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HYDROCARBON COMBUSTION AND PHYSICAL PROPERTIES

by

Dudley J. McCracken

September 1970



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 BALLISTIC RESEARCH LABORATORIES
 ABERDEEN PROVING GROUND, MARYLAND

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B A L L I S T I C R E S E A R C H L A B O R A T O R Y

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A B E R D E E N P R O V I N G G R O U N D , M A R Y L A N D

B A L L I S T I C R E S E A R C H L A B O R A T O R Y

REPORT NO. 1496

DJMcCracken/meg
Aberdeen Proving Ground, Md.
September 1970

HYDROCARBON COMBUSTION AND PHYSICAL PROPERTIES

ABSTRACT

Many tabulations of hydrocarbon combustion properties are found in the literature. Unfortunately, most of these report what the author believes to be the best value for each property, and do not include all combustion properties. This report presents a compilation of combustion and physical properties which can be used in a variety of combustion problems. Referenced values are included for flash point, flammability limits, autoignition temperature, maximum flame velocity, minimum ignition energy, and quenching distance. The physical properties include molecular weight, carbon-hydrogen ratio, vapor density, heats of combustion and vaporization, liquid density, refractive index, surface tension, viscosity and vapor pressure data.

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I. INTRODUCTION

The purpose of this report is to collate hydrocarbon combustion and physical properties which appear in the literature. Only those hydrocarbons are included for which combustion data has been reported.

The hydrocarbons are grouped into alkanes, naphthenes, alkenes, dienes, alkynes, aromatics, fused rings and a final group which includes hydrocarbons which would fit within two or more groups. In each group, the compounds are listed in order of increasing carbon number.

Each experimental value in the report is followed by references and notes which apply to that value. References are denoted by numbers and notes by letters. When an author cited a primary source which could not be obtained by this author, both sources have been cited in this report. It must be pointed out that many authors did not give references even though they did not do the original work. The following examples illustrate the system of references and notes:

1,2,3 - Datum listed in references 1,2 and 3.

(1)(2) - Datum listed in reference 1 which cites reference 2.

1(A) - Note A applies to the datum in reference 1.

(1)(2)(A) - Note A applies to the datum listed in reference 1 which cites reference 2 as the source.

1(A,B) - Notes A and B apply to the datum listed in reference 1.

1,2(A,B) - Datum listed in references 1 and 2 but notes A and B apply only to datum in reference 2.

(1,2)(A,B) - Notes A and B apply to both references 1 and 2.

An alphabetical list of compounds and synonyms which are included in this report is given in Section VI.

II. COMBUSTION PROPERTIES

A. Flash Point

The flash point is defined as the lowest liquid temperature at which the vapor gives a visible flash of light when a small flame is applied in a prescribed type of apparatus. The American Society for Testing and Materials (ASTM Standards, Part 17, 1968) recognizes four types of apparatuses that may be used to determine the flash point of a liquid. The Tag open-cup tester (ASTM-D 1310) may be used for liquids having flash points between 0°F (-18°C) and 235°F (113°C). The Tag closed tester (ASTM-D 56) may be used for all mobile liquids having flash points below 175°F (79°C), except products classified as Grade No. 4 or heavier fuel oil. The Cleveland open-cup tester (ASTM-D 92) may be used for flash point determination of all petroleum products except fuel oils and those having open-cup flash points below 175°F (79°C). The Pensky-Martens closed tester (ASTM-D 93) may be used for fuel oils, lubricating oils, viscous materials and suspensions of solids, but may not be used for drying oils, solvent-type liquid waxes or cut-back asphalt. The type of apparatus used to determine the flash point was listed as a note in this report whenever it was given in the referenced article, however, many of the published tables of flash points differentiate only between the closed- and open-cup test. The flash point was converted by this author from the usual units of degrees Fahrenheit to degrees Centigrade to conform with Army policy and was rounded off to the nearest 0.5°C after conversion. Flash points are given as closed cup(cc) or open cup(oc).

B. Flammable Limits

The flammable region of a compound is defined as the range of vapor concentrations in an oxidizing atmosphere such as oxygen or air in which flame will propagate over a prescribed distance determined by

the apparatus after the vapor has been ignited. Ignition may be by any source such as spark, hot wire, exploding wire or flame. For each hydrocarbon there will be a region of flammable concentrations. In this report the lower and upper bounds of this region (LEL and UEL) are given in volume per cent of hydrocarbon in air. Unless otherwise noted, the flammable limits are given in air. Flammable limits in oxygen are denoted by note (B). Notes are included in this report to describe the type of apparatus and system temperature when a description was given in the literature source.

C. Autoignition Temperature

The ASTM standardized a procedure and apparatus for the determination of autoignition temperature and autoignition delay in 1963 as procedure D 2155. (ASTM Standards, Part 17, 1968.) The procedure involves injecting a drop of liquid into a preheated borosilicate Erlenmeyer flask at atmospheric pressure. The lowest flask temperature at which a sudden flash of light occurs for a series of prescribed sample volumes is taken to be the autoignition temperature, and the time from introduction of the fuel droplet into the flask for the flash to occur is taken to be the autoignition delay time.

Various configurations and materials of construction of the combustion chamber, such as crucibles, flasks, bombs and spheres made of stainless steel, iron or glass have been used by various investigators. The combustible material has been introduced in a vapor, spray or drop form. The fact that the autoignition temperature is extremely dependent on the material of construction, configuration of apparatus, and test procedure is immediately evident by noting that values of 208, 232, 236, 250, 253, 425, and 463^oC have been reported for the autoignition temperature of decane in air at atmospheric pressure. The literature values listed in this report

are referenced, but the procedure and test apparatus are included as a note in only those cases where original papers were located. The autoignition temperature was converted by this author from Fahrenheit to Centigrade and rounded to the nearest degree after conversion.

D. Maximum Flame Velocity and Temperature

The maximum flame velocities reported in the literature were calculated for a flame front propagating down a tube or for a Bunsen Burner flame. The volume percent fuel which gave the maximum velocity was noted and the adiabatic flame temperature corresponding to that fuel concentration was calculated for both cases. The Bunsen burner experiments gave values about 10 percent higher than the tube experiments. Both experimental procedures used an oxidizing atmosphere of air.

E. Minimum Ignition Energy and Quenching Distance

The minimum ignition energies listed in this report apply to spark ignition. The reported distances were the minimum electrode spacings with which ignition was possible. Values are listed for stoichiometric fuel-air minimum ignition energy and quenching distance at atmospheric pressure. The minimum ignition energy and quenching distance for any fuel-air mixture was listed as the absolute minimum ignition energy and absolute minimum quenching distance. It should be noted that the electrode spacing which gave the minimum ignition energy is not the same as the quenching distance.

III. PHYSICAL PROPERTIES

A. Molecular Weight and Carbon-Hydrogen Ratio

An atomic weight of 12.011 for carbon and 1.00 for hydrogen have been used in the calculation of the molecular weight (MW). The carbon-hydrogen ratio (C/H) is a weight ratio.

B. Vapor Density

The vapor density (VD) as used in the literature might more aptly be termed the vapor specific gravity since it is calculated as the ratio of the molecular weight of air to the molecular weight of hydrocarbon.

C. Heats of Combustion and Vaporization

The net heat of combustion of hydrocarbon liquid (gas) refers to the energy released during the complete combustion of liquid (gaseous) hydrocarbon to gaseous water and carbon dioxide at 25°C. The gross heat of combustion refers to liquid water and gaseous carbon dioxide products at 25°C. Heats of combustion and vaporization have been converted to Kcal/mole and cal/gram when given in other units.

D. Density, Refractive Index, Surface Tension and Viscosity

An attempt was made to report these properties at the same temperatures, and preferably by the same author, for each separate compound. The units are grams per milliliter(gram/ML) for density, dynes per square centimeter for surface tension, and centistokes (cs) for viscosity. In a few cases the viscosity was given in Saybolt Seconds Universal (SSU).

E. Vapor Pressure

Vapor pressure in millimeters of mercury are listed as a function of temperature in degrees Centigrade. Two sets of vapor pressure equation coefficients have been calculated by the author using a least squares technique. The first set of coefficients apply to Equation 1, Antoine's equation, which is of the form,

$$\text{Log}_{10}p = A + B/(T+C), \quad (1)$$

where p is vapor pressure in mm of Hg, T is temperature in degrees C, and $A, B,$ and C are constants. The second set of coefficients apply to Equation 2.

$$\text{Log}_e p = A + B/T + C(\text{Log}_e T) + Dp/T^2, \quad (2)$$

where p is vapor pressure in mm of Hg, T is temperature in degrees Kelvin, and $A, B, C,$ and D are constants.

Vapor pressure is easier to calculate by hand from Antoine's equation because it is explicit in vapor pressure. Equation 2, which is implicit in vapor pressure, in general yields more accurate results. The maximum error is defined as being

$$E_{\max} = \text{MAX} ((P_{i,\text{calculated}} - P_{i,\text{actual}})/P_{i,\text{actual}}),$$

$$i = 1, 10, 30, 40, 100, 400, 760$$

The maximum error and the vapor pressure at which the maximum error occurs is listed beside each set of coefficients. The coefficients should be used only over the range 1 mm to 760 mm of Hg for the maximum error to apply. In cases where the melting point is in this range, either the coefficients listed here may be used, or if more accurate data are necessary, the Antoine coefficients from other sources which apply only to the solid or liquid phase should be used, since a discontinuity in the vapor pressure curve will occur at the melting point.

IV. HYDROCARBON PROPERTIES

METHANE

SYNONYMS. MARSH GAS, METHYL HYDRIDE

FORMULA= CH₄ C/H= 2.979 MW= 16.043 VD= .5532

HEAT OF COMBUSTION OF GAS	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	191.76	11953.	11
		212.80	13264.	11

HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-205.9	-195.5		-187.7	-181.4	-168.8	-161.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	-3.5151	-445.84	95.01		220.23	1.
EQUATION 2	15.328	-1142.5	.39	-5.3501	1.70	400.

FLASH POINT(DEG C) (CC) REF (OC) REF

-188. (8)(9)

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	3.8	13(U)	14.2	13(U)
	5.0	(8)(15)	15.	(8)(15)
	5.1	12(A,B)	61.	12(A,8)
	5.26	(17)(77)	14.3	(17)(77)
	5.3	1,3,4,12(A)	14.0	1,3,12(A)
	5.35	53(W,X)	14.85	53(W,X)
	5.40	53(W,Y)	13.95	53(W,Y)
	5.95	53(W,Z)	13.35	53(W,Z)
			13.9	4

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
537.		3,4	538.	1
556.		(22)(36)(8)	632.	(22)(48)
645.		28(AL)		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
33.8 (69)	2235 (55)	9.96 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	.33 56	.29 56
QUENCHING DISTANCE(CM)=	.19 80	.08 (7)(56)

ETHANE

SYNONYMS. BIMETHYL, DIMETHYL, METHYL METHANE, ETHYL HYDRIDE
 FORMULA= C2H6 C/H= 3.972 MW= 30.070 VD= 1.0369

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF GAS	(NET)	341.26	11349.	11
	(GROSS)	372.82	12398.	11

HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML)
 REFRACTIVE INDEX
 SURFACE TENSION
 VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-159.5	-142.9		-129.8	-119.3	-99.7	-88.6	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	1.5630	5.61	104.39		2792.04	1.
EQUATION 2	48.996	-2698.8	-5.34	4.4339	-.22	400.

FLASH POINT (DEG C) (CC) REF (OC) REF
 -135. 4,(8)(9)

FLAMMABLE LIMITS

	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	2.8	13(U)	13.8	13(U)
	2.9	(8)(15)	13.	(8)(15)
	3.0	3,4,12(A)	12.5	3,4,12(A)
	3.12	53(W,X)	14.95	53(W,X)
	3.15	53(W,Y)	12.85	53(W,Y)
	3.26	53(W,Z)	10.15	53(W,Z)
	3.3	1	10.60	1
	3.0	12(A,B)	66.	12(A,B)

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
472.		(22)(29)	504.	9
510.		1	515.	3,4

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
40.1 (69)	2246 (55)	6.28 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE) =	.3 56	.24 56
QUENCHING DISTANCE (CM) =	.2 56	.19 56

PROPANE

SYNONYMS. DIMETHYLMETHANE

FORMULA= C3H8 C/H= 4.469 MW= 44.097 VD= 1.5206

HEAT OF COMBUSTION OF GAS	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	488.53	11078.	11
HEAT OF VAPORIZATION(25 C)		530.61	12033.	11
		3.60	81.75	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.5005	11(D)	.4928	11(D)
REFRACTIVE INDEX	1.2898	20		
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-128.9	-108.5		-92.4	-79.6	-55.6	-42.1	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	1.7189	5.14	102.97		3216.45	1.
EQUATION 2	56.562	-3644.8	-6.29	7.5738	.24	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-104.5	1,(8)(9)		

FLAMMABLE LIMITS		LOWER		UPPER
	VOL PER	REF		VOL PER
	2.1	(8)(15)		9.5
	2.2	13(U)		10.7
	2.2	3,4,12(A)		9.5
	2.3	1		7.3
				9.6
	2.3	12(A,B)		55.
	2.4	(17)(78)(8)		57.
				12(A,B)
				(17)(78)(8)

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
466.		3,4	468.	1
468.	13.	54(B,AX)		
493.	6.	54(AX)		
504.	6.0	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
39.0 (69)	2251 (55)	4.54 (69)
	STOICH	REF
MIN IGN ENERGY(MILLIJOULE)=	.4	56
QUENCHING DISTANCE(CM)=	.21	56
	ABS MIN	REF
	.25	56
	.19	56

BUTANE

SYNONYMS. METHYLETHYLMETHANE, BUTYL HYDRIDE

FORMULA= C4H10 C/H= 4.766 MW= 58.124 VD= 2.0043

HEAT OF COMBUSTION OF GAS	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	635.05	10926.	11
HEAT OF VAPORIZATION(25 C)		687.65	11831.	11
		5.03	86.62	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.5788	11(D)	.5730	11(D)
REFRACTIVE INDEX	1.3326	11(D)	1.3292	11(D)
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-101.5	-77.8		-59.1	-44.2	-16.3	-.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8132	-939.45	239.34		-.55	10.
EQUATION 2	63.793	-4572.0	-7.2?	10.7405	-.24	10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-60.	1,4		
	-74.	(8)(9)		

FLAMMABLE LIMITS

	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.6	1	6.5	1
	1.7	13(U)	9.4	13(U)
	1.8	(8)(15)	8.4	(8)(15)
	1.9	3,4,12(A)	8.5	3,4,12(A)
	1.93	(17)(77)	9.05	(17)(77)
	1.8	12(A,B)	49.	12(A,B)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
405.		3,4	430.	1
408.	5.	54(AX)		
283.	28.	54(B,AX)		
430.	6.0	49	431.	9,(7)(26)

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
37.9 (69)	2256 (55)	3.52 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	.76 56	.25 56
QUENCHING DISTANCE(CM)=	.3 7	.18 7

2-METHYLPROPANE

SYNONYMS. ISOBUTANE, TRIMETHYLMETHANE

FORMULA= C4H10 C/H= 4.766 MW= 58.124 VD= 2.0043

HEAT OF COMBUSTION OF GAS	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	633.05	10891.	11
HEAT OF VAPORIZATION(25 C)		685.65	11796.	11
		4.57	78.62	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.5572	11(D)	.5510	11(D)
REFRACTIVE INDEX	1.3169	20		
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-109.2	-86.4	-72.5		-54.1		-11.7	20

VAPOR PRESSURE EQUATION COEFFICIENTS							
	A	B	C	D	MAX ERR	AT P	
EQUATION 1	6.7582	-886.49	240.37		.15	10.	
EQUATION 2	63.555	-4357.2	-7.25	9.7880	.00	30.	

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-82.5	4,(8)(9)		

FLAMMABLE LIMITS		LOWER		UPPER
	VOL PER	REF	VOL PER	REF
	1.8	3,4,(8)(15)	8.4	3,4,(8)(15)
	1.8	12(A)	8.4	12(A)
	1.9	1	8.5	1
	2.0	13(V)	9.3	13(V)
	1.83	65	8.43	65
	1.8	12(A,B)	48.	12(A,B)

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
543.		1	462.	3,4
462.	14.	65		
319.	19.2	65(B)		
477.	18.0	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
34.9 (69)	2259 (55)	3.48 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

PENTANE

SYNONYMS. AMYL HYDRIDE

FORMULA= C5H12 C/H= 4.965 MW= 72.151 VD= 2.4880

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	775.66	10750.	11
HEAT OF VAPORIZATION(25 C)		838.78	11625.	11
		6.32	87.54	11

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.62624	11	.51649	20
REFRACTIVE INDEX	1.35748	11	1.35194	20
SURFACE TENSION	16.05	(8)(60)	14.95	20
VISCOSITY (CS)	.375	20	.351	20

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-76.6	-50.1		-29.2	-12.6	18.5	36.1	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8402	-1059.60	231.51		-.16	10.
EQUATION 2	70.222	-5477.7	-8.02	14.2734	-.30	10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-49.5	1,4,10		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER
	1.0 AT 28 C	14(U)	9.15 AT 28 C
	1.4	4,(8)(15)	8.0
	1.4	13(U)	8.7
	1.42	53(W,X)	8.0
	1.44	53(W,Y)	7.45
	1.48	53(W,Z)	4.64
	1.5	3,12(A)	7.8
	1.62	(17)(77)	8.3
			(8)(15)

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
284.		9	309.	1,3,4
296.	8.	54(AX)		
264.	40.	54(B,AX)		
300.		(22)(24)(B)	579.	40(N)
284.	24.0	49	418.	46

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
38.5 (69)	2249 (55)	2.92 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	.82 (7)(57)(E)	.22 (7)(59)(F)
QUENCHING DISTANCE(CM)=	.33 7	.18 7

2-METHYLBUTANE

SYNONYMS. ISOPENTANE, ISOAMYL HYDRIDE, ETHYLDIMETHYLMETHANE
 FORMULA= C5H12 C/H= 4.965 MW= 72.151 VD= 2.4880

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		774.10	10729.	11
	(GROSS)	837.22	11604.	11
HEAT OF VAPORIZATION(25 C)		5.94	82.29	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.61967	11	.61462	11
REFRACTIVE INDEX	1.35373	11	1.35088	11
SURFACE TENSION	15.00	(8)(60)	14.46	11
VISCOSITY (CS)	.364	20		

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-82.9	-57.0		-36.5	-20.2	10.5	27.8	21

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	6.7791	-1015.94	232.77		.20 400.
EQUATION 2	70.851	-5305.6	-8.19	15.6054	.33 40.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	-51.	1		
	-56.5	10		

FLAMMABLE LIMITS LOWER		UPPER	
VOL PER	REF	VOL PER	REF
1.1	13(V)	7.7	13(V)
1.4	3,4,(8)(15)	7.6	3,4
1.4	12(A)	7.6	12(A)
1.61	(17)(77)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF
427.	6.0	49	420.	1,3,4
294.		54(B)	420.	54

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
36.6 (69)	2253 (55)	2.89 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=	.96 (7)(57)(E)	.21 (7)(59)(F)
QUENCHING DISTANCE (CM)=	.36 7	.18 7

2,2-DIMETHYLPROPANE

SYNONYMS. NEOPENTANE, TETRAMETHYLMETHANE

FORMULA= C5H12 C/H= 4.965 MW= 72.151 VD= 2.4880

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	772.03	10700.	11
	(GROSS)	835.15	11575.	11
HEAT OF VAPORIZATION(25 C)		5.20	72.14	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.5910	11(D)	.5851	11(D)	.	
REFRACTIVE INDEX	1.342	11(D)	1.339	11(D)		
SURFACE TENSION	12.05	20			10.98	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-102.0	-76.7		-56.1	-39.1	-7.1	9.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.4694	-905.46	242.05		2.92	400.
EQUATION 2	82.769	-4964.9	-10.45	45.9319	-.17	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-65.	(8)(9)		
	-75.	20(A)		

FLAMMABLE LIMITS LOWER

VOL PER	REF	UPPER	REF
1.3	13(V)	8.7	13(V)
1.4	3,4,(8)(15)	7.5	3,4
1.4	12(A)	7.5	12(A)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
456.	3.0	49	450.	1,3,4

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
33.3 (69)	2254 (55)	2.85 (69)

MIN IGN ENERGY(MILLIJOULE)= 1.57	STOICH REF	ABS MIN REF
	(7)(57)(BB)	

QUENCHING DISTANCE(CM)=

HEXANE

SYNONYMS. HEXYL HYDRIDE

FORMULA= C6H14 C/H= 5.107 MW= 86.178 VD= 2.9717

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	921.37	10691.	11
HEAT OF VAPORIZATION(25 C)		995.01	11546.	11
		7.54	87.49	11

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.65937	11	.65023	20
REFRACTIVE INDEX	1.37486	11	1.36938	20
SURFACE TENSION	18.40	(8)(60)	17.38	20
VISCOSITY (CS)	.4727	(8)(60)	.4389	20

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-53.9	-25.0		-2.3	15.8	49.6	68.7	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8608	-1152.15	223.29		-.03 760.
EQUATION 2	77.262	-6404.1	-8.92	18.2939	-.22 400.

FLASH POINT (DEG C)

(CC)	REF	(OC)	REF
-21.5	3,4	-25.5	4
-23.5	10		

FLAMMABLE LIMITS

LOWER		UPPER	
VOL PER	REF	VOL PER	REF
1.1 AT 50 C	14(U)	8.6 AT 50 C	14(U)
1.1	6	7.7	(8)(15)
1.2	1,3,4,(8)(15)	6.9	1
1.2	12(A),13(U)	7.5	3,4,6,12(A)
1.46	(17)(77)	8.1	13(U)

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
234.		3,4	248.	(22)(41)
253.		38	260.	1
261.	30.0	49	261.	6,(22)(43)
296.		(22)(24)(8)	487.	(22)(23)
520.		40(N)		

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
38.5 (69)	2241 (55)	2.51 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=	.95 56	.23 56
QUENCHING DISTANCE (CM)=	.36 7	.18 7

2-METHYLPENTANE

SYNONYMS. DIMETHYLPROPYLMETHANE, ISOHEXANE

FORMULA= C6H14 C/H= 5.107 MW= 86.178 VD= 2.9717

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	920.07	10676.	11
	(GROSS)	993.71	11531.	11
HEAT OF VAPORIZATION(25 C)		7.14	82.83	11

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.65315	11	.64386	20
REFRACTIVE INDEX	1.37145	11	1.36586	20
SURFACE TENSION	17.38	20	16.37	20
VISCOSITY (CS)	.4746	20	.4349	20

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-60.9	-32.1		-9.7	8.1	41.6	60.3	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9253	-1178.30	231.03		-.49	100.
EQUATION 2	63.446	-5646.3	-6.88	10.3702	.28	400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-23.5	4		
	-14.	20(A)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.2	3,4,(8)(15)	7.0	3,4
	1.2	12(A)	7.0	12(A)
	1.4	13(V)	7.6	13(V)

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
306.		3,4	275.	(22)(33)(B)
307.	6.0	49	284.	54(B)

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
36.8 (69)	2251 (55)	2.46 (69)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

3-METHYLPENTANE

SYNONYMS. DIETHYLMETHYLMETHANE

FORMULA= C6H14 C/H= 5.107 MW= 86.178 VD= 2.9717

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	920.61	10683.	11
HEAT OF VAPORIZATION(25 C)		994.25	11537.	11
		7.23	83.95	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.66431	11	.65976	11
REFRACTIVE INDEX	1.37652	11	1.37386	11
SURFACE TENSION	18.12	20	17.60	11
VISCOSITY (CS)	.486	(8)(61)	.4653	20

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-59.0	-30.1		-7.3	10.5	44.2	63.3	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.9047	-1178.79	229.72		.65 40.
EQUATION 2	63.978	-5717.8	-6.95	9.9353	.74 40.

FLASH POINT(DEG C) (CC) REF (OC) REF

	-31.5	(8)(9)(J)		
	-35.	20(AY)		

FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
	1.2	8(DD)	7.7	8(DD)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
304.	12.0	49	273.	(22)(33)(B,FF)

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
36.7 (69)	2245 (55)	2.48 (69)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=

QUENCHING DISTANCE(CM)=

2,2-DIMETHYL BUTANE

SYNONYMS. NEOHEXANE

FORMULA= C6H14 C/H= 5.107 MW= 86.178 VD= 2.9717

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		917.88	10651.	11
	(GROSS)	991.52	11505.	11
HEAT OF VAPORIZATION(25 C)		6.62	76.78	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.64916	11	.64446	11
REFRACTIVE INDEX	1.36876	11	1.36595	11
SURFACE TENSION	16.30	20	15.81	11
VISCOSITY (CS)	.5777	20	.5446	20

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-69.3	-41.5		-19.5	-2.0	31.0	49.7	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.7578	-1082.39	229.47		.18	40.
EQUATION 2	70.231	-5639.8	-8.00	16.1146	.32	40.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	-48.	3,4		
	-47.	20 (AY)		
	-31.5	(8)(9)(J)		

FLAMMABLE LIMITS				
	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.2	3,4,(8)(15)	7.0	3,4
	1.2	12(A,CC)	7.0	12(A,CC)
	1.4	13(V)	7.0	13(V)

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF
440.	12.0	49	425.	1,3,4,(22)(30)

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
35.7 (69)	2254 (55)	2.43 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=	1.64 (7)(57)	.25 (7)(59)(F)
QUENCHING DISTANCE (CM)=	.46 7	.18 7

2,3-DIMETHYLBUTANE

SYNONYMS. DIISOPROPYL

FORMULA= C6H14 C/H= 5.107 MW= 86.178 VD= 2.9717

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	919.41	10669.	11
HEAT OF VAPORIZATION(25 C)		943.05	11523.	11
		6.95	80.76	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.66164	11	.65702	11
REFRACTIVE INDEX	1.37495	11	1.37231	11
SURFACE TENSION	17.37	20	16.87	11
VISCOSITY (CS)	.582	(8)(61)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-63.6	-34.9		-12.4	5.4	39.0	58.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8615	-1152.32	231.53		-.47	100.
EQUATION 2	61.636	-5482.6	-6.64	9.1736	.27	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-29.	3,4		
	-37.	20(A,Y)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER
	1.14 AT 50 C	14(U)	8.3 AT 50 C
	1.2	3,4,(8)(15)	7.0
	1.2	12(A,CC)	7.0
	1.3	13(V)	7.8
			14(U)
			3,4
			12(A,CC)
			13(V)

AUTO IGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C
42.	12.0	49	420.
298.		54(B)	420.
			54

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
36.3 (69)	2252 (55)	2.45 (69)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

HEPTANE

SYNONYMS. HEPTYL HYDRIDE, DIPROPYLMETHANE

FORMULA= C7H16 C/H= 5.213 MW= 100.206 VD= 3.4554

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1067.11	10649.	11
HEAT OF VAPORIZATION(25 C)		1151.27	11489.	11
		8.74	87.17	11

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.68376	11	.67525	20
REFRACTIVE INDEX	1.38764	11	1.38250	20
SURFACE TENSION	20.14	(8)(60)	18.34	20
VISCOSITY (CS)	.6097	(8)(60)	.5586	20

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-34.0	-2.1		22.3	41.8	78.0	98.4	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.0764	-1362.89	226.56		1.05 10.
EQUATION 2	58.012	-6182.5	-5.87	1.5546	-.45 40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-4.	1,4	-1.	4
	-1.	(8)(9)(J)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER
	.97 AT 50 C	14(U)	8.5 AT 50 C
	1.0	(8)(15)	7.0
	1.2	1,3,4,12(A)	6.7
	1.26	(17)(77)	1,3,4,12(A)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
230.	34.	54(AX)		
214.	54.	54(B,AX)		
300.		(22)(24)(B)	233.	1,38
223.		3,4	250.	50,74
247.	30.0	49	451.	40(N)
259.		46		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
38.6 (69)	2208 (55)	2.26 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	1.1 56	.24 56
QUENCHING DISTANCE(CM)=	.38 7	.18 7

2-METHYLHEXANE

SYNONYMS. ETHYLISOBUTYLMETHANE, ISOHEPTANE
 FORMULA= C7H16 C/H= 5.213 MW= 100.206 VD= 3.4554

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1065.81	10636.	11
HEAT OF VAPORIZATION(25 C)		1149.97	11476.	11
		8.32	83.01	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.67859	11	.67439	11
REFRACTIVE INDEX	1.38485	11	1.38227	11
SURFACE TENSION	19.29	20	18.80	11
VISCOSITY (CS)	.5570	20		

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-40.4	-9.1		14.9	34.1	69.8	90.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.0284	-1317.78	227.86		1.05 10.
EQUATION 2	57.022	-5958.0	-5.77	1.2158	-.42 40.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	-14.	20 (AY)		

FLAMMABLE LIMITS

	LOWER		UPPER
	VOL PER	REF	VOL PER
	1.0	8 (DD)	7.0
			8 (DD)

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
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MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE)=				
QUENCHING DISTANCE (CM)=				

3-METHYLPHEXANE

SYNONYMS.

FORMULA= C7H16 C/H= 5.213 MW= 100.206 VD= 3.4554

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1066.39	10642.	11
	(GROSS)	1150.55	11482.	11
HEAT OF VAPORIZATION(25 C)		8.38	83.68	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.68713	11	.68295	11
REFRACTIVE INDEX	1.38864	11	1.38609	11
SURFACE TENSION	19.79	20	19.30	11
VISCOSITY (CS)	.541	(8)(61)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-39.0	-7.8		16.4	35.6	71.6	91.9	21

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	6.9547	-1291.40	224.40		.59 10.
EQUATION 2	64.817	-6313.8	-6.94	8.0125	.12 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-4.	(8)(9)		
	-14.	20(AY)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.0	8(DD)	7.0	8(DD)

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

2,2-DIMETHYLPENTANE

SYNONYMS.

FORMULA= C7H16 C/H= 5.213 MW= 100.206 VD= 3.4554

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		1063.69	10615.	11
	(GROSS)	1147.85	11455.	11
HEAT OF VAPORIZATION(25 C)		7.75	77.35	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.67385	11	.66953	11
REFRACTIVE INDEX	1.38215	11	1.37955	11
SURFACE TENSION	18.02	20	17.55	11
VISCOSITY (CS)	.5773	20		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-49.0	-18.7		5.0	23.9	59.2	79.2	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8816	-1224.77	226.97		.21 10.
EQUATION 2	66.707	-6075.5	-7.32	13.4566	-.13 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-25.	20(AY)		

FLAMMABLE LIMITS

LOWER	UPPER
VOL PER REF	VOL PER REF
1.0 8(DD)	7.0 8(DD)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
34.8 (63)	2244 (7)	2.13 (73)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=

QUENCHING DISTANCE(CM)=

2,3-DIMETHYLPENTANE

SYNONYMS. DIETHYLDIMETHYLMETHANE

FORMULA= C7H16 C/H= 5.213 MW= 100.206 VD= 3.4554

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1064.93	10627.	11
HEAT OF VAPORIZATION(25 C)		1149.09	11467.	11
		8.18	81.67	11

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.69508	11	.68673	20
REFRACTIVE INDEX	1.39196	11	1.38696	20
SURFACE TENSION	19.94	(8)(60)	18.98	20
VISCOSITY (CS)	.584	(8)(61)	.600	20

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-42.0	-10.3		13.9	33.3	69.4	89.8	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.0385	-1336.92	231.90		1.27	10.
EQUATION 2	49.967	-5592.5	-4.74	-2.7402	-.56	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-16.	20(AY)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.1	3,6,12(A)	6.7	3,12(A)
	1.29	(7)(14)(H)	8.16	(7)(14)(H)

AUTOIGNITION TEMPERATURE

DEC C	DELAY(SEC)	REF	DEG C	REF
338.	6.0	49	337.	1,3,6

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
36.5 (69)	2220 (55)	2.22 (69)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

2,4-DIMETHYLPENTANE

SYNONYMS. DIISOPROPYLMETHANE

FORMULA= C7H16 C/H= 5.213 MW= 100.206 VD= 3.4554

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1064.57	10624.	11
HEAT OF VAPORIZATION(25 C)		1148.73	11464.	11
		7.86	78.44	11

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.67270	11	.66393	20
REFRACTIVE INDEX	1.38145	11	1.37617	20
SURFACE TENSION	18.15	(8)(60)	17.17	20
VISCOSITY (CS)	.537	(8)(61)	.5351	20

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-48.0	-17.1		6.5	25.4	60.6	80.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.0368	-1302.52	233.06		1.27 10.
EQUATION 2	49.470	-5430.9	-4.68	-2.9662	-.53 40.

FLASH POINT (DEG C)

(CC)	REF	(OC)	REF
-12.	3,6	-12.	4
-24.	20 (AY)		

FLAMMABLE LIMITS

LOWER	UPPER
VOL PER REF	VOL PER REF
1.1 4	6.7 4

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
338.		4		

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
35.7 (69)	2236 (55)	2.17 (69)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY (MILLIJOULE)=
 QUENCHING DISTANCE (CM)=

3,3-DIMETHYLPENTANE

SYNONYMS.

FORMULA= C7H16 C/H= 5.213 MW= 100.206 VD= 0.4554

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1064.67	10625.	11
HEAT OF VAPORIZATION(25 C)		1148.83	11465.	11
		7.89	78.76	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.69327	11	.68908	11
REFRACTIVE INDEX	1.39092	11	1.38842	11
SURFACE TENSION	19.59	20	19.10	11
VISCOSITY (CS)	.655	(8)(61)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-45.9	-14.4		9.9	29.3	65.5	86.1	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9650	-1301.64	232.75		.87	10.
EQUATION 2	50.722	-5489.5	-4.90	.0533	-.26	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-18.	20(AY)		

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF
	1.0 8(DD)	7.0 8(DD)

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
35.3 (63)		2.13 (73)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

3-ETHYLPENTANE

SYNONYMS.

FORMULA= C7H16 C/H= 5.213 MW= 100.206 VD= 3.4554

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1066.97	10648.	11
HEAT OF VAPORIZATION(25 C)		1151.13	11488.	11
		8.42	84.02	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.69816	11	.69395	11
REFRACTIVE INDEX	1.39339	11	1.39084	11
SURFACE TENSION	20.44	20	19.94	11
VISCOSITY (CS)	.540	(8)(61)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-37.8	-6.8		17.5	36.9	73.0	93.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8794	-1253.45	220.00		-.15 400.
EQUATION 2	76.207	-6812.4	-8.65	18.7585	-.29 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-14.	20(AY)		

FLAMMABLE LIMITS LOWER		UPPER	
VOL PER	REF	VOL PER	REF
1.0	8(DD)	7.0	8(DD)

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2,2,3-TRIMETHYLBUTANE

SYNONYMS. TRIPTANE

FORMULA= C7H16 C/H= 5.213 MW= 100.206 VD= 3.4554

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1064.11	10619.	11
HEAT OF VAPORIZATION(25 C)		1148.27	11459.	11
		7.66	76.41	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.69011	11	.68588	11
REFRACTIVE INDEX	1.38944	11	1.38692	11
SURFACE TENSION	18.76	20	18.26	11
VISCOSITY (CS)	.868	(8)(61)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-49.3	-18.8	-2		24.5		80.9	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.7870	-1198.36	225.87		.15	100.
EQUATION 2	73.576	-6295.2	-8.40	23.7257	.05	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-22.	20(AY)		

FLAMMABLE LIMITS LOWER				UPPER			
	VOL PER	REF		VOL PER	REF		
	1.0	8(DD)		7.0	8(DD)		

AUTOIGNITION TEMPERATURE					
DEG C	DELAY(SEC)	REF	DEG C	REF	
454.	18.0	49			

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
35.9 (69)	2242 (55)	2.15 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=	1.00 (7)(57)	
QUENCHING DISTANCE (CM)=	.36 7	

OCTANE

SYNONYMS. OCTYL HYDRIDE

FORMULA= C8H18 C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1212.85	10617.	11
	(GROSS)	1307.53	11446.	11
HEAT OF VAPORIZATION(25 C)		9.92	86.80	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.70252	11	.69849	11		
REFRACTIVE INDEX	1.39743	11	1.39505	11		
SURFACE TENSION	21.62	(8)(60)	21.26	11		
VISCOSITY (CS)	.7758	(8)(60)			.6476	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-14.0	19.2		45.1	65.7	104.0	125.6	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.9649	-1378.10	211.86		.15 10.
EQUATION 2	82.287	-7824.5	-9.37	21.6945	-.19 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	15.5	1	22.	(8)(9)(11)
	13.5	3,4		

FLAMMABLE LIMITS LOWER

VOL PER	REF	UPPER	REF
.84 AT 80 C	14(U)	7.0 AT 80 C	14(U)
.8	4	3.2	1,4
.96	(8)(15)		
1.0	1,3,12(A)		
1.12	(17)(77)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
232.		1	220.	3,4
240.	54.0	49	458.	40(N)
218.	70.	54(AX)		
208.	107.	54(B,AX)		

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)= STOICH REF ABS MIN REF
 QUENCHING DISTANCE(CM)=

2-METHYLHEPTANE

SYNONYMS. ISOCTANE

FORMULA= C₈H₁₈ C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1211.60	10606.	11
HEAT OF VAPORIZATION(25 C)		1306.28	11435.	11
		9.48	83.01	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.69792	11	.69392	11
REFRACTIVE INDEX	1.39494	11	1.39257	11
SURFACE TENSION	20.60	20	20.14	11
VISCOSITY (CS)	.744	(8)(61)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-21.0	12.3		37.9	58.3	96.2	117.6	21

VAPOR PRESSURE EQUATION COEFFICIENTS						MAX ERR AT P	
	A	B	C	D			
EQUATION 1	7.0555	-1415.55	221.60		.82	10.	
EQUATION 2	62.985	-6739.7	-6.56	5.0460	-.27	40.	

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS		LOWER	UPPER	
	VOL PER	REF	VOL PER	REF
	0.98	(8)(15)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL		
	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

3-METHYLHEPTANE

SYNONYMS.

FORMULA= C8H18 C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1212.24	10612.	11
HEAT OF VAPORIZATION(25 C)		1306.92	11441.	11
		9.52	83.34	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.70582	11	.70175	11
REFRACTIVE INDEX	1.39848	11	1.39610	11
SURFACE TENSION	21.17	20	20.70	11
VISCOSITY (CS)	.721	(8)(61)		

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-19.8	13.3		38.9	59.4	97.4	118.9	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9816	-1377.47	217.08		.57	10.
EQUATION 2	72.249	-7184.1	-7.93	13.1532	-.27	40.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	6.	20 (AY)		

FLAMMABLE LIMITS

LOWER	UPPER
VOL PER	VOL PER
REF	REF
0.98	8 (DD)

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
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MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

4-METHYLHEPTANE

SYNONYMS.

FORMULA= C8H18 C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1212.41	10614.	11
	(GROSS)	1307.09	11442.	11
HEAT OF VAPORIZATION(25 C)		9.48	83.01	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.70463	11	.70055	11
REFRACTIVE INDEX	1.39792	11	1.39553	11
SURFACE TENSION	21.00	20	20.54	11
VISCOSITY (CS)	.678	(8)(61)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-20.4	12.4		38.0	58.3	96.3	117.7	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.9406	-1350.37	214.95		-.30 100.
EQUATION 2	77.620	-7405.0	-8.73	18.0668	.14 40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	6.	20(AY)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.98	8(DD)	

AUTOIGNITION TEMPERATURE	
DEG C	DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

2,2-DIMETHYLHEXANE

SYNONYMS.

FORMULA= C8H18 C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1209.96	10592.	11
HEAT OF VAPORIZATION(25 C)		1304.64	11421.	11
		8.91	78.02	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.69528	11	.69112	11
REFRACTIVE INDEX	1.39349	11	1.39104	11
SURFACE TENSION	19.60	20	19.14	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-29.7	3.1		28.2	48.2	85.6	106.8	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.0314	-1380.45	225.98		1.24	10.
EQUATION 2	53.715	-6086.2	-5.23	-4.1481	.37	10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-3.	20(AV)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	0.98	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

2,3-DIMETHYLHEXANE

SYNONYMS.

FORMULA = C8H18 C/H= 5.296 MM= 114.233 VD= 3.9391

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1212.18	10612.	11
HEAT OF VAPORIZATION(25 C)		1306.86	11440.	11
		9.27	81.16	17

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.71214	11	.70809	11
REFRACTIVE INDEX	1.40113	11	1.39880	11
SURFACE TENSION	20.99	20	20.53	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-23.0	9.9		35.6	56.0	94.1	115.6	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.9386	-1354.19	218.16		-.19 100.
EQUATION 2	73.657	-7123.9	-8.18	17.5210	-.14 10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	45.	1	7.	3

NOTE-- 45 F IS 7 C

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.98	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
438.		3	438.	46

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2,4-DIMETHYLHEXANE

SYNONYMS.

FORMULA= C8H18 C/H= 5.296 MM= 114.233 VD= 3.9391

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1211.12	10602.	11
	(GROSS)	1305.80	11431.	11
HEAT OF VAPORIZATION(25 C)		9.03	79.01	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.70036	11	.69620	11
REFRACTIVE INDEX	1.39534	11	1.39291	11
SURFACE TENSION	20.05	20	19.59	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-26.9	5.2		30.5	50.6	88.2	109.4	21

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8605	-1292.13	215.25		-.19 10.
EQUATION 2	82.990	-7415.5	-9.60	26.0992	-.30 10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	10.	1	10.	3,4
	-2.	20(AY)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.98	8(DD)	

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
438.		4	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2,5-DIMETHYLHEXANE

SYNONYMS. DIISOBUTYL

FORMULA= C8H18 C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1210.32	10595.	11
HEAT OF VAPORIZATION(25 C)		1305.00	11424.	11
		9.05	79.21	11

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.69354	11	.68513	20
REFRACTIVE INDEX	1.39246	11	1.38740	20
SURFACE TENSION	19.73	(8)(60)	18.82	20
VISCOSITY (CS)	.699	(8)(61)	.6305	20

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-26.7	5.3		30.4	50.5	87.9	109.1	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8534	-1283.37	213.96		-.14 40.
EQUATION 2	83.520	-7459.7	-9.67	24.1634	-.29 400.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	1.	20 (AY)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.98	8 (DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
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MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY (MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE (CM)=		

3,3-DIMETHYLHEXANE

SYNONYMS.

FORMULA= C8H18 C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1211.00	10601.	11
HEAT OF VAPORIZATION(25 C)		1305.68	11430.	11
		8.97	78.53	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.71000	11	.70596	11
REFRACTIVE INDEX	1.40009	11	1.39782	11
SURFACE TENSION	20.63	20	20.18	11
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-25.8	6.1		31.7	52.5	90.4	112.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	6.7202	-1236.50	209.85		1.63 100.
EQUATION 2	104.398	-8325.8	-12.84	54.4458	-1.31 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS LOWER		UPPER	
VOL PER	REF	VOL PER	REF
0.98	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL

MIN IGN ENERGY (MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE (CM)=				

3,4-DIMETHYLHEXANE

SYNONYMS.

FORMULA= C8H18 C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1212.36	10613.	11
HEAT OF VAPORIZATION(25 C)		1307.04	11442.	11
		9.31	81.54	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.71923	11	.71516	11
REFRACTIVE INDEX	1.40406	11	1.40180	11
SURFACE TENSION	21.64	20	21.18	11
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-22.1	11.3		37.1	57.7	96.0	117.7	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9908	-1392.96	221.33		.68	10.
EQUATION 2	64.347	-6738.0	-6.79	7.8702	-.23	40.

FLASH POINT (DEG C) (CC) REF (OC) REF

4. 20 (AY)

FLAMMABLE LIMITS LOWER UPPER

VOL PER	REF	VOL PER	REF
0.98	8 (DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

3-ETHYLMEXANE

SYNONYMS.

FORMULA= CBH18 C/H= 5.296 MM= 114.233 VD= 3.9391

 HEAT OF COMBUSTION KCAL/MOLE CAL/GRAM REF
 OF LIQUID (NET) 1212.71 10616. 11
 (GROSS) 1307.39 11445. 11
 HEAT OF VAPORIZATION(25 C) 9.48 82.94 11

DENSITY (GRAM/ML) 20 C REF 25 C REF
 .71358 11 .70948 11
 REFRACTIVE INDEX 1.40162 11 1.39919 11
 SURFACE TENSION 21.51 20 21.04 11
 VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
 P 1 10 30 40 100 400 760 REF
 T -20.0 12.8 38.5 58.9 97.0 118.5 21

VAPOR PRESSURE EQUATION COEFFICIENTS
 A B C D MAX ERR AT P
 EQUATION 1 6.9176 -1342.37 214.05 -0.09 100.
 EQUATION 2 80.644 -7541.9 -9.19 21.9950 -0.21 10.

FLASH POINT(DEG C) (CC) REF (OC) REF
 -4. 20(AY)

 FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF
 0.98 8(DD)

 AUTOIGNITION TEMPERATURE
 DEG C DELAY(SEC) REF DEG C REF

 MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)= STOICH REF ABS MIN REF
 QUENCHING DISTANCE(CM)=

2,2,3-TRIMETHYLPENTANE

SYNONYMS.

FORMULA= C8H18 C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1211.15	10602.	11
	(GROSS)	1305.83	11431.	11
HEAT OF VAPORIZATION(25 C)		8.82	77.24	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.71602	11	.71207	11
REFRACTIVE INDEX	1.40295	11	1.40066	11
SURFACE TENSION	20.67	20	20.22	11
VISCOSITY (CS)	.865	(8)(61)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-29.0	3.9		29.5	49.9	88.2	109.8	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8953	-1332.99	222.30		.54	10.
EQUATION 2	65.966	-6578.9	-7.10	11.9599	.12	400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS

	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.0	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
436.	24.0	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2,2,4-TRIMETHYLPENTANE

SYNONYMS. ISOOCTANE

FORMULA= C₈H₁₈ C/H= 5.296 Mw= 114.233 VD= 3.9391

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1210.61	10598.	11
HEAT OF VAPORIZATION(25 C)		1305.29	11427.	11
		8.40	73.50	11

	20 C	REF	25 C	REF	40 C	REF
DENSITY (GRAM/ML)	.69193	11	.68781	11		
REFRACTIVE INDEX	1.39145	11	1.38898	11		
SURFACE TENSION	18.77	20	18.32	11	16.99	20
VISCOSITY (CS)	.7259	20			.5958	20

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-36.5	-4.3		20.7	40.7	78.0	99.2	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9092	-1309.92	226.07		.59	10.
EQUATION 2	61.270	-6172.7	-6.44	8.3540	-.18	40.

FLASH POINT(DEG C) (CC) REF (OC) REF

	-12.	3,4	4.5	(8)(9)(L)
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FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
.85 AT 50 C	14(U)		5.95 AT 50 C	14(U)
1.1	3,4,12(A)		6.0	3,4
1.15	(17)(77)			

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
434.	20.	54(AX)		
283.	15.	54(B,AX)		
515.		50	561.	40(N)
447.	12.0	49	467.	74
529.		46	518.	51

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

34.6 (63)	2233 (7)	1.90 (73)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	.29 (7)(57)(BB)	.28 (7)(58)
QUENCHING DISTANCE(CM)=	.20 7	.18 (7)(58)

2,3,3-TRIMETHYLPENTANE

SYNONYMS.

FORMULA= C₈H₁₈ C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1211.96	10610.	11
	(GROSS)	1306.64	11438.	11
HEAT OF VAPORIZATION(25 C)		8.89	77.87	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.72619	11	.72232	11
REFRACTIVE INDEX	1.40750	11	1.40522	11
SUPFACE TENSION	21.56	20	21.10	11
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-25.8	6.9		33.0	53.8	92.7	114.8	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.7395	-1270.10	214.28		-.66 10.
EQUATION 2	86.556	-7532.6	-10.18	35.7757	-.58 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.0	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
430.	12.0	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL.
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

2,3,4-TRIMETHYLPENTANE

SYNONYMS.

FORMULA= C8H18 C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		1211.60	10606.	11
	(GROSS)	1306.28	11435.	11
HEAT OF VAPORIZATION(25 C)		9.01	78.89	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.71906	11	.71503	11
REFRACTIVE INDEX	1.40422	11	1.40198	11
SURFACE TENSION	21.14	20	20.68	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-26.3	7.1		32.9	53.4	91.8	113.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.9834	-1388.78	225.14		.80 10.
EQUATION 2	58.186	-6326.5	-5.91	3.7712	.18 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	5.	(8)(9)(J)		
	2.	20(AY)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.0	8(DD)		

AUTOIGNITION TEMPERATURE				
	DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

2-METHYL-3-ETHYLPENTANE

SYNONYMS.

FORMULA= C8H18 C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1212.90	10618.	11
	(GROSS)	1307.58	11447.	11
HEAT OF VAPORIZATION(25 C)		9.21	80.60	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.71932	11	.71522	11
REFRACTIVE INDEX	1.40401	11	1.40167	11
SURFACE TENSION	21.52	20	21.05	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-24.0	9.5		35.2	55.7	94.0	115.6	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.0217	-1407.20	224.37		1.08	10.
EQUATION 2	57.503	-6382.4	-5.78	1.0623	.36	10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	3.	20(AY)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.98	8(DD)	

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
461.		46	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

3-METHYL-3-ETHYLPENTANE

SYNONYMS.

FORMULA= C8H18 C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1212.12	10611.	11
HEAT OF VAPORIZATION(25 C)		1306.80	11440.	11
		9.08	79.49	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.72742	11	.72354	11
REFRACTIVE INDEX	1.40775	11	1.40549	11
SURFACE TENSION	21.99	20	21.53	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-23.9	9.9		36.2	57.1	96.2	118.3	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9400	-1389.64	224.12		.43	10.
EQUATION 2	62.191	-6534.5	-6.52	10.7155	-.02	100.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	6.	20(AY)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	0.98	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

2,2,3,3-TETRAMETHYLBUTANE

SYNONYMS.

FORMULA= C8H18 C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1207.56	10571.	11
	(GROSS)	1302.24	11400.	11
HEAT OF VAPORIZATION(25 C)		10.24	89.64	11

DENSITY (GRAM/ML)	20 C	REF	30 C	REF	110 C	REF
			.8188	20	.6485	2
REFRACTIVE INDEX	1.4695	2				
SURFACE TENSION	21.14	20	20.22	20		
VISCOSITY (CS)	.634(CP)	(8)(61)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-17.4	13.5		36.8	54.8	87.4	106.3	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.6748	-1573.95	222.44		-1.63 400.
EQUATION 2	50.115	-6634.3	-4.36	-19.1374	-.63 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS

LOWER	UPPER
VOL PER REF	VOL PER REF
1.0 8(DD)	

AUTOIGNITION TEMPERATURE

DEG C DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

NONANE

SYNONYMS. NONYL HYDRIDE

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1358.60	10593.	11
HEAT OF VAPORIZATION(25 C)		1463.80	11413.	11
		11.10	86.54	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.71763	11	.71381	11		
REFRACTIVE INDEX	1.40542	11	1.40311	11		
SURFACE TENSION	22.85	(8)(60)	22.44	11		
VISCOSITY (CS)	.9948	(8)(60)			.8087	11

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	1.4	38.0		66.0	88.1	128.2	150.8	21

VAPOR PRESSURE EQUATION COEFFICIENTS							
	A	B	C	D	MAX ERR	AT P	
EQUATION 1	7.3798	-1720.17	231.68		-.48	400.	
EQUATION 2	50.770	-6735.7	-4.67	4.5780	.41	100.	

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	31.	1,3,4	30.	(8)(9)(L)

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.76 AT 80 C	14(U)	6.5 AT 80 C	14(U)
	.74	1,4	2.9	1,3,4
	.8	3,6		
	.87	(8)(15)(K)		

AUTOIGNITION TEMPERATURE					
DEG C	DELAY(SEC)	REF	DEG C	REF	
285.		1,(22)(47)	206.	3,4	
234.	66.0	49			

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2-METHYLOCTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.352 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1357.26	10582.	11
HEAT OF VAPORIZATION(25 C)		1462.46	11402.	11
		10.67	83.19	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7134	11	.7095	11
REFRACTIVE INDEX	1.4031	11	1.4008	11
SURFACE TENSION	21.88	20	21.41	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-2.5	32.2	53.1		81.0		143.3	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9908	-1454.44	210.56		.54	100.
EQUATION 2	91.413	-8547.9	-10.68	41.5067	-.18	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	32.	20(AY)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	0.85	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
227.	66.0	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

3-METHYLOCTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1357.95	10587.	11
HEAT OF VAPORIZATION(25 C)		1463.15	11408.	11
		10.69	83.35	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7205	11	.7168	11
REFRACTIVE INDEX	1.4063	11	1.4040	11
SURFACE TENSION	22.34	20	21.87	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-2.1	33.0	53.7		81.0		144.2	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9828	-1451.55	209.91		1.66	10.
EQUATION 2	55.395	-6978.8	-5.29	-24.5585	-.29	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS

LOWER	UPPER
VOL PER	VOL PER
REF	REF
0.85	8(DD)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
228.	60.0	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGM. ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

4-METHYLOCTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1358.04	10588.	11
HEAT OF VAPORIZATION(25 C)		1463.24	11408.	11
		10.69	83.35	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7202	11	.7163	11
REFRACTIVE INDEX	1.4062	11	1.4039	11
SURFACE TENSION	22.34	20	21.87	11
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG) - TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-2.8	32.0	52.5		80.0		142.5	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9779	-1440.13	209.14		1.33	10.
EQUATION 2	70.568	-7641.2	-7.55	.9235	-.69	30.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS

LOWER	UPPER
VOL PER	VOL PER
REF	REF
0.85	8(DD)

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
232.	6.0	49		

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

2,2-DIMETHYLHEPTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MM= 128.260 VD= 4.4227

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1355.33	10567.	11
HEAT OF VAPORIZATION(25 C)		1460.53	11387.	11
		10.10	78.75	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7105	11	.7066	11
REFRACTIVE INDEX	1.4016	11	1.3993	11
SURFACE TENSION	20.80	20	20.34	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-11.0	23.3	43.8		71.0		132.7	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9801	-1426.40	215.33		.61	10.
EQUATION 2	71.458	-7384.7	-7.77	12.5306	-.23	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS

	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.85	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

2,3-DIMETHYLHEPTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1357.88	10587.	11
HEAT OF VAPORIZATION(25 C)		1463.08	11407.	11
		10.46	81.55	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7260	11	.7221	11
REFRACTIVE INDEX	1.4085	11	1.4062	11
SURFACE TENSION	22.34	20	21.87	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-5.2	29.4	50.3		78.0		140.5	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9483	-1429.55	210.94		-.23	30.
EQUATION 2	85.891	-8203.2	-9.89	32.4474	-.08	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	26.	20(AY)		

FLAMMABLE LIMITS		LOWER	UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	APS MIN	REF
QUENCHING DISTANCE(CM)=				

2,5-DIMETHYLHEPTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1356.62	10577.	11
	(GROSS)	1461.82	11397.	11
HEAT OF VAPORIZATION(25 C)		10.25	79.92	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7167	11	.7127	11
REFRACTIVE INDEX	1.4038	11	1.4015	11
SURFACE TENSION	21.30	20	20.84	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-8.4	26.2	46.9		74.1		136.0	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.0304	-1461.17	216.21		-.63	100.
EQUATION 2	66.520	-7248.2	-7.02	5.7003	-.04	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	23.5	1		
	23.	20(AY)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2,6-DIMETHYLHEPTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1355.92	10572.	11
	(GROSS)	1461.12	11392.	11
HEAT OF VAPORIZATION(25 C)		10.24	79.84	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7089	11	.7049	11
REFRACTIVE INDEX	1.4007	11	1.3983	11
SURFACE TENSION	20.83	20	20.38	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-8.8	25.5	46.2		73.3		135.2	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9730	-1425.79	213.26		-.38	100.
EQUATION 2	75.587	-7644.4	-8.37	16.4512	.10	30.

FLASH POINT(DEG C) (CC) REF (OC) REF

22. 20(AY)

FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
	0.85	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

3,3-DIMETHYLHEPTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1356.52	10576.	11
HEAT OF VAPORIZATION(25 C)		10.19	79.45	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7256	11	.7216	11
REFRACTIVE INDEX	1.4088	11	1.4063	11
SURFACE TENSION	22.01	20	21.55	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-8.4	26.0	46.9		74.0		137.3	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8535	-1375.37	209.05		-1.28	100.
EQUATION 2	69.561	-7390.1	-7.47	-.4251	.60	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
330.	3.6	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	A&S MIN REF
QUENCHING DISTANCE(CM)=		

3,5-DIMETHYLHEPTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1357.31	10583.	11
	(GROSS)	1462.51	11403.	11
HEAT OF VAPORIZATION(25 C)		10.27	80.07	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7225	11	.7186	11
REFRACTIVE INDEX	1.4067	11	1.4044	11
SURFACE TENSION	21.77	20	21.31	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-8.0	26.0	46.6		73.9		136.0	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.8710	-1370.38	207.44		-.16	30.
EQUATION 2	89.811	-8314.2	-10.48	31.3867	-.03	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	23.5	1		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

4,4-DIMETHYLHEPTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1356.61	10577.	11
	(GROSS)	1461.81	11397.	11
HEAT OF VAPORIZATION(25 C)		10.19	79.45	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7256	11	.7216	11
REFRACTIVE INDEX	1.4076	11	1.4053	11
SURFACE TENSION	22.01	20	21.55	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-9.0	24.5	45.2		73.0		135.2	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.7389	-1303.67	202.50		1.60 100.
EQUATION 2	121.983	-9676.5	-15.31	80.3885	-.06 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	23.5	1		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

3-ETHYLHEPTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1358.73	10594.	11
	(GROSS)	1463.93	11414.	11
HEAT OF VAPORIZATION(25 C)		10.71	83.50	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7265	11	.7225	11
REFRACTIVE INDEX	1.4093	11	1.4070	11
SURFACE TENSION	22.81	20	22.34	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-2.6	32.0	52.7		80.3		143.0	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.9278	-1416.69	207.12		.74 10.
EQUATION 2	81.682	-8135.6	-9.22	17.6882	-.39 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	28.	20(AY)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.85	8(DD)	

AUTOIGNITION TEMPERATURE	
DEG C DELAY(SEC)	REF DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

4-ETHYLHEPTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 126.260 VD= 4.4227

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1358.82	10594.	11
	(GROSS)	1464.02	11414.	11
HEAT OF VAPORIZATION(25 C)		10.71	83.50	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7281	11	.7241	11
REFRACTIVE INDEX	1.4096	11	1.4073	11
SURFACE TENSION	22.81	20	22.34	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-3.4	31.0	51.4		79.0		141.2	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9114	-1397.72	205.61		.95	10.
EQUATION 2	87.486	-8388.3	-10.07	24.1768	-.86	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	26.	20(AV)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2,2,4-TRIMETHYLHEXANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1356.58	10577.	11
	(GROSS)	1441.78	11397.	11
HEAT OF VAPORIZATION(25 C)		9.69	75.55	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7156	11	.7118	11
REFRACTIVE INDEX	1.4033	11	1.4010	11
SURFACE TENSION	20.51	20	20.09	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-16.0	17.0	38.0		65.0		126.5	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.7779	-1309.23	209.23		-2.11	10.
EQUATION 2	112.068	-8958.7	-13.92	72.8683	1.59	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS		LOWER		UPPER
	VOL PER	REF		VOL PER
	0.85	8(DD)		

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2,2,5-TRIMETHYLHEXANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		1354.00	10557.	11
	(GROSS)	1459.20	11377.	11
HEAT OF VAPORIZATION(25 C)		9.60	74.86	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.70721	11	.70322	11
REFRACTIVE INDEX	1.39972	11	1.39728	11
SURFACE TENSION	20.04	20	19.60	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-18.2	16.2	36.4		63.1		124.1	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.0800	-1466.03	225.21		1.50	10.
EQUATION 2	44.906	-6001.7	-3.86	-18.2516	-.50	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	13.	1	13.	3

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF
	0.85 8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

2,3,3-TRIMETHYLHEXANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1357.31	10583.	11
	(GROSS)	1462.51	11403.	11
HEAT OF VAPORIZATION(25 C)		10.09	78.57	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7375	11	.7345	11
REFRACTIVE INDEX	1.4141	11	1.4119	11
SURFACE TENSION	22.41	20	21.95	11
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-9.0	25.0	46.0		74.0		137.7	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.6989	-1303.56	203.62		.79	100.
EQUATION 2	108.502	-9049.6	-13.31	62.8681	.22	30.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	26.	1		

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF
	0.85 8(DD)	

AUTOIGNITION TEMPERATURE	
DEG C DELAY (SEC)	REF DEG C REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

2,3,4-TRIMETHYLHEXANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1358.05	10588.	11
	(GROSS)	1463.25	11408.	11
HEAT OF VAPORIZATION(25 C)		10.26	79.99	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7392	11	.7354	11
REFRACTIVE INDEX	1.4144	11	1.4120	11
SURFACE TENSION	22.80	20	22.34	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-7.0	27.0	48.0		76.0		139.0	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.7674	-1334.80	204.28		1.16	100.
EQUATION 2	112.961	-9331.2	-13.95	70.6836	.20	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	27.	1		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2,3,5-TRIMETHYLHEXANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1356.36	10575.	11
	(GROSS)	1461.56	11395.	11
HEAT OF VAPORIZATION(25 C)		9.90	77.19	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7219	11	.7179	11
REFRACTIVE INDEX	1.4061	11	1.4037	11
SURFACE TENSION	21.27	20	20.82	11
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-12.9	21.0	42.0		69.0		131.3	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.8703	-1372.33	212.66		1.00	30.
EQUATION 2	82.512	-7787.6	-9.46	28.4998	1.11	30.

FLASH POINT (DEG C) (CC) REF (OC) REF

13. (8)(9)(L)

FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
	0.85	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
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MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE) =		
QUENCHING DISTANCE (CM) =		

2,4,4-TRIMETHYLHEXANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1357.07	10581.	11
	(GROSS)	1462.27	11401.	11
HEAT OF VAPORIZATION(25 C)		9.76	76.10	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.72381	11	.72007	11
REFRACTIVE INDEX	1.40745	11	1.40515	11
SURFACE TENSION	21.17	20	20.75	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-14.2	19.9	40.6		68.1		130.7	20

VAPOR PRESSURE EQUATION COEFFICIENTS							
	A	B	C	D	MAX ERR	AT P	
EQUATION 1	6.8355	-1359.35	213.07		-.09	10.	
EQUATION 2	83.846	-7784.3	-9.68	32.4450	.15	30.	

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	0.85	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

3,3,4-TRIMETHYLHEXANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		1357.92	10587.	11
	(GROSS)	1463.12	11407.	11
HEAT OF VAPORIZATION(25 C)		10.11	78.82	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7454	11	.7414	11
REFRACTIVE INDEX	1.4178	11	1.4154	11
SURFACE TENSION	23.27	20	22.79	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-7.9	27.0	48.0		77.0		140.5	20

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8403	-1397.23	212.20		2.08 100.
EQUATION 2	105.145	-8880.0	-12.84	74.9474	-1.10 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	26.	1		

FLAMMABLE LIMITS		LOWER	UPPER	
	VOL PER	REF	VOL PER	REF
	0.85	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

2,2,3,3-TETRAMETHYLPENTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1357.90	10587.	11
HEAT OF VAPORIZATION(25 C)		1463.10	11407.	11
		9.80	76.41	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.75666	11	.75299	11
REFRACTIVE INDEX	1.42360	11	1.42140	11
SURFACE TENSION	23.38	20	22.93	11
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-10.3	26.1	47.4		75.7		140.3	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.0726	-1547.16	228.99		1.73 10.
EQUATION 2	36.684	-5740.6	-2.66	-25.7374	-.68 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS LOWER

VOL PER	REF	UPPER	REF
.8	3,4,12(A,GG)	4.9	3,4,12(A,GG)
.84	(8)(15)(M)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
505.		51(AU)	516.	51(AT)
452.	42.	49	430.	4

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

2,2,3,4-TETRAMETHYLPENTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1358.37	10591.	11
	(GROSS)	1463.57	11411.	11
HEAT OF VAPORIZATION(25 C)		9.80	76.41	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.73895	11	.73524	11
REFRACTIVE INDEX	1.41472	11	1.41246	11
SURFACE TENSION	21.98	20	21.54	11
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-13.0	20.9	41.9		69.6		133.0	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.7101	-1303.57	707.30		-.81 10.
EQUATION 2	102.338	-8620.2	-12.44	57.7229	.48 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.85	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

2,2,4,4-TETRAMETHYLPENTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1357.49	10584.	11
HEAT OF VAPORIZATION(25 C)		1462.69	11404.	11
		9.11	71.03	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.71947	11	.71563	11
REFRACTIVE INDEX	1.40694	11	1.40459	11
SURFACE TENSION	20.37	20	19.92	11
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-24.7	12.5	33.0		60.1		122.3	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.5702	-1803.34	262.75		4.37	10.
EQUATION 2	-31.437	-2446.1	7.49	-103.9010	-1.52	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS		LOWER	UPPER	
	VOL PER	REF	VOL PER	REF
	0.85	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL		
	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

2,3,3,4-TETRAMETHYLPENTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1358.02	10588.	11
HEAT OF VAPORIZATION(25 C)		1463.22	11408.	11
		9.98	77.81	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.75473	11	.75113	11
REFRACTIVE INDEX	1.42222	11	1.42003	11
SURFACE TENSION	23.31	20	22.88	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-8.4	27.2	48.6		77.0		141.5	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9319	-1461.36	219.24		.47	10.
EQUATION 2	65.299	-7082.7	-6.91	13.2015	-.09	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS			
LOWER		UPPER	
VOL PER	REF	VOL PER	REF
0.85	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
437.	24.0	49	514.	51(AT)
497.		51(AU)		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

2,2-DIMETHYL-3-ETHYLPENTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1357.52	10584.	11
HEAT OF VAPORIZATION(25 C)		1462.72	11404.	11
		10.04	78.28	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7348	11	.7310	11
REFRACTIVE INDEX	1.4123	11	1.4102	11
SURFACE TENSION	22.38	20	21.92	11
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-10.9	22.0	43.0		71.0		133.8	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.5713	-1221.89	196.90		-2.42	10.
EQUATION 2	148.981	-10767.7	-19.38	120.5405	.89	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS LOWER		UPPER	
VOL PER	REF	VOL PER	REF
0.85	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

2,4-DIMETHYL-3-ETHYLPENTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VD= 4.4227

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1358.14	10589.	11
HEAT OF VAPORIZATION(25 C)		1463.34	11409.	11
		10.26	79.99	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7379	11	.7341	11
REFRACTIVE INDEX	1.4137	11	1.4115	11
SURFACE TENSION	22.80	20	22.34	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-8.4	24.0	45.0		73.0		136.7	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.4115	-1144.38	187.01		-2.69	10.
EQUATION 2	169.610	-11810.2	-22.41	139.5742	1.21	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	0.85	8(DD)		

AUTOIGNITION TEMPERATURE					
DEG C	DELAY(SEC)	REF	DEG C	REF	
390.	12.0	49	510.	51(AT)	
472.		51(AU)			

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

3,3-DIMETHYLPENTANE

SYNONYMS.

FORMULA= C9H20 C/H= 5.362 MW= 128.260 VC= 4.4227

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1358.81	10594.	11
	(GROSS)	1464.01	11414.	11
HEAT OF VAPORIZATION(25 C)		10.36	80.77	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.75359	11	.75000	11
REFRACTIVE INDEX	1.42051	11	1.41837	11
SURFACE TENSION	23.75	20	23.29	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-4.2	30.7	52.4		81.0		146.2	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.7372	-1357.63	205.75		-.98 10.
EQUATION 2	104.532	-8995.9	-12.71	65.3811	.54 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.7	3,4	5.7	3,4

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
322.		1	290.	3,4

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

DECANE

SYNONYMS. DECYL HYDRIDE

FORMULA= C10H22 C/H= 5.416 MW= 142.287 VD= 4.9064

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1504.34	10573.	11
HEAT OF VAPORIZATION(25 C)		12.28	86.30	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.73005	11	.72625	11		
REFRACTIVE INDEX	1.41189	11	1.40967	11		
SURFACE TENSION	23.83	(8)(60)	23.37	11		
VISCOSITY (CS)	1.268	(8)(60)			1.004	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	17.1	55.4		84.6	108.0	149.9	173.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.4203	-1824.08	228.73		-.77 40.
EQUATION 2	61.872	-7665.7	-6.25	24.8797	-.65 40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	46.	1,3,6	44.	(8)(9)(L)
	44.	4		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER
	.66 AT 80 C	14(U)	5.0 AT 80 C
	.7	1,4	2.6
	.78	(8)(15)(M)	5.4
	.8	3,6,12(A)	3,4,6,8

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
250.		1,(22)(47)	208.	3,4
202.		(22)(23)(B)	463.	(22)(23)
425.		40(N)	236.	50
232.	54.0	49	253.	46

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
40.2 (62)(P)	2287 (62)	1.40 (73)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

2-METHYLNONANE

SYNONYMS.

FORMULA= C10H22 C/H= 5.416 MM= 142.287 VD= 4.9064

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1502.99	10563.	11
HEAT OF VAPORIZATION(25 C)		1618.71	11376.	11

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7264	11	.7203	20
REFRACTIVE INDEX	1.4100	11	1.4053	20
SURFACE TENSION	22.21	20	21.27	20
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	13.5	50.4	72.4		101.3		166.8	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.0671	-1572.81	208.98		-.55	100.
EQUATION 2	72.886	-8185.9	-7.84	11.0682	.01	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	0.75	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
214.	102.0	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

3-METHYLNONANE

SYNONYMS.

FORMULA= C10H22 C/H= 5.416 MW= 142.287 VD= 4.9064

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1503.67	10568.	11
	(GROSS)	1619.39	11381.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7334	11	.7258	20
REFRACTIVE INDEX	1.4125	11	1.4080	20
SURFACE TENSION	22.86	20	21.93	20

VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	15.7	52.5	74.4		103.1		167.8	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.1490	-1609.48	209.36		-.53 100.
EQUATION 2	72.678	-8277.7	-7.77	10.1028	-.00 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.75	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

4-METHYLNONANE

SYNONYMS.

FORMULA= C₁₀H₂₂ C/H= 5.416 MW= 142.287 VD= 4.9064

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1503.78	10569.	11
	(GROSS)	1619.50	11382.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7322	11	.7245	20
REFRACTIVE INDEX	1.4118	11	1.4076	20
SURFACE TENSION	22.72	20	21.77	20

VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	14.3	50.8	72.6		101.2		165.7	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.1322	-1593.06	209.09		-.51	100.
EQUATION 2	73.557	-8276.3	-7.91	10.8486	.01	10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS

LOWER		UPPER	
VOL PER	REF	VOL PER	REF
0.75	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

5-METHYLNONANE

SYNONYMS.

FORMULA= C10H22 C/H= 5.416 MW= 142.287 VD= 4.9064

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1503.81	10569.	11
HEAT OF VAPORIZATION(25 C)		1619.53	11382.	11

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7326	11	.7250	20
REFRACTIVE INDEX	1.4122	11	1.4077	20
SURFACE TENSION	22.76	20	21.83	20
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	13.8	50.3	72.0		100.6		165.1	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.1232	-1586.43	208.92		.52 10.
EQUATION 2	73.810	-8273.5	-7.95	10.9456	.02 10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.75	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

2,3-DIMETHYLOCTANE

SYNONYMS.

FORMULA= C₁₀H₂₂ C/H= 5.416 MW= 142.287 VD= 4.9064

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1503.42	10566.	11
	(GROSS)	1619.14	11379.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7379	11	.7298	20
REFRACTIVE INDEX	1.4149	11	1.4102	20
SURFACE TENSION	23.39	20	22.41	20
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	9.6	46.7	68.9		98.0		163.8	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.0974	-1600.96	215.95		-.46 100.
EQUATION 2	65.454	-7655.0	-6.80	9.8710	-.01 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
231.	72.0	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

2,7-DIMETHYLOCTANE

SYNONYMS.

FORMULA= C₁₀H₂₂ C/H= 5.416 MW= 142.287 VD= 4.9064

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1501.62	10553.	11
HEAT OF VAPORIZATION(25 C)		1617.34	11367.	11

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7242	11	.7162	20
REFRACTIVE INDEX	1.4086	11	1.4038	20
SURFACE TENSION	21.73	20	20.79	20
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	6.3	42.3		71.2	93.9	136.0	159.7	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8973	-1477.23	207.93		-1.41	10.
EQUATION 2	94.056	-8878.3	-11.06	52.9809	-.99	10.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.75	8 (DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
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MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY (MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE (CM)=		

4,5-DIMETHYLOCTANE

SYNONYMS.

FORMULA= C10H22 C/H= 5.416 MW= 142.287 VD= 4.9064

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1504.22	10572.	11
HEAT OF VAPORIZATION(25 C)		1619.94	11385.	11

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7470	11	.7394	20
REFRACTIVE INDEX	1.4190	11	1.4145	20
SURFACE TENSION	24.60	20	23.62	20
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	8.3	45.4	67.5		96.5		162.1	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.1150	-1607.41	217.59		.68 10.
EQUATION 2	60.478	-7383.4	-6.07	2.5994	-.11 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
388.		50		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

3-ETHYLOCTANE

SYNONYMS.

FORMULA= C₁₀H₂₂ C/H= 5.416 MW= 142.287 VD= 4.9064

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1504.47	10574.	11
HEAT OF VAPORIZATION(25 C)		1620.19	11387.	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7399	11	.7359	11
REFRACTIVE INDEX	1.4156	11	1.4136	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							166.5	11

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C)	(CC)	REF	(CC)	REF
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FLAMMABLE LIMITS		LOWER	UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY (SEC)	REF	DEG C REF
235.		50	

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
------------------------	--------------------	------------------

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE)=				
QUENCHING DISTANCE (CM)=				

4-ETHYLOCTANE

SYNONYMS.

FORMULA= C10H22 C/H= 5.416 MW= 142.287 VD= 4.9064

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1504.61	10574.	11
HEAT OF VAPORIZATION(25 C)		1620.33	11388.	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7381	11	.7343	11
REFRACTIVE INDEX	1.4151	11	1.4131	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							163.6	11

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
--------------------	------	-----	------	-----

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
237.	54.0	49		

MAX FLAME VEL(ICM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(ICM)=				

2,2,6-TRIMETHYLHEPTANE

SYNONYMS.

FORMULA= C10H22 C/H= 5.416 MW= 142.287 VD= 4.9064

HEAT OF COMBUSTION OF LIQUID (NET) (GROSS) KCAL/MOLE 1499.68 1615.40 CAL/GRAM 10540. 11353. REF 11 11

HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML) .7238 11 .7117 20 REF 20 C REF 30 C REF 20
 REFRACTIVE INDEX 1.4078 11 1.4012 20
 SURFACE TENSION 21.17 20 20.27 20
 VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P 1 10 30 40 100 400 760 REF
 T -1.3 34.6 56.2 84.3 148.2 20

VAPOR PRESSURE EQUATION COEFFICIENTS

EQUATION 1 A 7.0829 B -1543.56 C 219.21 D MAX ERR AT P -.64 100.
 EQUATION 2 62.445 -7211.8 -6.41 6.7473 .27 30.

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF
 0.75 8(DD)

AUTOIGNITION TEMPERATURE

DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)= STOICH REF ABS MIN REF
 QUENCHING DISTANCE(CM)=

2,5,5-TRIMETHYLHEPTANE

SYNONYMS.

FORMULA= C10H22 C/M= 5.416 MM= 142.287 VD= 4.9064

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1500.89	10548.	11
HEAT OF VAPORIZATION(25 C)		1616.61	11362.	11

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7400	11	.7288	20
REFRACTIVE INDEX	1.4149	11	1.4088	20
SURFACE TENSION	23.29	20	22.29	20
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	.1	36.6	58.5		87.3		152.8	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.0071	-1531.61	218.46		.51	10.
EQUATION 2	62.998	-7231.6	-6.51	8.8622	-.02	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
485.		50	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

4-ISOPROPYLHEPTANE

SYNONYMS.

FORMULA= C10H22 C/H= 5.416 MW= 142.287 VD= 4.9064

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1504.36	10573.	11
HEAT OF VAPORIZATION(25 C)		1620.08	11386.	11

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7392	11	.733	20
REFRACTIVE INDEX	1.4155	11	1.412	20
SURFACE TENSION	23.82	20	22.81	20
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	6.9	43.8	65.8		94.7		160.0	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.1105	-1597.27	217.71		.61	10.
EQUATION 2	62.291	-7429.9	-6.35	5.9639	-.12	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
288.		50	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

UNDECANE

SYNONYMS. HENDECANE

FORMULA= C₁₁H₂₄ C/H= 5.462 MM= 156.314 VD= 5.3901

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		1649.00	10549.	(8)(60)
	(GROSS)	1775.24	11357.	(8)(60)
HEAT OF VAPORIZATION(25 C)		9.92	63.44	(8)(15)(R)

	20 C	REF	30 C	REF	110 C	REF
DENSITY (GRAM/ML)	.74026	8(Q)	.7329	20		
REFRACTIVE INDEX	1.41725	8(Q)	1.41284	20		
SURFACE TENSION	24.66	(8)(60)	23.80	20		
VISCOSITY (CS)	1.601	(8)(60)			.5977	20

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	31.4	72.2		103.1	126.8	170.6	194.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.6891	-2091.67	240.60		-.93 100.
EQUATION 2	36.853	-6768.3	-2.56	-6.1391	-.56 100.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
			65.	(8)(9)(L)
			65.	3,4

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

2-METHYLDECANE

SYNONYMS.

FORMULA= C11H24 C/H= 5.462 MW= 156.314 VD= 5.3901

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T								

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY(SEC) REF DEG C REF
231. 50

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

DODECANE

SYNONYMS. DIHEXYL

FORMULA= C12H26 C/H= 5.500 MW= 170.341 VD= 5.8738

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1794.61	10535.	(8)(60)
HEAT OF VAPORIZATION(25 C)		1931.37	11338.	(8)(60)
		10.43	61.23	(8)(15)(R)

	20 C	REF	30 C	REF	150 C	REF
DENSITY (GRAM/ML)	.74871	8(Q)	.74163	20		
REFRACTIVE INDEX	1.42160	(8)(60)	1.41735	20		
SURFACE TENSION	25.35	(8)(60)	24.51	20		
VISCOSITY (CS)	2.007	(8)(60)			.5128	20

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	47.8	90.0		121.7	146.2	191.0	216.2	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.6970	-2161.60	232.98		1.00	10.
EQUATION 2	32.093	-6976.7	-1.79	-28.5014	.05	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	74.	1,3,4		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	.6	1,3,4,(8)(15)	

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
204.		3,4	232. 50

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

ISODODECANE

SYNONYMS.

FORMULA= C12H26 C/H= 5.500 MW= 170.341 VD= 5.8738

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
 (GROSS)
HEAT OF VAPORIZATION(25 C)

 25 C REF
DENSITY (GRAM/ML)
REFRACTIVE INDEX 1.4170 51
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T 178.0 51(AQ)

VAPOR PRESSURE EQUATION COEFFICIENTS
 A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
 DEG C DELAY(SEC) REF DEG C REF
 500. 46 500. 51
 534. 40(N)

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
 STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

1,1-DINEOPENTYLETHANE

SYNONYMS.

FORMULA= C12H26 C/H= 5.500 MW= 170.341 VD= 5.8738

HEAT OF COMBUSTION (NET) (GROSS) KCAL/MOLE CAL/GRAM REF
HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML) 25 C REF
REFRACTIVE INDEX 1.4169 51
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T 177.0 51(AQ)

VAPOR PRESSURE EQUATION COEFFICIENTS
A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY(SEC) REF DEG C REF
500. 51

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
MIN IGN ENERGY(MILLIJOULE)= STOICH REF ABS MIN REF
QUENCHING DISTANCE(CM)=

TRIDECANE

SYNONYMS.

FORMULA= C13H28 C/H= 5.533 MW= 184.368 VD= 6.3575

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1940.33	10524.	(8)(60)
HEAT OF VAPORIZATION(25 C)		2087.61	11323.	(8)(60)
		10.91	59.18	(8)(15)(R)

	20 C	REF	30 C	REF	170 C	REF
DENSITY (GRAM/ML)	.75604	(8)(Q)	.7492	20		
REFRACTIVE INDEX	1.42560	(8)(60)	1.4213	20		
SURFACE TENSION	25.99	(8)(60)	25.2	20		
VISCOSITY (CS)	2.487	(8)(60)			.5043	20

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	59.4	104.0		137.7	162.5	209.4	234.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	8.0842	-2549.58	255.95		-1.99 100.
EQUATION 2	25.704	-6797.7	-.91	-8.2571	-1.73 100.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	79.5	(8)(9)(J)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
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MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY (MILLIJOULE) =	STOICH REF	ABS MIN REF
QUENCHING DISTANCE (CM) =		

TETRADECANE

SYNONYMS.

FORMULA = C₁₄H₃₀ C/H = 5.561 MW = 198.395 VD = 6.8412

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	2085.94	10514.	(8)(60)
HEAT OF VAPORIZATION(25 C)		2243.74	11309.	(8)(60)
		11.37	57.31	(8)(15)(R)

	20 C	REF	30 C	REF	190 C	REF
DENSITY (GRAM/ML)	.76277	8(Q)	.7558	20		
REFRACTIVE INDEX	1.42892	(8)(60)	1.4247	20		
SURFACE TENSION	26.56	(8)(60)	25.7	20		
VISCOSITY (CS)	3.061	(8)(60)			.4946	20

VAPOR PRESSURE (MM HG) - TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	76.4	120.7		152.7	178.5	226.8	252.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.5078	-2120.78	205.93		3.49	10.
EQUATION 2	52.683	-8963.5	-4.62	-27.7363	2.36	10.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	100.	1,3,4	121.	(8)(9)(L)

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	.5	1,3,4	

AUTOIGNITION TEMPERATURE			
DEG C	DELAY (SEC)	REF	DEG C REF
202.		3	232. 50

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE) =				
QUENCHING DISTANCE (CM) =				

HEXADECANE

SYNONYMS. CETANE

FORMULA = C16H34 C/H = 5.608 MW = 226.449 VD = 7.8086

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	2377.16	10498.	(8)(60)
	(GROSS)	2556.00	11287.	(8)(60)
HEAT OF VAPORIZATION(25 C)		12.28	54.23	(9)(15)(R)

	20 C	REF	30 C	REF	225 C	REF
DENSITY (GRAM/ML)	.77346	9(Q)	.76648	20		
REFRACTIVE INDEX	1.43553	(8)(60)	1.43036	20		
SURFACE TENSION	27.47	(8)(60)	26.7	20		
VISCOSITY (CS)	4.492	(8)(60)			.4816	20

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	105.3	149.8		181.3	208.5	258.3	287.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9668	-1789.71	151.36		5.70	10.
EQUATION 2	75.658	-11479.8	-7.64	-92.5371	-3.56	40.

FLASH POINT(DEG C) (CC) REF (OC) REF
 135. 70(K)
 FIRE POINT (DEG C) = 140.5 70

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
232.		50	235.	(22)(50)(S)
230.	66.0	49	235.	46(S)
205.		4.6	241.	70
232.		51(AT)		

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
 40.7 (62)(P) 2284 (62) 0.92 (73)
 STOICH REF ABS MIN REF

MIN IGN ENERGY(MILLIJOULE) =
 QUENCHING DISTANCE(CM) =

ISOHEXADECANE

SYNONYMS.

FORMULA= C16H34 C/H= 5.608 MW= 226.449 VD= 7.8086

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	25 C	REF	37.70 C	REF
DENSITY (GRAM/ML)				
REFRACTIVE INDEX	1.4370	51		
SURFACE TENSION				
VISCOSITY (CS)			28 SSU	51 (AR)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							118.5	51 (AS)

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS		LOWER	UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
484.		51	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

OCTADECANE

SYNONYMS.

FORMULA= C18H38 C/H= 5.645 MW= 254.504 VD= 8.7760

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	2668.61	10486.	(8)(60)
HEAT OF VAPORIZATION(25 C)		2868.49	11271.	(8)(60)
		13.01	51.12	(8)(15)(R)

DENSITY (GRAM/ML)	20 C	REF	25 C	REF	30 C	REF
	.7818	8(Q)	.7785	20	.7751	20
REFRACTIVE INDEX	1.4389	(8)(T)	1.4369	(8)(T)		
SURFACE TENSION	28.29	(8)(T)			27.5	20
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	119.6	169.6		207.4	236.0	288.0	317.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.9680	-2772.28	228.30		-.82 400.
EQUATION 2	36.145	-8925.4	-2.25	-24.2327	.69 40.

FLASH POINT (DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY (SEC) REF DEG C REF
235. 50

MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL
STOICH REF ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=
QUENCHING DISTANCE (CM)=

NONADECANE

SYNONYMS.

FORMULA= C19H40 C/H= 5.660 MW= 268.531 VD= 9.2597

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	2814.11	10480.	(8)(60)
HEAT OF VAPORIZATION(25 C)		3024.51	11263.	(8)(60)
		13.38	49.83	(8)(15)(R)

	20 C	REF	25 C	REF	40 C	REF
DENSITY (GRAM/ML)	.7854	8(Q)	.7821	20		
REFRACTIVE INDEX	1.4408	(8)(T)	1.4388	(8)(T)		
SURFACE TENSION	28.59	(8)(T)			26.9	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	133.2	183.5		220.0	248.0	299.8	330.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.8910	-2682.69	206.57		3.17 10.
EQUATION 2	3.475	-7464.7	2.48	-163.4155	.27 10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
237.		50		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

EICOSANE

SYNONYMS.

FORMULA= C20H42 C/H= 5.674 MW= 282.558 VD= 9.7434

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	2959.89	10475.	(8)(60)
HEAT OF VAPORIZATION(25 C)		3180.81	11257.	(8)(60)
		13.74	48.63	(8)(15)(R)

DENSITY (GRAM/ML)	20 C	REF	25 C	REF	40 C	REF
	.7886	8(Q)	.7853	20		
REFRACTIVE INDEX	1.4425	(8)(T)	1.4405	(8)(T)		
SURFACE TENSION	28.87	(8)(T)			27.2	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							343.0	2

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
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AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
240.		50		

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

CYCLOPROPANE

SYNONYMS. TRIMETHYLENE

FORMULA= C3H6 C/H= 5.958 MW= 42.081 VD= 1.4511

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	15.56 C	REF
DENSITY (GRAM/ML)	.563	11
REFRACTIVE INDEX		
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-116.8	-97.5		-82.3	-70.0	-46.9	-33.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.6364	-719.92	225.27		.44	10.
EQUATION 2	101.138	-5444.1	-13.13	10.5025	.40	100.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS		LOWER		UPPER
	VOL PER	REF	VOL PER	REF
	2.4	1,3,4,(8)(15)	10.4	1,3,4,(8)(15)
	2.4	12(A),66	10.4	12(A),66
	2.48	66(B)	60.0	66(B)
	2.45	30	10.45	30
	2.5	12(A,B)	60.	12(A,B)
			10.3	52

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
454.		54(B)	
498.		1,3,4	498. 54

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
47.5 (63)	2358 (7)	4.97 (72)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	.35 56	.18 56
QUENCHING DISTANCE(CM)=	.18 7	.18 7

CYCLOBUTANE

SYNONYMS.

FORMULA= C4H8 C/H= 5.958 MW= 56.108 VD= 1.9348

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.6943	11(D)	.6890	11(D)
REFRACTIVE INDEX	1.365	11(D)	1.362	11(D)
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							12.5	11

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
--------------------	------	-----	------	-----

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
56.6 (62)	2311 (62)	3.88 (73)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

METHYLCYCLOPROPANE

SYNONYMS.

FORMULA= C4H8 C/H= 5.958 MW= 56.108 VD= 1.9348

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
(GROSS)
HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T .7 11

VAPOR PRESSURE EQUATION COEFFICIENTS
A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
49.2 (62) 2319 (62) 3.93 (73)
STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

CYCLOPENTANE

SYNONYMS. PENTAMETHYLENE

FORMULA= C5H10 C/H= 5.958 MW= 70.135 VD= 2.4185

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	733.94	10465.	11
HEAT OF VAPORIZATION(25 C)		786.54	11215.	11
		6.82	97.21	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.74538	11	.74045	11		
REFRACTIVE INDEX	1.40645	11	1.40363	11		
SURFACE TENSION	22.42	(8)(60)	21.82	11		
VISCOSITY (CS)	.589	19			.499	11

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-68.0	-40.4		-18.6	-1.3	31.0	49.3	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8594	-1111.37	230.03		-.31	10.
EQUATION 2	71.214	-5743.6	-8.12	16.5742	-.39	10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-42.	19(A)		
	-37.0	3,(8)(9)(J)		
	-6.5	6		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.4	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
385.	6.	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
37.3 (63)	2264 (7)	3.16 (72)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	.83 (7)(57)(E)	
QUENCHING DISTANCE(CM)=	.33 7	

METHYLCYCLOBUTANE

SYNONYMS.

FORMULA= C5H10 C/H= 5.958 MW= 70.135 VD= 2.4185

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.6930	11	.6884	11
REFRACTIVE INDEX	1.3836	11	1.3810	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							36.3	11

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
44.6 (72)		3.18 (72)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

CIS-1,2-DIMETHYLCYCLOPROPANE

SYNONYMS.

FORMULA= C5H10 C/H= 5.958 MW= 70.135 VD= 2.4185

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
 (GROSS)
HEAT OF VAPORIZATION(25 C)

 20 C REF 25 C REF
DENSITY (GRAM/ML) .6939 11 .6889 11
REFRACTIVE INDEX 1.3829 11 1.3800 11
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM H.G.)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T 37.0 11

VAPOR PRESSURE EQUATION COEFFICIENTS
 A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (C) REF (O) REF

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
 DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
 46.5 (62) 2319 (62) 3.16 (73)
 STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

TRANS-1,2-DIMETHYLCYCLOPROPANE

SYNONYMS.

FORMULA = C5H10 C/H = 5.958 MM = 70.135 VD = 2.4185

HEAT OF COMBUSTION (NET)
(GROSS)
HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.6698	11	.6648	11
REFRACTIVE INDEX	1.3713	11	1.3683	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							28.2	11

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
46.2 (62) 2312 (62) 3.19 (73)
STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE) =
QUENCHING DISTANCE(CM) =

ETHYLCYCLOPROPANE

SYNONYMS.

FORMULA= C5H10 C/H= 5.958 MW= 70.135 VD= 2.4185

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.6840	11	.6790	11
REFRACTIVE INDEX	1.3786	11	1.3756	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							35.9	11

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS		LOWER	UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
47.5 (62)	2291 (62)	3.40 (73)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

CYCLOMEXANE

SYNONYMS. HEXAHYDROBENZENE, HEXAMETHYLENE

FORMULA = C₆H₁₂ C/M = 5.958 MM = 84.163 VD = 2.9022

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	873.76	10382.	11
HEAT OF VAPORIZATION(25 C)		936.88	11132.	11
		7.90	93.81	11

	20 C	REF	25 C	REF	40 C	REF
DENSITY (GRAM/ML)	.77855	11	.77389	11		
REFRACTIVE INDEX	1.42623	11	1.42354	11		
SURFACE TENSION	24.98	(8)(60)	24.38	11	21.99	19
VISCOSITY (CS)	1.258	19			.926	19

VAPOR PRESSURE (MM HG) - TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-45.3	-15.9		6.7	25.5	60.8	80.7	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.6282	-1086.16	209.13		1.65 10.
EQUATION 2	92.698	-7320.8	-11.19	19.9212	-1.29 40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-17.0	1		
	-20.0	3,4		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER
	1.3 AT 50 C	14(U)	9.1 AT 50 C
	1.3	1,3,4,(8)(15)	8.4
	1.3	12(A)	8.
			7.8
			14(U)
			1,4
			3,12(A)
			(8)(15)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
268.		1	259.	3,4
296.		(22)(33)(B)	325.	(22)(24)(B)
270.	102.	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
38.7 (69)	2249 (55)	2.65 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE) =	1.0 56	.23 56
QUENCHING DISTANCE(CM) =	.41 7	.18 7

METHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C6H12 C/H= 5.958 MM= 84.163 VD= 2.9022

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	878.02	10432.	11
HEAT OF VAPORIZATION(25 C)		941.14	11182.	11
		7.56	89.83	11

	20 C	REF	25 C	REF	40 C	REF
DENSITY (GRAM/ML)	.74864	11	.74394	11		
REFRACTIVE INDEX	1.40970	11	1.40700	11		
SURFACE TENSION	22.19	(8)(60)	21.61	11		
VISCOSITY (CS)	.677	19			.555	19

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-53.7	-23.7		-0.6	17.9	52.3	71.8	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.9847	-1247.31	232.25		.89 10.
EQUATION 2	54.950	-5503.0	-5.54	2.6570	-.37 40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-25.	19(A Y)		
	-27.0	(8)(9)(J)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER
	1.2 AT 50 C	14(U)	8.5 AT 50 C
	1.2	8(DD)	8.35
			(8)(16)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
323.	6.	49	329.	(22)(33)(8)
469.		46		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
36.0 (63)	2228 (7)	2.75 (72)

MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

ETHYLCYCLOBUTANE

SYNONYMS.

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7279	11	.7232	11
REFRACTIVE INDEX	1.4020	11	1.3994	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	10	30	40	100	400	760	REF
T						70.6	11

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS

LOWER		UPPER	
VOL PER	REF	VOL PER	REF
1.2	3,4,12(A)	7.7	3,4,12(A)

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
211.		(22)(30)	212.	3,4

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
44.7 (62)	2291 (62)	2.62 (73)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY (MILLIJOULE)=
 QUENCHING DISTANCE (CM)=

1,1,2-TRIMETHYLCYCLOPROPANE

SYNONYMS.

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.6947	11	.6897	11
REFRACTIVE INDEX	1.3864	11	1.3834	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							52.4	11

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
43.5 (62)	2310 (62)	2.62 (73)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

ISOPROPYLCYCLOPROPANE

SYNONYMS. 2-CYCLOPROPYLPROPANE

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

KCAL/MOLE CAL/GRAM REF
HEAT OF COMBUSTION (NET)
(GROSS)
HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA
P 1 10 30 40 100 400 760 REF
T

VAPOR PRESSURE EQUATION COEFFICIENTS
A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT (DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY (SEC) REF DEG C REF

MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL
42.7 (72) STOICH REF ABS MIN REF
2.66 (72)
MIN IGN ENERGY (MILLIJOULE)=
QUENCHING DISTANCE (CM)=

CYCLOHEPTANE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1021.50	10403.	11
HEAT OF VAPORIZATION(25 C)		1095.14	11153.	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.8110	11	.8066	11
REFRACTIVE INDEX	1.4449	11	1.4424	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							118.8	11

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
--------------------	------	-----	------	-----

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.1	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

METHYLCYCLOHEXANE

SYNONYMS. HEXAHYDROTOLUENE, CYCLOHEXYLMETHANE

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1017.49	10362.	11
HEAT OF VAPORIZATION(25 C)		1091.13	11112.	11
		8.45	86.07	11

	20 C	REF	25 C	REF	40 C	REF
DENSITY (GRAM/ML)	.76939	11	.76506	11		
REFRACTIVE INDEX	1.42312	11	1.42058	11		
SURFACE TENSION	23.81	19	23.17	11	21.76	19
VISCOSITY (CG)	.954	19			.750	19

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-35.9	-3.2		22.0	42.1	79.6	100.9	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9855	-1359.75	230.52		.89	10.
EQUATION 2	51.732	-5780.7	5.00	.1622	-.25	40.

FLASH POINT (DEG C)

(CC)	REF	(OC)	REF
-4.0	1,3,4		
-1.0	19(A,Y)		

FLAMMABLE LIMITS

LOWER	UPPER
VOL PER	VOL PER
REF	REF
.94 AT 50 C	7.1 AT 50 C
14(U)	14(U)
1.2	3,4,(8)(15)
1.2	12(A)
1.5	1

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
285.		3	285.	(22)(33)(B)
265.	108.	49	393.	46

MAX FLAME VEL (CM/SEC)

FLAME TEMP (DEG K)	VOL PERCENT FUEL
2186 (7)	2.43 (72)
37.5 (63)	
STOICH REF	ABS MIN REF
	.27 (7)(59)(F)
MIN IGN ENERGY (MILLIJOULE)=	.18 7
QUENCHING DISTANCE (CM)=	

1,1-DIMETHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1021.80	10406.	11
HEAT OF VAPORIZATION(25 C)		1095.44	11156.	11
		8.08	82.28	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.75448	11	.74991	11
REFRACTIVE INDEX	1.41356	11	1.41091	11
SURFACE TENSION	21.74	(8)(60)	21.23	11
VISCOSITY (CS)	1.249	(8)(61)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-43.1	-12.3	6.4		31.2		87.9	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8257	-1223.86	222.40		.07	10.
EQUATION 2	75.266	-6581.4	-8.58	21.0200	.10	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-12.0	19(AY)		

FLAMMABLE LIMITS	LOWER	UPPER		
	VOL PER	REF	VOL PER	REF
	1.1	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

CIS-1,2-DIMETHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1023.42	10423.	11
HEAT OF VAPORIZATION(25 C)		1097.06	11173.	11
		8.55	87.07	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.77262	11	.76807	11	.76351	19
REFRACTIVE INDEX	1.42217	11	1.41963	11	1.41691	19
SURFACE TENSION	24.05	19			22.93	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-34.9	-3.3	16.0		41.5		99.5	19

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8438	-1265.69	219.84		-.04 10.
EQUATION 2	78.834	-6967.8	-9.06	25.3242	.12 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-4.0	19(AV)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.1	8(DD)	

AUTOIGNITION TEMPERATURE	
DEG C DELAY(SEC)	REF DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

TRANS-1,2-DIMETHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1022.00	10408.	11
	(GROSS)	1095.64	11158.	11
HEAT OF VAPORIZATION(25 C)		8.26	84.11	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.75144	11	.74686	11	.74227	19
REFRACTIVE INDEX	1.41200	11	1.40941	11	1.40667	19
SURFACE TENSION	21.51	19			20.47	19
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-40.1	-9.0	9.9		34.9		91.9	19

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8475	-1244.15	221.79		.15	10.
EQUATION 2	75.282	-6674.7	-8.56	20.8096	-.00	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-10.0	19(AV)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.1	8(DD)	

AUTOIGNITION TEMPERATURE	
DEG C DELAY(SEC)	REF DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

CIS-1,3-DIMETHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1022.26	10411.	11
HEAT OF VAPORIZATION(25 C)		1095.90	11161.	11
		8.20	83.51	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.74479	11	.74025	11	.73989	19
REFRACTIVE INDEX	1.40894	11	1.40633	11	1.40555	19
SURFACE TENSION	21.21	19			20.20	19
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-40.3	-9.2	9.7		34.7		91.7	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8443	-1243.16	221.93		.11	10.
EQUATION 2	75.144	-6660.6	-8.54	20.8997	.04	30.

FLASH POINT (DEG C) (CC) REF (OC) REF

-10.0 19 (AY)

FLAMMABLE LIMITS LOWER UPPER

VOL PER	REF	VOL PER	REF
1.1	8 (DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
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MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL

MIN IGN ENERGY (MILLI JOULE) =	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE (CM) =				

TRANS-1,3-DIMETHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1022.75	10416.	11
	(GROSS)	1096.39	11166.	11
HEAT OF VAPORIZATION(25 C)		8.25	84.00	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.74880	11	.74435	11	.73570	19
REFRACTIVE INDEX	1.41074	11	1.40813	11	1.40369	19
SURFACE TENSION	20.76	19			19.75	19
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-41.0	-10.0	8.9		33.8		90.8	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8353	-1236.37	221.88		-.02	30.
EQUATION 2	76.651	-6698.2	-8.77	22.9457	.09	30.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	-11.0	19 (AY)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.1	8 (DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
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MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE)=				
QUENCHING DISTANCE (CM)=				

ETHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1023.86	10427.	11
HEAT OF VAPORIZATION(25 C)		1097.50	11177.	11
		8.72	88.81	11

	20 C	REF	25 C	REF	40 C	REF
DENSITY (GRAM/ML)	.76647	11	.76217	11		
REFRACTIVE INDEX	1.41981	11	1.41730	11		
SURFACE TENSION	23.88	(8)(160)	23.37	11	21.25	19
VISCOSITY (CS)	.740	19			.608	19

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-32.2	-.1		25.0	45.0	82.3	103.4	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.9043	-1307.23	221.53		.17 10.
EQUATION 2	71.212	-6734.7	-7.89	16.9555	-.16 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-1.0	19(A)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.1	3,4,(8)(15)	6.7	3,4,(8)(15)
	1.1	12(A)	6.7	12(A)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
262.		3,4		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

ISOPROPYLCYCLOBUTANE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
 (GROSS)
HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T

VAPOR PRESSURE EQUATION COEFFICIENTS
 A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
 DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
 39.1 (62) 2168 (62) 2.65 (73)
 STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

SEC-BUTYLCYCLOPROPANE

SYNONYMS. 2-CYCLOPROPYLBUTANE

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
 (GROSS)
HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA
P 1 10 30 40 100 400 760 REF
T

VAPOR PRESSURE EQUATION COEFFICIENTS
 A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT (DEG C) (C) REF (O) REF

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
 DEG C DELAY (SEC) REF DEG C REF

MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL
 39.8 (72) 2.51 (72)
 STOICH REF ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=
QUENCHING DISTANCE (CM)=

CYCLOOCTANE

SYNONYMS.

FORMULA= C₈H₁₆ C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1168.00	10408.	11
	(GROSS)	1252.16	11158.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.8361	11	.8320	11
REFRACTIVE INDEX	1.4587	11	1.4563	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							151.1	11

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	0.95	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

1,1-DIMETHYLCYCLOHEXANE

SYNONYMS.

FORMULA= C8H16 C/H= 5.296 MW= 114.233 VD= 3.9391

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1152.49	10089.	11
	(GROSS)	1247.17	10918.	11
HEAT OF VAPORIZATION(25 C)		9.04	79.16	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.78094	11	.77677	11
REFRACTIVE INDEX	1.42900	11	1.42661	11
SURFACE TENSION	24.01	19	23.61	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-24.4	10.3		37.3	57.9	97.2	119.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.1473	-1519.96	237.03		-1.45 100.
EQUATION 2	37.363	-5419.0	-2.82	-12.6144	1.05 40.

FLASH POINT(DEG C) (CC) REF (OC) REF

	13.0	19(AY)		
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FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
	0.95	8(DD)		

AUTOIGNITION TEMPERATURE

	DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

CIS-1,2-DIMETHYLCYCLOHEXANE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1164.15	10374.	11
	(GROSS)	1248.31	11124.	11
HEAT OF VAPORIZATION(25 C)		9.49	84.59	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.79627	11	.79222	11
REFRACTIVE INDEX	1.43596	11	1.43358	11
SURFACE TENSION	25.96	19	25.19	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-15.9	18.4		45.3	66.8	107.0	129.7	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8438	-1370.84	216.20		.11 10.
EQUATION 2	75.394	-7338.8	-8.44	23.7802	-.13 400.

FLASH POINT(DEG C) (CC) REF (OC) REF

	16.0	10(J)		
	22.0	19(AY)		

FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
	0.95	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

TRANS-1,2-DIMETHYLCYCLOHEXANE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1162.60	10360.	11
HEAT OF VAPORIZATION(25 C)		1246.76	11110.	11
		9.17	81.69	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.77601	11	.77204	11
REFRACTIVE INDEX	1.42695	11	1.42470	11
SURFACE TENSION	23.41	19	23.57	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-21.1	13.0		39.7	61.0	100.9	123.4	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8599	-1369.08	220.67		.20 10.
EQUATION 2	69.228	-6897.0	-7.57	19.4718	.04 40.

FLASH POINT(DEG C)

(CC)	REF	(OC)	REF
17.0	19(AY)		
10.5	10(J)		

FLAMMABLE LIMITS

LOWER		UPPER	
VOL PER	REF	VOL PER	REF
0.95	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

CIS-1,3-DIMETHYLCYCLOHEXANE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		1161.49	10350.	11
	(GROSS)	1245.65	11100.	11
HEAT OF VAPORIZATION(25 C)		9.14	81.41	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.76603	11	.76196	11
REFRACTIVE INDEX	1.42294	11	1.42063	11
SURFACE TENSION	23.12	(8)(60)	22.64	11
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-19.4	14.9		41.4	62.5	102.1	124.4	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.9570	-1414.30	222.66		.82 10.
EQUATION 2	60.580	-6599.5	-6.24	6.1889	.26 400.

FLASH POINT (DEG C) (CC) REF (OC) REF

	15.0	19(AV)		
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FLAMMABLE LIMITS LOWER UPPER

VOL PER	REF	VOL PER	REF
0.95	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE)=				
QUENCHING DISTANCE (CM)=				

TRANS-1,3-DIMETHYLCYCLOHEXANE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1163.22	10366.	11
HEAT OF VAPORIZATION(25 C)		1247.38	11116.	11
		9.37	83.48	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.78472	11	.78055	11
REFRACTIVE INDEX	1.43085	11	1.42843	11
SURFACE TENSION	24.67	(8)(60)	24.16	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-22.7	11.2		37.5	58.5	97.8	120.1	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9090	-1378.24	222.16		.68	10.
EQUATION 2	62.427	-6583.7	-6.54	8.2202	-.15	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER	VOL PER
	REF	REF
	0.95	8(DD)

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

CIS-1,4-DIMETHYLCYCLOHEXANE

SYNONYMS. HEXAHYDROXYLENE

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1163.24	10366.	11
	(GROSS)	1247.40	11116.	11
HEAT OF VAPORIZATION(25 C)		9.33	83.12	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.78285	11	.77870	11
REFRACTIVE INDEX	1.42966	11	1.42731	11
SURFACE TENSION	24.45	(8)(60)	23.96	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-20.0	14.5		41.1	62.3	101.9	124.3	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9888	-1436.42	225.50		.86	10.
EQUATION 2	56.029	-6369.7	-5.58	2.9863	-.23	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	11.0	(1,3,4)(HH)		
	16.0	19(AV)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.95	8(DD)	

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

TRANS-1,4-DIMETHYLCYCLOHEXANE

SYNONYMS. HEXAHYDROXYLENE

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1161.62	10352.	11
HEAT OF VAPORIZATION(25 C)		1245.78	11102.	11
		9.05	80.67	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.76255	11	.75835	11
REFRACTIVE INDEX	1.42090	11	1.41853	11
SURFACE TENSION	23.02	(8)(60)	22.52	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-24.3	10.1		36.5	57.6	97.0	119.3	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9981	-1434.26	229.21		1.11	10.
EQUATION 2	50.175	-5984.6	-4.74	-1.8064	-.39	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	11.0	(1,3,4)(HH)		
	12.0	19(AV)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.95	8(DD)	

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

ETHYLCYCLOHEXANE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1164.07	10373.	11
	(GROSS)	1248.23	11123.	11
HEAT OF VAPORIZATION(25 C)		9.67	86.20	11

	20 C	REF	25 C	REF	40 C	REF
DFNSITY (GRAM/ML)	.78792	11	.78390	11		
REFRACTIVE INDEX	1.43304	11	1.43073	11		
SURFACE TENSION	24.89	19	25.12	11	22.90	19
VISCOSITY (CS)	1.069	19			.843	19

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	10	30	40	100	400	760	REF
T	-14.5	20.6	47.6	69.0	109.1	131.8	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.0289	-1478.46	224.80		.97	10.
EQUATION 2	53.386	-6409.0	-5.15	-2.2124	.23	400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	35.0	3,4		
	22.0	19(A)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.9	3,4,12(A)	6.6	3,4,12(A)
	.95	8		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
264.	114.	49	262.	3,4

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

TRANS-1,2-CIS-4-TRIMETHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.74727	11	.74302	11
REFRACTIVE INDEX	1.41060	11	1.40812	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							109.3	11

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	3.0	19(AY)		

FLAMMABLE LIMITS		LOWER	UPPER	
	VOL PER	REF	VOL PER	REF
	0.95	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1-METHYL-1-ETHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1168.80	10416.	11
	(GROSS)	1252.96	11166.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	2 C	REF	30 C	REF
DENSITY (GRAM/ML)	.78093	11	.77670	11	.77246	19
REFRACTIVE INDEX	1.42718	11	1.42476	11	1.42239	19
SURFACE TENSION	24.74	19			23.68	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-21.6	12.6	33.1		60.1		121.5	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.0109	-1437.54	226.62		-.57	100.
EQUATION 2	55.722	-6319.2	-5.54	3.6281	-.03	30.

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.95	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

CIS-1-METHYL-2-ETHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1168.10	10409.	11
	(GROSS)	1252.26	11159.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.78522	11	.78113	11	.77704	19
REFRACTIVE INDEX	1.42933	11	1.42695	11	1.42459	19
SURFACE TENSION	25.29	19			24.25	19

VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-16.6	18.1	38.9		66.1		128.0	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.0489	-1474.16	225.71		.59 10.
EQUATION 2	55.717	-6462.2	-5.50	2.7523	-.05 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS

LOWER		UPPER	
VOL PER	REF	VOL PER	REF
0.95	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

TRANS-1-METHYL-2-ETHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1168.70	10415.	11
	(GROSS)	1252.86	11165.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7690	11	.7649	11	.7608	19
REFRACTIVE INDEX	1.4219	11	1.4195	11	1.4171	19
SURFACE TENSION	23.27	19			22.28	19
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-21.2	12.8	33.3		60.1		121.2	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.0058	-1427.68	224.97		-.55 100.
EQUATION 2	59.669	-6514.7	-6.12	7.4715	.20 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS LOWER

VOL PER	REF
0.95	8(DD)

UPPER

VOL PER	REF
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AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

CIS-1-METHYL-3-ETHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1167.90	10408.	11
	(GROSS)	1252.06	11158.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7724	19	.7681	19	.7638	19
REFRACTIVE INDEX	1.4203	19	1.4179	19	1.4151	19
SURFACE TENSION	23.68	19			22.64	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-21.0	13.1	33.5		60.3		121.4	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.0196	-1434.85	225.38		-.68 100.
EQUATION 2	55.319	-6340.0	-5.46	.4491	-.05 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.95	8(DD)	

AUTOIGNITION TEMPERATURE	
DEG C DELAY(SEC)	REF DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

TRANS-1-METHYL-3-ETHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1168.70	10415.	11
HEAT OF VAPORIZATION(25 C)		1252.86	11165.	11

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7619	19	.7535	19
REFRACTIVE INDEX	1.4186	19	1.4137	19
SURFACE TENSION	22.42	19	21.44	19
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-22.0	12.4	32.8		59.7		120.8	19

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.0777	-1470.86	229.78		.99	10.
EQUATION 2	47.143	-5944.3	-4.25	-6.7429	-.30	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.95	8(DD)	

AUTOIGNITION TEMPERATURE	
DEG C	DELAY(SEC) REF
DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

N-PROPYLCYCLOPENTANE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1169.58	10423.	11
	(GROSS)	1253.74	11172.	11
HEAT OF VAPORIZATION(25 C)		9.91	88.31	11

	20 C	REF	25 C	REF	40 C	REF
DENSITY (GRAM/ML)	.77633	11	.77229	11		
REFRACTIVE INDEX	1.42626	11	1.42389	11		
SURFACE TENSION	24.17	19			22.20	19
VISCOSITY (CS)	.878	19			.711	19

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-13.3	21.2	41.9		69.1		130.9	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.0270	-1457.95	220.76		.50 10.
EQUATION 2	63.308	-6922.5	-6.60	7.8065	.00 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	19.0	19(AY)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	.95	8(DD)	

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
285.		46	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

ISOPROPYLCYCLOPENTANE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1169.80	10424.	11
	(GROSS)	1253.96	11174.	11
HEAT OF VAPORIZATION(25 C)				

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.77653	11	.77259	11	.76864	19
REFRACTIVE INDEX	1.42582	11	1.42350	11	1.42124	19
SURFACE TENSION	24.19	19			23.22	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-18.4	16.3	37.1		64.3		126.4	19

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.0289	-1464.58	226.74		.65	10.
EQUATION 2	53.938	-6321.2	-5.26	1.4158	-.09	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS LOWER				UPPER	
	VOL PER	REF		VOL PER	REF
	.95	8(DD)			

AUTOIGNITION TEMPERATURE					
	DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

CYCLONONANE

SYNONYMS.

FORMULA= C9H18 C/H= 5.958 MW= 126.244 VD= 4.3532

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1314.30	10411.	11
	(GROSS)	1408.98	11161.	11
HEAT OF VAPORIZATION(25 C)				

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.8502	11	.8463	11
REFRACTIVE INDEX	1.4666	11	1.4644	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							178.4	11

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.85	8(DD)	

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

N-PROPYLCYCLOHEXANE

SYNONYMS.

FORMULA= C9H18 C/H= 5.958 MW= 126.244 VD= 4.3532

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1309.66	10374.	11
HEAT OF VAPORIZATION(25 C)		1404.34	11124.	11
		10.78	85.39	11

	20 C	REF	25 C	REF	40 C	REF
DENSITY (GRAM/ML)	.79360	11	.78977	11		
REFRACTIVE INDEX	1.43705	11	1.43478	11		
SURFACE TENSION	25.40	19			23.49	19
VISCOSITY (CS)	1.268	19			.976	19

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	4.0	40.1	62.1		91.0		156.7	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.9005	-1470.29	209.05		-.01 30.
EQUATION 2	83.696	-8335.6	-9.53	32.8230	.11 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS LOWER

VOL PER	REF
0.85	8(DD)

UPPER

VOL PER	REF
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AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF
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DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

ISOPROPYLCYCLOHEXANE

SYNONYMS.

FORMULA= C9H16 C/H= 5.958 MW= 126.244 VD= 4.3532

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1311.90	10392.	11
HEAT OF VAPORIZATION(25 C)		1406.58	11142.	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.80221	11	.79833	11	.79448	19
REFRACTIVE INDEX	1.44087	11	1.43861	11	1.43639	19
SURFACE TENSION	26.53	19			25.51	19
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	1.6	38.3	60.2		89.0		154.5	19

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.0552	-1562.22	219.83		-.65	100.
EQUATION 2	58.646	-7078.4	-5.86	2.6598	-.03	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	0.85	8(DD)		

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC) REF	DEG C	REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

1-METHYL-3-ISOPROPYLCYCLOPENTANE

SYNONYMS.

FORMULA= C9H18 C/H= 5.958 MW= 126.244 VD= 4.3532

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1310.80	10383.	11
	(GROSS)	1405.48	11133.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.780	11	.777	11
REFRACTIVE INDEX	1.426	11	1.424	11

SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							142.2	11

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
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EQUATION 1
EQUATION 2

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS

	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	0.85	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
-------	------------	-----	-------	-----

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

CIS-1,2-DIETHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C9H18 C/H= 5.958 MW= 126.244 VD= 4.3532

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1309.90	10376.	11
HEAT OF VAPORIZATION(25 C)		1404.58	11126.	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7960	11	.7920	11
REFRACTIVE INDEX	1.4355	11	1.4330	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							153.6	11

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
--------------------	------	-----	------	-----

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	0.85	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

TRANS-1,2-DIETHYLCYCLOPENTANE

SYNONYMS.

FORMULA= C9H18 C/H= 5.958 MW= 126.244 VD= 4.3532

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1310.20	10378.	11
	(GROSS)	1404.88	11128.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7832	11	.7792	11
REFRACTIVE INDEX	1.4295	11	1.4270	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							147.5	11

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
--------------------	------	-----	------	-----

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	0.85	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
-----------------------	-------------------	------------------

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

N-BUTYLCYCLOPENTANE

SYNONYMS.

FORMULA= C9H18 C/H= 5.958 MW= 126.244 VD= 4.3532

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1315.42	10420.	11
	(GROSS)	1410.10	11170.	11
HEAT OF VAPORIZATION(25 C)		11.00	87.13	11

	20 C	REF	25 C	REF	40 C	REF
DENSITY (GRAM/ML)	.7846	11	.7808	11		
REFRACTIVE INDEX	1.4316	11	1.4293	11		
SURFACE TENSION	24.93	19			23.04	19
VISCOSITY (CS)	1.134	19			.889	19

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	5.3	41.6	63.3		91.8		156.6	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.0515	-1542.98	213.49		.63	10.
EQUATION 2	66.920	-7635.4	-7.02	6.2998	-.05	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.85	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

ISOBUTYLCYCLOPENTANE

SYNONYMS.

FORMULA= C9H18 C/H= 5.958 MW= 126.244 VD= 4.3532

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1311.80	10391.	11
	(GROSS)	1405.48	11141.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7809	11	.7769	11
REFRACTIVE INDEX	1.4298	11	1.4273	11

SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							147.9	11

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
--	---	---	---	---	--------------

EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
	.85	8(DD)		

AUTOIGNITION TEMPERATURE

	DEG C	DELAY(SEC)	REF	DEG C	REF
--	-------	------------	-----	-------	-----

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

SFC-BUTYLCYCLOPENTANE

SYNONYMS.

FORMULA= C9H18 C/H= 5.958 MW= 126.244 VD= 4.3532

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1311.30	10387.	11
HEAT OF VAPORIZATION(25 C)		1405.98	11137.	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7945	11	.7905	11
REFRACTIVE INDEX	1.4357	11	1.4332	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							154.4	11

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.85	8(DD)		

AUTOIGNITION TEMPERATURE			
DEG C	DELAY (SEC)	REF	DEG C REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
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	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

T-BUTYLCYCLOPENTANE

SYNONYMS.

FORMULA= C9H18 C/H= 5.958 MW= 126.244 VD= 4.3532

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1309.40	10372.	11
	(GROSS)	1404.08	11122.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7910	11	.7870	11
REFRACTIVE INDEX	1.4338	11	1.4313	11

SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							144.9	11

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
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EQUATION 1
EQUATION 2

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.85	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL		
	STOICH	REF	ABS MIN	REF

MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

DIETHYLCYCLOHEXANE

SYNONYMS.

FORMULA= C10H20 C/H= 5.958 MW= 140.271 VD= 4.8369

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
 REFRACTIVE INDEX
 SURFACE TENSION
 VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							173.4	3

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	49.0	3		

FLAMMABLE LIMITS LOWER			UPPER		
VOL PER	REF		VOL PER	REF	
.8 AT 60 C	3		.6 AT 110 C	3	

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
242.		3		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

N-BUTYLCYCLOHEXANE

SYNONYMS.

FORMULA= C10H20 C/H= 5.958 MW= 140.271 VD= 4.8369

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1455.58	10377.	11
	(GROSS)	1560.78	11127.	11
HEAT OF VAPORIZATION(25 C)		11.96	85.26	11

	20 C	REF	30 C	REF	50 C	REF
DENSITY (GRAM/ML)	.79918	11	.79184	19		
REFRACTIVE INDEX	1.44075	11	1.43647	19		
SURFACE TENSION	25.94	19	25.00	19		
VISCOSITY (CS)			1.406	19	1.069	19

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	20.3	59.0	82.1		112.3		180.9	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.0876	-1661.28	214.04		.54	10.
EQUATION 2	64.040	-7855.7	-6.56	8.0010	.02	10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	0.75	2(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL		
	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

CIS-DECALIN

SYNONYMS. CIS-DECAHYDRONAPHTHALENE

FORMULA= C₁₀H₁₈ C/H= 6.620 MW= 138.255 VD= 4.7674

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1408.24	10186.	11
	(GROSS)	1502.92	10871.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8965	11	.8925	11	.8885	19
REFRACTIVE INDEX	1.4810	11	1.4788	11	1.4766	19
SURFACE TENSION	32.51	19			31.36	19

VISCOSITY (CS.)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	22.5	64.2		97.2	123.2	169.9	194.6	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.3579	-1977.31	246.35		-2.10 10.
EQUATION 2	64.002	-7602.1	-6.73	75.5636	-.62 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	58.0	(1,3,4)(JJ)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.7 AT 100 C	3(JJ)	4.9 AT 100 C	3(JJ)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
250.		3(JJ)	262.	(1,4)(JJ)
271.		46(JJ)		
272.	18.	49(JJ)	280.	24(B,JJ)
262.		54(JJ)		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

TRANS-DECALIN

SYNONYMS.

FORMULA= C10H18 C/H= 6.620 MW= 138.255 VD= 4.7674

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1405.55	10166.	11
HEAT OF VAPORIZATION(25 C)		1500.23	10851.	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8699	11	.8659	11	.8619	19
REFRACTIVE INDEX	1.4695	11	1.4672	11	1.4650	19
SURFACE TENSION	28.82	19			27.77	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-.8	47.2		85.7	114.6	160.1	186.7	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	8.9502	-3544.78	397.21		-5.85 10.
EQUATION 2	-3.499	-3291.2	2.78	74.4129	-5.64 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	58.0	(1,3,4)(JJ)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.7 AT 100 C	3(JJ)	4.9 AT 100 C	3(JJ)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
250.		3(JJ)	262.	(1,4)(JJ)
272.	18.	49(JJ)	280.	24(B,JJ)
262.		54(JJ)		
271.		46(JJ)		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
33.9 (62)(P)	2290 (62)	1.58 (73)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

1-METHYL-2-T-BUTYLCYCLOHEXANE

SYNONYMS.

FORMULA= C11H22 C/H= 5.958 MW= 154.298 VD= 5.3206

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
(GROSS)
HEAT OF VAPORIZATION(25 C) -----

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T

VAPOR PRESSURE EQUATION COEFFICIENTS
A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY(SEC) REF DEG C REF
314. 12. 49

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

1-METHYL-3-T-BUTYLCYCLOHEXANE (LOW BOILING)

SYNONYMS.

FORMULA= C11H22 C/H= 5.958 MW= 154.298 VD= 5.3206

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T								

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
291.	24.	49		

MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE)=				
QUENCHING DISTANCE (CM)=				

1-METHYL-3-T-BUTYLCYCLOHEXANE (HIGH BOILING)

SYNONYMS.

FORMULA= C11H22 C/H= 5.958 MW= 154.298 VD= 5.3206

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
 (GROSS)
HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T

VAPOR PRESSURE EQUATION COEFFICIENTS
 A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
 DEG C DELAY(SEC) REF DEG C REF
 304. 12. 49

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

 STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

BICYCLOHEXYL

SYNONYMS. DICYCLOHEXYL

FORMULA= C12H22 C/H= 6.500 MW= 166.309 VD= 5.7348

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.8917	2	.883	1
REFRACTIVE INDEX	1.4766	2		
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							240.0	1

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	101.5	1		
	74.0	3		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.7 AT 100 C	3	5.1 AT 150 C	3

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
104.5		1	244.	3

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

DIMETHYLDECALIN (ISOMERS)

SYNONYMS.

FORMULA= C12H22 C/H= 6.500 MW= 166.309 VD= 5.7348

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
 REFRACTIVE INDEX
 SURFACE TENSION
 VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							235.0	3

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	84.5	3(KK)		

FLAMMABLE LIMITS LOWER			UPPER		
VOL PER	REF		VOL PER	REF	
.7 AT 93.5 C	3		5.3 AT 149 C	3	

AUTOIGNITION TEMPERATURE					
DEG C	DELAY(SEC)	REF	DEG C	REF	
234.		3			

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

N-BUTYLDECALIN

SYNONYMS.

FORMULA= C14H26 C/H= 6.416 MW= 194.363 VD= 6.7022

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T								

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C) (CC) REF (OC) REF

	260.0	1,3,4		
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FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
--	---------	-----	---------	-----

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
-------	-------------	-----	-------	-----

MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
--	--------	-----	---------	-----

MIN IGN ENERGY (MILLIJOULE)=
QUENCHING DISTANCE (CM)=

T-BUTYLDECALIN

SYNONYMS.

FORMULA= C14H26 C/H= 6.416 MW= 194.363 VD= 6.7022

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T								

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C) (CC) REF (OC) REF

	338.0	1,3,4		
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FLAMMABLE LIMITS LOWER UPPER

VOL PER	REF	VOL PER	REF
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AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
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MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

MONOISOPROPYLBICYCLOHEXYL

SYNONYMS.

FORMULA= C15H28 C/H= 6.384 MW= 208.390 VD= 7.1859

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET) (GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							280.0	3

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C) (CC) REF (OC) REF

	124.0	3		
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FLAMMABLE LIMITS LOWER UPPER

VOL PER	REF	VOL PER	REF
.5 AT 150 C	3	4.1 AT 204.5 C	3

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
228.		3		

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

ETHENE

SYNONYMS. ETHYLENE, ELAYL, ETHERIN

FORMULA= C2H4 C/H= 5.958 MW= 28.054 VD= .9674

HEAT OF COMBUSTION	KCAL/MOLE	CAL/GRAM	REF
OF GAS (NET)	316.20	11271.	11
(GROSS)	337.24	12021.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF
DENSITY (GRAM/ML)		
REFRACTIVE INDEX		
SURFACE TENSION	16.5	(8)(60)(R)
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-168.3	-153.2		-141.3	-131.8	-113.9	-103.7	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	.8062	-21.19	95.01		1145.45	1.
EQUATION 2	49.623	-2529.8	-5.48	2.5441	.14	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-136.	(8)(9)		
	-120.5	4		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	2.6	13(V)	32.	3,12(A)
	2.7	4,(8)(15)	34.	1,4,(8)(15)
	3.0	1	41.	13(V)
	2.90	66(B)	79.9	66(B)
	3.05	66	28.6	66
	3.1	3,12(A),67		
	3.0	12(A,B)	80.	12(A,B)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
543.		1	490.	(22)(32)
450.		3,4	485.	(22)(32)(B)

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
68.3 (69)	2387 (55)	7.40 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	.096 (7)(57)	.124 58
QUENCHING DISTANCE(CM)=	.13 7	

PROPENE

SYNONYMS. PROPYLENE

FORMULA= C3H6 C/H= 5.958 MW= 42.081 VD= 1.4511

HEAT OF COMBUSTION OF GAS	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	460.43	10941.	11
HEAT OF VAPORIZATION(25 C)		491.99	11691.	11

DENSITY (GRAM/ML)	20 C	REF	25 C	REF
	.5139	11(D)	.5053	11(D)
REFRACTIVE INDEX				
SURFACE TENSION	16.7	(8)(60)(R)		
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-131.9	-112.1		-96.5	-84.1	-60.9	-47.7	21

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	1.7188	4.98	106.74		3217.93
EQUATION 2	55.901	-3571.8	-6.18	5.5142	-.28
					10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-108.	4,(8)(9)		

FLAMMABLE LIMITS		LOWER		UPPER
	VOL PER	REF	VOL PER	REF
	2.0	4,(8)(15),66	10.	(8)(15)
	2.13	(7)(14)(H)	12.1	(7)(14)(H)
	2.2	13(V)	11.1	13(V),66
	2.10	66(B)	52.8	66(B)
	2.4	3,12(A),71(AK)	10.3	3,12(A),71(AK)
			11.1	4
	2.1	12(A,B)	53.	12(A,B)

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
410.		3	497. 1,6
455.		28(AL)	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
43.8 (69)	2341 (55)	5.04 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	.282 (7)(57)	
QUENCHING DISTANCE(CM)=	.20 7	

1-BUTENE

SYNONYMS. ALPHA-BUTYLENE, ETHYLETHYLENE

FORMULA= C4H8 C/H= 5.958 MW= 56.108 VD= 1.9348

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	602.50	10738.	11
HEAT OF VAPORIZATION(25 C)		644.58	11488.	11
		4.87	86.80	11

DENSITY (GRAM/ML)	20 C	REF	25 C	REF
	.5951	11(D)	.5888	11(D)
REFRACTIVE INDEX				
SURFACE TENSION	12.53	(8)(60)		
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-104.8	-81.6		-63.4	-48.9	-21.7	-6.3	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8402	-925.78	240.14		.18 10.
EQUATION 2	61.048	-4415.7	-6.79	7.6693	.11 40.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	-80.	1,4,(8)(9)		

FLAMMABLE LIMITS

	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.6	12(A)	9.3	12(A)
	1.6	3,4,(8)(15)	9.3	3,(8)(60)
	1.7	1,13(V)	9.0	1
	2.0	12(A,LL)	9.6	4,12(A,LL)
			11.	13(V)
	1.8	12(A,B)	58.	12(A,B)

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
384.		3,4	443.	28(LL,AL)

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
43.2 (69)	2320 (55)	3.87 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

CIS-2-BUTENE

SYNONYMS. PSEUDOBUTYLENE, DIMETHYLETHYLENE, SYM-DIMETHYLETHYLENE
 FORMULA= C4H8 C/H= 5.958 MW= 56.108 VD= 1.9348

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	600.43	10701.	11
	(GROSS)	642.51	11451.	11
HEAT OF VAPORIZATION(25 C)		5.30	94.46	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.6213	11(D)	.6154	11(D)	.5094	20
REFRACTIVE INDEX						
SURFACE TENSION	15.07	20			13.90	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-96.4	-73.4		-54.7	-39.8	-12.0	3.7	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.6521	-873.67	227.78		-1.63 10.
EQUATION 2	99.520	-5905.2	-12.78	29.2039	-1.06 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-73.5	10(DD)		

FLAMMABLE LIMITS

	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.7	12(A,B)	55. 12(A,B)
	2.0	12(A,LL)	9.6 12(A,LL)
	1.7	6	9.0 6
	1.8	4,12(A)	9.7 4,12(A)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
324.		4,6	443.	28(AL,LL)

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)= STOICH REF ABS MIN REF
 QUENCHING DISTANCE(CM)=

TRANS-2-BUTENE

SYNONYMS. BETA-BUTYLENE

FORMULA= C4H8 C/H= 5.958 MW= 56.108 VD= 1.9348

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	599.58	10686.	11
HEAT OF VAPORIZATION(25 C)		641.66	11436.	11
		5.15	91.79	11

DENSITY (GRAM/ML)	20 C	REF	25 C	REF	30 C	REF
	.6042	11(D)	.5984	11(D)	.5925	20
REFRACTIVE INDEX						
SURFACE TENSION	13.43	20			12.27	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-99.4	-76.3		-57.6	-42.7	-14.8	.9	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.6619	-878.86	231.36		-1.37	10.
EQUATION 2	90.522	-5496.4	-11.42	25.8338	-.81	10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-73.5	10(DD)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.8	3	9.7	3
	1.8	6,12(A)	9.7	6,12(A)
	2.0	12(A,LL)	9.6	12(A,LL)
	1.7	12(A,B)	55.	12(A,B)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
324.		3,6	443.	28(AL,LL)

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

2-METHYLPROPENE

SYNONYMS. ISOBUTENE, ISOBUTYLENE, GAMMA-BUTYLENE
 FORMULA= C4H8 C/H= 5.958 MW= 56.108 VD= 1.9348

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	598.44	10666.	11
	(GROSS)	640.52	11416.	11
HEAT OF VAPORIZATION(25 C)		4.92	87.69	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.5942	11(D)	.5879	11(D)	.5815	20
REFRACTIVE INDEX						
SURFACE TENSION	12.27	(8)(60)			11.22	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-105.1	-82.0	-67.9		-49.3		-6.9	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8426	-923.70	240.05		-.04	30.
EQUATION 2	64.460	-4513.2	-7.34	10.3662	.07	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-76.	(8)(9)		

FLAMMABLE LIMITS

	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.8	3,4,12(A)	8.8 3,4,12(A)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
465.		1,3,4		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
37.5 (69)	2315 (55)	3.83 (69)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

i-PENTENE

SYNONYMS. PROPYLETHYLENE, METHYLBUTENE, ALPHA-N-AMYLENE
 FORMULA= C5H10 C/H= 5.958 MW= 70.135 VD= 2.4185

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		748.16	10667.	11
	(GROSS)	800.76	11417.	11
HEAT OF VAPORIZATION(25 C)		6.09	86.80	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.64050	11	.63533	11
REFRACTIVE INDEX	1.37148	11	1.36835	11
SURFACE TENSION	15.57	20	15.45	11
VISCOSITY (CS)	.373	(8)(60)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-80.4	-54.5		-34.1	-17.7	12.8	30.1	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.7962	-1020.95	230.63		.33 100.
EQUATION 2	74.543	-5527.4	-8.72	16.5149	-.34 400.

FLASH POINT(DEG C)

(CC)	REF	(OC)	REF
-51.	10(DD)	-18.	1,3,4

FLAMMABLE LIMITS

LOWER			UPPER		
VOL PER	REF		VOL PER	REF	
1.4	4,(8)(15)		8.7	3,4,(8)(15)	
1.5	3		7.7	1	
1.6	1		10.0	7	
1.27	7				

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
273.		1,3,4	273.	(22)(31)(PP)
273.		28(PP,AN)	381.	28(PP,AM)
298.	18.	49	276.	28(PP,AP)

MAX FLAME VEL(CM/SEC)

FLAME TEMP(DEG K)	VOL PERCENT FUEL
42.6 (69)	3.07 (69)
2316 (55)	
STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

CIS-2-PENTENE

SYNONYMS. SYM-METHYLETHYLETHYLENE

FORMULA= C5H10 C/H= 5.958 MW= 70.135 VD= 2.4185

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	746.33	10641.	11
HEAT OF VAPORIZATION(25 C)		798.93	11391.	11
		6.41	91.39	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.6556	11	.6504	11
REFRACTIVE INDEX	1.3830	11	1.3798	11
SURFACE TENSION	17.38	(8)(60)	16.8	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-75.2	-48.7	-32.7		-11.4		36.9	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.8793	-1070.59	230.82		.19	10.
EQUATION 2	71.031	-5566.7	-8.11	13.5235	-.02	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-18.	1		
	-45.5	10(DD)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.33	7	9.35	7
	1.4	8(DD)	8.7	12(A,NN)
	1.5	12(A,NN)		

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
43.1 (62)	2242 (62)	3.38 (73)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	.82 (7)(57)(E)	.18 (7)(59)(F)
QUENCHING DISTANCE(CM)=	.33 7	.15 7

TRANS-2-PENTENE

SYNONYMS: SYM-METHYLETHYLENE

FORMULA= C5H10 C/H= 5.958 MW= 70.135 VD= 2.4185

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	745.28	10626.	11
	(GROSS)	797.88	11376.	11
HEAT OF VAPORIZATION(25 C)		6.38	90.97	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.6482	11	.6431	11
REFRACTIVE INDEX	1.3793	11	1.3761	11
SURFACE TENSION	16.90	(8)(60)	16.42	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-76.0	-49.4	-33.3		-12.0		36.4	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9112	-1086.24	233.17		.08	10.
EQUATION 2	68.128	-5427.0	-7.68	13.5161	.06	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-18.	1		
	-45.5	10(DD)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.4	8(DD)	8.7 12(A,NN)
	1.5	12(A,NN)	

AUTOIGNITION TEMPERATURE	
DEG C DELAY(SEC)	REF DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

CYCLOPENTENE

SYNONYMS.

FORMULA= C5H8 C/H= 7.448 MW= 68.120 VD= 2.3489

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	702.47	10312.	11
HEAT OF VAPORIZATION(25 C)		744.55	10930.	11
		6.71	98.50	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.77199	11	.76653	11	.76104	19
REFRACTIVE INDEX	1.42246	11	1.41940	11	1.41612	19
SURFACE TENSION	22.65	19			21.32	19
VISCOSITY (CS)					.410	19

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-71.4	-44.0	-27.4		-5.5		44.2	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9264	-1124.37	233.73		.06	10.
EQUATION 2	65.922	-5455.1	-7.33	13.7646	.06	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-29.	1		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.5	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
40.4 (72)		3.48 (72)

MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

2-METHYL-1-BUTENE

SYNONYMS.

FORMULA= C5H10 C/H= 5.958 MW= 70.135 VD= 2.4185

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	744.39	10614.	11
HEAT OF VAPORIZATION(25 C)		796.99	11364.	11
		6.18	88.13	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.6504	11	.6451	11
REFRACTIVE INDEX	1.3778	11	1.3746	11
SURFACE TENSION	16.50	(8)(60)	15.9	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-89.1	-64.3		-44.1	-28.0	2.5	20.2	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.4941	-890.69	226.28		-1.07	10.
EQUATION 2	87.640	-5676.8	-10.89	25.0273	-.97	10.

FLASH POINT(DEG C) (CC) REF (OC) REF

-48.5 10(DD)

FLAMMABLE LIMITS LOWER UPPER

VOL PER	REF	VOL PER	REF
1.4	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
-------	------------	-----	-------	-----

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
39.0 (69)	2298 (55)	3.12 (69)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=

QUENCHING DISTANCE(CM)=

3-METHYL-1-BUTENE

SYNONYMS. ALPHA-ISOAMYLENE

FORMULA= C5H10 C/H= 5.958 MW= 70.135 VD= 2.4185

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	746.63	10646.	11
	(GROSS)	799.23	11396.	11
HEAT OF VAPORIZATION(25 C)		5.70	81.27	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.6272	11	.6219	11(D)
REFRACTIVE INDEX	1.3643	11	1.3611	11(D)
SURFACE TENSION	14.40	(8)(60)	13.8	11(G)
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-88.3	-62.9	-47.3		-26.8		20.1	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.8158	-1009.03	236.35		-.37	10.
EQUATION 2	68.342	-5059.7	-7.85	15.8063	.43	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-56.5	10(DD)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.4	8(DD)		

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
374.	6.	49	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
41.5 (69)	2305 (55)	3.11 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2-METHYL-2-BUTENE

SYNONYMS.

FORMULA= C5H10 C/H= 5.958 MW= 70.135 VD= 2.4185

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	742.61	10588.	11
HEAT OF VAPORIZATION(25 C)		795.21	11338.	11
		6.47	92.22	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.6623	11	.6570	11
REFRACTIVE INDEX	1.3874	11	1.3842	11
SURFACE TENSION	17.61	(8)(60)	17.14	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-75.4	-47.9		-26.7	-9.9	21.6	38.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.1239	-1197.08	243.43		1.17 400.
EQUATION 2	55.962	-4968.2	-5.83	13.3146	.77 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-45.5	10(DD)		

FLAMMABLE LIMITS

LOWER	UPPER
VOL PER	VOL PER
REF	REF
1.4	8(DD)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1-HEXENE

SYNONYMS. BUTYLETHYLENE, HEXYLENE

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	893.80	10620.	11
HEAT OF VAPORIZATION(25 C)		956.92	11370.	11
		7.34	87.21	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.67317	11	.66848	11		
REFRACTIVE INDEX	1.38788	11	1.38502	11		
SURFACE TENSION	18.42	(8)(60)	17.90	11		
VISCOSITY (CS)	.386	(8)(60)			.34	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-57.5	-28.1		-5.0	13.0	46.8	66.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.0052	-1237.56	234.16		.63	40.
EQUATION 2	56.582	-5461.8	-5.82	6.8055	.70	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-26.	10(DD)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER
	1.2 AT 50 C	14(U)	9.0 AT 50 C
	1.2	13(V)	8.0
	1.2	8(DD)	13(V)

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C
272.	72.	49	325.
			(22)(24)(8,RR)

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
42.1 (69)	2287 (55)	2.67 (69)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=

QUENCHING DISTANCE(CM)=

CIS-2-HEXENE

SYNONYMS.

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	892.02	10599.	11
	(GROSS)	955.14	11349.	11
HEAT OF VAPORIZATION(25 C)		7.52	89.35	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.68720	11	.68252	11	.6777	20
REFRACTIVE INDEX	1.39761	11	1.39473	11	1.3920	20
SURFACE TENSION	18.9	(8)(61)			18.34	20
VISCOSITY (CS)	.457	(8)(61)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-54.2	-25.1	-7.5		15.9		68.8	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8998	-1184.14	225.82		-.27	30.
EQUATION 2	76.884	-6361.5	-8.88	21.6423	-.14	30.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	-20.5	10(DD,SS)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.2	8(DD)	

AUTOIGNITION TEMPERATURE		
DEG C	DELAY (SEC)	REF
		DEG C REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

TRANS-2-HEXENE

SYNONYMS.

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	891.00	10587.	11
	(GROSS)	954.12	11337.	11
HEAT OF VAPORIZATION(25 C)		7.54	89.59	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.67795	11	.67327	11	.6692	20
REFRACTIVE INDEX	1.39363	11	1.39073	11	1.3879	20
SURFACE TENSION	18.44	20			17.43	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-54.9	-25.9	-8.3		15.0		67.9	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8824	-1174.07	225.49		-.10 30.
EQUATION 2	76.632	-6331.8	-8.84	20.7225	.03 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-20.5	10(DD,SS)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.2	8(DD)	

AUTOIGNITION TEMPERATURE	
DEG C DELAY(SEC)	REF DEG C REF

MAX FLAME VEL.(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

CYCLOHEXENE

SYNONYMS. 1,2,3,4-TETRAHYDROBENZENE

FORMULA= C6H10 C/H= 7.150 MW= 82.147 VD= 2.8326

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	844.02	10275.	11
		896.62	10915.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.81096	11	.80609	11	.80141	19
REFRACTIVE INDEX	1.44654	11	1.44377	11	1.44110	19
SURFACE TENSION	26.54	19			25.22	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-45.5	-15.1	3.3		27.6		83.0	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8929	-1233.25	224.41		.21 10.
EQUATION 2	71.195	-6373.1	-7.96	15.9498	.04 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-29.5	1		
	-23.5	10(DD)		

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER	VOL PER
	REF	REF
	1.2	8(DD)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
325.		(22)(24)(B)		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
40.3 (72)		

MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=	.86	(7)(57)(E)		
	.33	7		

2-METHYL-1-PENTENE

SYNONYMS. 1-METHYL-1-PROPYLETHYLENE

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		890.25	10578.	11
	(GROSS)	953.37	11328.	11
HEAT OF VAPORIZATION(25 C)		7.29	86.62	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.67987	11	.67505	11	.6720	20
REFRACTIVE INDEX	1.39200	11	1.38912	11	1.3856	20
SURFACE TENSION	18.78	20			17.70	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-59.8	-31.4	-14.1		8.8		60.7	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.8891	-1155.31	227.53		-.02	30.
EQUATION 2	73.413	-6067.7	-8.39	17.7370	.10	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-28.	1		
	-26.	10(DD)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.2	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
306.	6.	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
39.6 (69)	2237 (55)	2.80 (69)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

3-METHYL-1-PENTENE

SYNONYMS.

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	893.25	10613.	11
HEAT OF VAPORIZATION(25 C)		956.37	11363.	11
		6.83	81.15	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.66745	11	.66287	11	.6581	20
REFRACTIVE INDEX	1.38422	11	1.38133	11	1.3786	20
SURFACE TENSION	17.24	20			16.24	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-64.3	-36.4	-19.4		3.1		54.1	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8766	-1130.10	228.68		-.04 10.
EQUATION 2	73.228	-5930.1	-8.39	17.6849	.13 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS

LOWER	UPPER
VOL PER	VOL PER
REF	REF
1.2	8(DD)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

4-METHYL-1-PENTENE

SYNONYMS.

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	892.58	10605.	11
	(GROSS)	955.70	11355.	11
HEAT OF VAPORIZATION(25 C)		6.86	81.51	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.66370	11	.65894	11	.6546	20
REFRACTIVE INDEX	1.38267	11	1.37974	11	1.3770	20
SURFACE TENSION	16.90	20			15.90	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-64.5	-36.6	-19.6		2.8		53.9	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8775	-1129.62	228.76		.03	30.
EQUATION 2	73.105	-5920.9	-8.38	17.5804	.14	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-31.5	10(DD)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.2	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
304.	12.	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
40.5 (69)	2295 (55)	2.62 (69)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=

QUENCHING DISTANCE(CM)=

2-METHYL-2-PENTENE

SYNONYMS.

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	888.59	10558.	11
	(GROSS)	951.71	11308.	11
HEAT OF VAPORIZATION(25 C)		7.55	89.71	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.68650	11	.68187	11	.6767	20
REFRACTIVE INDEX	1.40030	11	1.39739	11	1.3945	20
SURFACE TENSION	19.32	20			18.22	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-55.3	-26.4	-8.8		14.5		67.3	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.8947	-1178.09	226.21		-.04	10.
EQUATION 2	74.966	-6254.7	-8.59	19.4109	.13	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-23.5	10(DD)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.2	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

4-METHYL-CIS-2-PENTENE

SYNONYMS. 1-ISOPROPYL-2-METHYLETHYLENE

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	890.80	10584.	11
	(GROSS)	953.92	11334.	11
HEAT OF VAPORIZATION(25 C)		7.04	83.65	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.66918	11	.66441	11	.6593	20
REFRACTIVE INDEX	1.38793	11	1.38498	11	1.3820	20
SURFACE TENSION	17.41	20			16.38	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-62.8	-34.7	-17.6		5.0		56.3	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8831	-1139.08	228.31		.02	30.
EQUATION 2	73.109	-5970.8	-8.36	17.4581	.11	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-35.5	(8)(9)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.2	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

4-METHYL-TRANS-2-PENTENE

SYNONYMS. 1-ISOPROPYL-2-METHYLETHYLENE

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	889.68	10571.	11
	(GROSS)	952.80	11321.	11
HEAT OF VAPORIZATION(25 C)		7.16	85.07	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.66862	11	.66380	11	.6590	20
REFRACTIVE INDEX	1.38878	11	1.38583	11	1.2831	20
SURFACE TENSION	17.37	20			16.35	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-61.3	-13.0	-15.8		6.9		58.6	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.0855	-1146.99	227.86		-.03	10.
EQUATION 2	73.495	-6029.3	-8.41	17.8083	.14	30.

FLASH POINT(DEG C)	(C)	REF	(OC)	REF
	-29.	8(DD)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.2	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

2,3-DIMETHYL-1-BUTENE

SYNONYMS.

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	889.35	10567.	11
	(GROSS)	952.47	11317.	11
HEAT OF VAPORIZATION(25 C)		6.97	82.82	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.67810	11	.67325	11	.6682	20
REFRACTIVE INDEX	1.39022	11	1.38729	11	1.3845	20
SURFACE TENSION	18.35	20			17.28	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-63.3	-35.2	-18.1		4.4		55.7	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8816	-1136.50	228.40		-.01 100.
EQUATION 2	72.984	-5954.1	-8.35	17.2875	.12 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-29.	10(DD)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.2	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
369.	6.	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
39.2 (62)	2206 (62)	3.83 (73)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

3,3-DIMETHYL-1-BUTENE

SYNONYMS.

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	890.49	10581.	11
HEAT OF VAPORIZATION(25 C)		953.61	11331.	11
		6.36	75.57	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.65310	11	.64795	11	.6429	20
REFRACTIVE INDEX	1.37620	11	1.37313	11	1.3699	20
SURFACE TENSION	15.72	20			14.71	20
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-73.4	-46.4	-30.0		-8.3		41.2	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8460	-1079.89	231.10		-.02	10.
EQUATION 2	71.329	-5599.6	-8.17	16.1248	.12	30.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS	LOWER	UPPER		
	VOL PER	REF	VOL PER	REF
	1.2	8 (DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL

MIN IGN ENERGY (MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE (CM)=				

2-ETHYL-1-BUTENE

SYNONYMS.

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	890.77	10584.	11
	(GROSS)	953.89	11334.	11
HEAT OF VAPORIZATION(25 C)		7.41	88.04	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.68958	11	.68481	11	.6800	20
REFRACTIVE INDEX	1.39671	11	1.39380	11	1.3912	20
SURFACE TENSION	19.66	20			18.57	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-57.1	-28.3	-10.8		12.2		64.7	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8954	-1170.01	226.78		.01 30.
EQUATION 2	74.117	-6173.0	-8.47	18.4530	.12 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
324.	6.	49	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
39.3 (69)	2284 (55)	2.65 (69)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

2,3-DIMETHYL-2-BUTENE

SYNONYMS.

FORMULA= C6H12 C/H= 5.958 MW= 84.163 VD= 2.9022

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	887.41	10544.	11
HEAT OF VAPORIZATION(25 C)		950.53	11294.	11
		7.78	92.44	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.70810	11	.70347	11	.6988	20
REFRACTIVE INDEX	1.41235	11	1.40952	11	1.4065	20
SURFACE TENSION	21.90	20			20.75	20
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-51.3	-21.8	-3.9		19.6		73.2	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.9029	-1199.58	225.04		.01 100.
EQUATION 2	75.386	-6390.5	-8.62	19.6449	.11 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-18.	10(DD)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.2	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
407.	6.	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
37.2 (62)	2284 (62)	3.36 (73)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

2-CYCLOPROPYLPROPENE

SYNONYMS.

FORMULA= C6H10 C/H= 7.150 MW= 82.147 VD= 2.8326

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
 (GROSS)
HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T

VAPOR PRESSURE EQUATION COEFFICIENTS
 A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
 DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
 44.9 (72) 2.85 (72)
 STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

1-HEPTENE

SYNONYMS. ALPHA-N-HEPTYLENE

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1039.53	10587.	11
HEAT OF VAPORIZATION(25 C)		1113.17	11337.	11
		8.52	86.77	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.69698	11	.69267	11		
REFRACTIVE INDEX	1.39980	11	1.39713	11		
SURFACE TENSION	20.30	(8)(60)	19.80	11		
VISCOSITY (CS)	.502	(8)(60)			.44	11

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-37.0	-6.1	12.7		37.4		93.6	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9007	-1257.52	219.18		-.02	10.
EQUATION 2	81.048	-7048.5	-9.37	23.6961	.12	30.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.0	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF
263.	66.	49	332.	40(N,TT)

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY (MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE (CM)=				

CIS-2-HEPTENE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1037.85	10570.	11
	(GROSS)	1111.49	11320.	11
HEAT OF VAPORIZATION(25 C)		8.60	87.59	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7071	11	.7028	11	.700	20
REFRACTIVE INDEX	1.4069	11	1.4042	11	1.401	20
SURFACE TENSION	20.79	20			19.84	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-33.9	-2.5	16.5		41.6		98.5	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9366	-1292.98	220.30		.01	100.
EQUATION 2	78.182	-7010.9	-8.92	22.7478	.10	30.

FLASH POINT(DEG C)

(CC)	REF	(OC)	REF
-2.	10(J,UU)		
-18.	10(J,VV)		

FLAMMABLE LIMITS

LOWER		UPPER	
VOL PER	REF	VOL PER	REF
1.0	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)= STOICH REF ABS MIN REF
 QUENCHING DISTANCE(CM)=

TRANS-2-HEPTENE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1036.85	10560.	11
	(GROSS)	1110.49	11310.	11
HEAT OF VAPORIZATION(25 C)		8.60	87.59	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7012	11	.6969	11	.6926	20
REFRACTIVE INDEX	1.4045	11	1.4020	11	1.3992	20
SURFACE TENSION	20.00	20			19.03	20
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-34.3	-3.0	16.1		41.1		97.9	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9327	-1289.68	220.34		-.03	10.
EQUATION 2	78.577	-7013.8	-8.99	23.3049	.13	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-2.	10(J,UU)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.0	8(DD)		

AUTOIGNITION TEMPERATURE		
DEG C	DELAY(SEC)	REF
		DEG C
		REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH	REF
MIN IGN ENERGY (MILLIJOULE)=		ABS MIN
QUENCHING DISTANCE (CM)=		REF

CIS-3-HEPTENE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1037.95	10571.	11
	(GROSS)	1111.59	11321.	11
HEAT OF VAPORIZATION(25 C)		8.50	86.57	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7028	11	.6985	11	.6944	20
REFRACTIVE INDEX	1.4059	11	1.4033	11	1.4006	20
SURFACE TENSION	20.21	20			18.26	20
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG) -TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-35.8	-4.6	14.3		39.2		95.7	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9323	-1282.62	220.83		-.02	100.
EQUATION 2	77.599	-6930.6	-8.85	22.0076	.12	30.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	-6.	10(J,WW)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.0	8(DD)	

AUTOIGNITION TEMPERATURE	
DEG C	DELAY (SEC) REF
	DEG C REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

TRANS-3-HEPTENE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1036.95	10561.	11
	(GROSS)	1110.59	11311.	11
HEAT OF VAPORIZATION(25 C)		8.50	86.57	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.6981	20	.6938	11	.6895	20
REFRACTIVE INDEX	1.4044	11	1.4017	11	1.3989	20
SURFACE TENSION	19.65	20			18.68	20
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-35.9	-4.7	14.0		39.1		95.7	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9065	-1269.72	219.72		-.54	30.
EQUATION 2	80.793	-7059.1	-9.33	25.0650	-.40	30.

FLASH POINT (DEG C) (CC) REF (OC) REF

-6. 10(J,WW)

FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
	1.0	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
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MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE)=				
QUENCHING DISTANCE (CM)=				

1-METHYLCYCLOHEXENE

SYNONYMS.

FORMULA= C7H12 C/H= 6.951 MW= 96.174 VD= 3.3163

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	985.73	10249.	11
	(GROSS)	1048.85	10906.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.81148	11	.80660	11	.8014	19
REFRACTIVE INDEX	1.45046	11	1.44784	11	1.4459	19
SURFACE TENSION	26.01	19			24.89	19

VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-27.6	4.9	24.6		50.7		110.0	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8796	-1314.02	218.60		-.13	30.
EQUATION 2	78.300	-7162.9	-8.93	25.1288	-.01	30.

FLASH POINT (DEG C) (CC) REF (OC) REF

7.0 10(L)

FLAMMABLE LIMITS LOWER UPPER

VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C DELAY (SEC) REF DEG C REF

MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL

MIN IGN ENERGY (MILLIJOULE)= STOICH REF ABS MIN REF

QUENCHING DISTANCE (CM)=

4-METHYL-1-CYCLOHEXENE

SYNONYMS.

FORMULA= C7H12 C/H= 6.951 MW= 96.174 VD= 3.3163

		KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)				
	(GROSS)			
HEAT OF VAPORIZATION(25 C)				

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7991	11	.7947	11	.7902	19
REFRACTIVE INDEX	1.4414	11	1.4389	11	1.4362	19
SURFACE TENSION	24.61	19			23.53	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-32.2	-.4	19.0		44.5		102.7	19

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.8705	-1283.59	219.03		.19	30.
EQUATION 2	79.103	-7072.0	-9.07	24.6823	.30	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
			-1.	(1,(8)(9))(L)

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

4,4-DIMETHYL-1-PENTENE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1037.00	10561.	11
		1110.64	11311.	11
HEAT OF VAPORIZATION(25 C)		7.45	75.87	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.68249	11	.67804	11	.6743	20
REFRACTIVE INDEX	1.39172	11	1.38895	11	1.3867	20
SURFACE TENSION	17.93	20			17.03	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-55.9	-26.1	-7.9		16.4		72.5	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.6741	-1128.59	225.03		.02	100.
EQUATION 2	74.583	-6132.9	-8.61	22.8683	.11	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER	VOL PER
	REF	REF
	1.0	8(DD)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

2,3-DIMETHYL-2-PENTENE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1035.10	10542.	11
HEAT OF VAPORIZATION(25 C)		1108.74	11292.	11
		8.50	86.57	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7277	11	.7234	11	.7190	20
REFRACTIVE INDEX	1.4211	11	1.4185	11	1.4156	20
SURFACE TENSION	23.20	20			22.10	20
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-38.4	-6.6	12.7		38.5		97.5	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.7544	-1233.63	221.01		-.01	30.
EQUATION 2	76.187	-6711.9	-8.72	24.8373	.11	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.0	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

2,3,3-TRIMETHYL-1-BUTENE

SYNONYMS.

FORMULA= C7H14 C/H= 5.958 MW= 98.190 VD= 3.3858

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1036.30	10554.	11
HEAT OF VAPORIZATION(25 C)		1109.94	11304.	11
		7.68	78.22	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.70466	11	.70024	11	.6960	20
REFRACTIVE INDEX	1.40282	11	1.40007	11	1.3973	20
SURFACE TENSION	20.40	20			19.35	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-52.0	-21.8	-3.3		21.3		77.9	20

VAPOR PRESSURE EQUATION COEFFICIENTS							
	A	B	C	D	MAX ERR AT P		
EQUATION 1	6.6956	-1151.31	223.93		-.01	30.	
EQUATION 2	75.209	-6276.7	-8.67	23.1425	.11	30.	

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER		
	VOL PER	REF	VOL PER	REF	
	1.0	8(DD)			

AUTOIGNITION TEMPERATURE					
DEG C	DELAY(SEC)	REF	DEG C	REF	
383.	12.	49			

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

2-CYCLOPROPYL-1-BUTENE

SYNONYMS.

FORMULA= C7H12 C/H= 6.951 MW= 96.174 VD= 3.3163

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T								

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS LOWER			UPPER		
VOL PER	REF		VOL PER	REF	

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
42.5 (62)	2342 (62)	2.37 (73)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY (MILLIJOULE)=
QUENCHING DISTANCE (CM)=

1-OCTENE

SYNONYMS. 1-OCTYLENE, 1-CAPRYLENE

FORMULA= C₈H₁₆ C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1185.27	10562.	11
	(GROSS)	1269.43	11312.	11
HEAT OF VAPORIZATION(25 C)		9.70	86.44	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.71492	11	.71085	11		
REFRACTIVE INDEX	1.40870	11	1.40620	11		
SURFACE TENSION	21.76	(8)(60)	21.28	11		
VISCOSITY (CS)	.656	(8)(60)			.557	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-17.5	15.4	35.3		61.6		121.3	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9264	-1349.95	212.40		-.03	10.
EQUATION 2	86.618	-7887.2	-10.06	28.8997	.13	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
			21.	(1,3)(L)

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.78 AT 80 C	14(U)	6.8 AT 80 C	14(U)
	0.9	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
256.	72.	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL		
	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

2-OCTENE (CIS AND TRANS)

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1186.00	10569.	11
	(GROSS)	1270.16	11319.	11
HEAT OF VAPORIZATION(25 C)				

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7221	11(XX)	.7179	11(XX)		
REFRACTIVE INDEX	1.4141	11(XX)	1.4116	11(XX)		
SURFACE TENSION	21.6	20(XX)			20.6	20(XX)
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							125.3	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
			21.	(1,3)(L)

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.9	8(DD)	

AUTOIGNITION TEMPERATURE		
DEG C	DELAY(SEC)	REF
		DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2-METHYLHEPTENE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

 HEAT OF COMBUSTION OF LIQUID (NET) (GROSS) KCAL/MOLE 1183.50 1267.66 CAL/GRAM 10547. 11297. REF 11 11
 HEAT OF VAPORIZATION(25 C)

 DENSITY (GRAM/ML) 20 C REF 25 C REF 30 C REF
 .7205 11 .7164 11 .7123 20
 REFRACTIVE INDEX 1.4123 11 1.4098 11 1.4073 20
 SURFACE TENSION 21.45 20 20.48 20
 VISCOSITY (CS)

 VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
 P 1 10 30 40 100 400 760 REF
 T -22.5 11.4 31.7 58.4 119.3 20

 VAPOR PRESSURE EQUATION COEFFICIENTS
 EQUATION 1 A B C D MAX ERR AT P
 7.0004 -1417.95 224.98 -.60 100.
 EQUATION 2 57.641 -6400.5 -5.81 3.5592 -.03 30.

 FLASH POINT(DEG C) (CC) REF (OC) REF

 FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF
 0.9 8(DD)

 AUTOIGNITION TEMPERATURE
 DEG C DELAY(SEC) REF DEG C REF

 MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
 MIN IGN ENERGY(MILLIJOULE)= STOICH REF ABS MIN REF
 QUENCHING DISTANCE(CM)=

2,3-DIMETHYL-2-HEXENE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1180.90	10523.	11
	(GROSS)	1265.06	11273.	11
HEAT OF VAPORIZATION(25 C)				

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7408	11	.7366	11	.7324	20
REFRACTIVE INDEX	1.4268	11	1.4244	11	1.4217	20
SURFACE TENSION	23.97	20			22.90	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-18.8	15.1	35.3		61.8		121.8	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.1057	-1463.94	224.81		-.60	100.
EQUATION 2	58.047	-6560.3	-5.82	3.0134	.01	10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	0.9	B(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL		
	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

2,3,3-TRIMETHYL-1-PENTENE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1182.00	10533.	11
	(GROSS)	1266.16	11283.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7352	11	.7308	11	.7263	20
REFRACTIVE INDEX	1.4174	11	1.4151	11	1.4128	20
SURFACE TENSION	23.25	20			22.14	20

VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-27.2	5.0	24.4		50.1		108.3	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.9460	-1328.22	218.42		-.02 100.
EQUATION 2	79.039	-7244.2	-9.01	23.7401	.12 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS

LOWER		UPPER	
VOL PER	REF	VOL PER	REF
0.9	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

2,3,4-TRIMETHYL-1-PENTENE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

		KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)				
	(GROSS)			
HEAT OF VAPORIZATION(25 C)				

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.729	11	.725	11	.721	20
REFRACTIVE INDEX	1.415	11	1.413	11	1.411	20
SURFACE TENSION	22.47	20			21.50	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-27.5	4.7	24.1		49.8		108.0	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9422	-1325.90	218.46		-.02	10.
EQUATION 2	79.295	-7245.2	-9.05	24.1849	.11	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
257.	12.	49	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2,4,4-TRIMETHYL-1-PENTENE

SYNONYMS. ALPHA-DIISOBUTYLENE

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1180.00	10515.	11
	(GROSS)	1264.16	11265.	11
HEAT OF VAPORIZATION(25 C)				

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7150	11	.7108	11	.7065	20
REFRACTIVE INDEX	1.4086	11	1.4060	11	1.4034	20
SURFACE TENSION	20.79	20			19.81	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-31.9	-.3	18.9		44.1		101.4	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9365	-1302.40	219.69		-.01	30.
EQUATION 2	78.443	-7079.0	-8.95	23.0101	.10	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	1.5	10(DD)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	0.9	8(DD)	

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
420.	12.	49	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	1.75 (7)(57)	
QUENCHING DISTANCE(CM)=	.46 7	

2,4,4-TRIMETHYL-2-PENTENE

SYNONYMS. BETA-DIISOBUTYLENE

FORMULA= C₈H₁₆ C/H= 5.958 MW= 112.217 VD= 3.8695

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1178.60	10503.	11
	(GROSS)	1262.76	11253.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7218	11	.7176	11	.7133	20
REFRACTIVE INDEX	1.4160	11	1.4135	11	1.4110	20
SURFACE TENSION	21.60	20			20.59	20

VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-29.6	2.3	21.7		47.1		104.9	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	H	C	D	MAX ERR	AT P
EQUATION 1	6.9406	-1315.39	219.09		-.02	10.
EQUATION 2	78.934	-7168.2	-9.01	23.7816	.12	30.

FLASH POINT(DEG C) (CC) REF (OC) REF

	-6.5	4	1.5	(1,3,4)(L)
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FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
	0.9	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
308.	3.	49		

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

3,4,4-TRIMETHYL-2-PENTENE (CIS AND TRANS)

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.739	11	.735	11	.731	20
REFRACTIVE INDEX	1.423	11	1.421	11	1.418	20
SURFACE TENSION	23.74	20			22.71	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-25.5	7.6	27.4		53.3		112.0	20

VAPOR PRESSURE EQUATION COEFFICIENTS							
	A	B	C	D	MAX ERR	AT P	
EQUATION 1	7.1025	-1429.76	226.75		-.62	100.	
EQUATION 2	56.362	-6313.2	-5.60	1.7558	-.03	30.	

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE					
DEG C	DELAY(SEC)	REF	DEG C	REF	
330.	24.	49			

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

DIISOBUTYLENE

SYNONYMS.

FORMULA= C8H16 C/H= 5.958 MW= 112.217 VD= 3.8695

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	25 C	REF
DENSITY (GRAM/ML)		
REFRACTIVE INDEX	1.4073	51
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							101.5	51(AQ)

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-6.5	1		

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
470.		51(MM)		

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=	1.75 (7)(57)(QQ)	
QUENCHING DISTANCE (CM)=	.457 7(QQ)	

2,6-DIMETHYL-3-HEPTENE (CIS AND TRANS)

SYNONYMS.

FORMULA= C9H18 C/H= 5.958 MW= 126.244 VD= 4.3532

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	15.5 C	REF
DENSITY (GRAM/ML)	.722	1
REFRACTIVE INDEX		
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							129.0	1

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
			21.	1(L)

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1-DECENE

SYNONYMS. N-DECYLENE

FORMULA= C10H20 C/H= 5.958 MW= 140.271 VD= 4.8369

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1476.76	10528.	11
HEAT OF VAPORIZATION(25 C)		1581.96	11278.	11
		12.06	85.98	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.74081	11	.73693	11		
REFRACTIVE INDEX	1.42146	11	1.41913	11		
SURFACE TENSION			23.54	11		
VISCOSITY (CS)					.877	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	14.7	53.7		83.3	106.5	149.2	170.6	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.6792	-2003.09	246.17		2.51 400.
EQUATION 2	60.171	-7434.3	-6.07	47.7381	1.24 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.55 AT 80 C	14(U)	5.7 AT 80 C	14(U)

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
244.	78.	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
41.2 (62)(P)	2298 (62)	1.55 (73)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=

QUENCHING DISTANCE(CM)=

DIAMYLENE

SYNONYMS.

FORMULA= 10H18 C/H= 6.620 MW= 138.255 VD= 4.7674

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							150.0	3

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
			48.	1,3,4

FLAMMABLE LIMITS LOWER		UPPER	
VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE		DEG C		REF
DEG C	DELAY(SEC)			

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL	
	STOICH REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=			
QUENCHING DISTANCE(CM)=			

TRIIISOBUTYLENE

SYNONYMS.

FORMULA= C12H24 C/H= 5.958 MW= 168.325 VD= 5.8043

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7590	2		
REFRACTIVE INDEX	1.4314	2	1.4282	51
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	18.0	56.5		86.7	110.0	153.0	179.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.0981	-1665.67	216.64		-2.31 400.
EQUATION 2	48.378	-7028.1	-4.27	-20.8550	-1.41 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
413.		51		

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)		VOL PERCENT FUEL	
	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE)=				
QUENCHING DISTANCE (CM)=				

1,1-DINEOPENTYLETHYLENE

SYNONYMS.

FORMULA= C12H24 C/H= 5.958 MW= 168.325 VD= 5.8043

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	25 C	REF
DENSITY (GRAM/ML)		
REFRACTIVE INDEX	1.4271	51
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							177.5	51(AQ)

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS		LOWER	UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
455.		51		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1-TETRADECENE

SYNONYMS. 1-TETRADECYLENE

FORMULA= C14H28 C/H= 5.958 MW= 196.379 VD= 6.7717

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	2058.40	10482.	11
	(GROSS)	2205.68	11232.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.7713	20	.7641	20		
REFRACTIVE INDEX	1.43631	11	1.4320	20		
SURFACE TENSION	24.99	20	24.07	20		
VISCOSITY (CS)					1.92	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	74.5	119.0	144.4		177.1		251.1	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.6580	-2236.23	217.39		-2.42	100.
EQUATION 2	14.698	-6778.2	.82	-98.2463	-.36	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	110.	6		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
239.	66.	49	255.	50

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

1-HEXADECENE

SYNONYMS.

FORMULA= C16H32 C/H= 5.958 MW= 224.433 VD= 7.7391

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	2349.80	10470.	11
	(GROSS)	2518.12	11220.	11
HEAT OF VAPORIZATION(25 C)				

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.78112	20	.77406	20		
REFRACTIVE INDEX	1.44120	11	1.43694	11		
SURFACE TENSION	25.75	20	24.83	20		
VISCOSITY (CS)					3.04	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	101.6	146.2		178.8	205.3	250.0	274.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS							
	A	B	C	D	MAX ERR AT P		
EQUATION 1	8.3246	-2715.53	224.62		-1.99	40.	
EQUATION 2	71.316	-10955.9	-7.10	44.3810	-1.84	40.	

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS			
	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
240.	78.	49	253.	50

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

TETRAISOBUTYLENE

SYNONYMS.

FORMULA= C16H32 C/H= 5.958 MW= 224.433 VD= 7.7391

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.7944	2				
REFRACTIVE INDEX	1.4482	2	1.4475	51		
SURFACE TENSION					30 SSU	51(AR)
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	63.8	108.5		142.2	167.5	214.6	240.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.9435	-2457.55	245.54		-1.46 100.
EQUATION 2	28.825	-7102.8	-1.33	-16.1902	-1.01 100.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER	VOL PER
	REF	REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
415.		51		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1-OCTADECENE

SYNONYMS.

FORMULA= C18H36 C/H= 5.958 Mw= 252.488 VD= 8.7065

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	2640.98	10460.	11
	(GROSS)	2830.34	11210.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	30 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.7891	11	.7818	20		
REFRACTIVE INDEX	1.4449	11	1.4408	20		
SURFACE TENSION	26.36	20	25.43	20		
VISCOSITY (CS)					4.19	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	128.0	172.0	198.9		234.2		314.2	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9188	-1806.37	133.10		-.41	10.
EQUATION 2	169.083	-18051.7	-20.70	118.4692	.47	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
251.		(22)(50)		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

11-TRICOSENE

SYNONYMS.

FORMULA= C23H46 C/H= 5.958 MW= 322.623 VD= 11.1249

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T								

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C) (CC) REF (OC) REF

	140.	1		
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FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
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AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
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MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

PROPADIENE

SYNONYMS.

FORMULA= C3H4 C/H= 8.937 MW= 40.065 VD= 1.3816

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF GAS	(NET)	443.67	11074.	11
	(GROSS)	464.71	11599.	11
HEAT OF VAPORIZATION(25 C)		3.67	91.60	11

-34.5 C REF
 DENSITY (GRAM/ML) .6575 11
 REFRACTIVE INDEX
 SURFACE TENSION
 VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							-34.5	11

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY (SEC)	REF	DEG C REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
73.8 (62)	2463 (62)	6.04 (73)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

1,2-BUTADIENE

SYNONYMS. METHYLALLENE

FORMULA= C4H6 C/H= 7.944 MW= 54.092 VD= 1.8653

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	583.90	10794.	11
HEAT OF VAPORIZATION(25 C)		615.46	11378.	11
		4.47	82.64	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.652	11(D)	.646	11(D)	.640	20
REFRACTIVE INDEX						
SURFACE TENSION	16.56	20			15.24	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-89.0	-64.2		-44.3	-28.3	1.8	18.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.6414	-934.32	229.71		-.85	10.
EQUATION 2	88.303	-5711.1	-10.98	28.4947	-.33	10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS

	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	2.0	8(DD)	12.	8(DD)
	2.0	12(A,YY)	11.5	12(A,YY)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
58.0 (63)	2419 (7)	4.27 (72)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=

QUENCHING DISTANCE(CM)=

1,3-BUTADIENE

SYNONYMS. VINYLETHYLENE, DIVINYL, ERYTHRENE

FORMULA= C4H6 C/H= 7.944 MW= 54.092 VD= 1.8653

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	570.82	10553.	11
	(GROSS)	602.38	11136.	11
HEAT OF VAPORIZATION(25 C)		5.11	94.47	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.6211	11(D)	.6149	11(D)	.6086	20
REFRACTIVE INDEX						
SURFACE TENSION	13.41	20			12.20	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-102.8	-79.7		-61.3	50.0	-19.3	-4.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8507	-930.91	238.71		1.36 400.
EQUATION 2	78.215	-5000.3	-9.51	21.4737	.59 40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-76.	4		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	2.0	1,3	11.5 1,3
	2.0	12(A,YY)	11.5 12(A,YY)
	2.0	79	11.5 79

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
450.		1	429.	3
335.		54(3)	418.	54

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
54.5 (63)	2375 (7)	4.34 (72)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	.235 (7)(57)(E)	.125 (7)(57)
QUENCHING DISTANCE(CM)=	.18 7	.13 7

1,2-PENTADIENE

SYNONYMS. ETHYLALLENE

FORMULA= C5H8 C/H= 7.448 MW= 68.120 VD= 2.3489

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	730.10	10718.	11
	(GROSS)	772.18	11336.	11
HEAT OF VAPORIZATION(25 C)		6.15	90.28	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.69257	11	.68760	11	.68259	20
REFRACTIVE INDEX	1.42091	11	1.41773	11	1.41446	20
SURFACE TENSION	19.57	20			18.41	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-70.0	-42.6	-26.0		-4.3		44.9	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.0105	-1154.20	234.63		.02 100.
EQUATION 2	63.133	-5414.2	-6.67	11.0987	.27 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS

LOWER		UPPER	
VOL PER	REF	VOL PER	REF
1.5	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
51.8 (63)	2381 (7)	3.45 (72)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

CIS-1,3-PENTADIENE

SYNONYMS. CIS-PIPERYLENE

FORMULA= C5H8 C/H= 7.448 MW= 68.120 VD= 2.3489

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	714.40	10487.	11
	(GROSS)	756.48	11105.	11
HEAT OF VAPORIZATION(25 C)		5.75	84.41	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.69102	11	.68592	11	.68078	20
REFRACTIVE INDEX	1.43634	11	1.43291	11	1.42943	20
SURFACE TENSION	19.39	20			18.21	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-70.2	-43.1	-26.7		-5.0		44.1	20

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9427	-1118.75	231.36		.03	10.
EQUATION 2	70.321	-5679.2	-7.97	14.7293	.09	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
			-29.	10(L,ZZ)

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.5	8(DD)		

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC) REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
46.5 (63)	2336 (7)	3.47 (72)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

TRANS-1,3-PENTADIENE

SYNONYMS. TRANS-PIPERYLENE

FORMULA= C5H8 C/H= 7.448 MW= 68.120 VD= 2.3489

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	714.50	10489.	11
	(GROSS)	756.58	11107.	11
HEAT OF VAPORIZATION(25 C)		5.55	81.47	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.67603	11	.67102	11	.66597	20
REFRACTIVE INDEX	1.43008	11	1.42669	11	1.42302	20
SURFACE TENSION	17.75	20			16.66	20
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-72.2	-45.1	-28.7		-7.1		42.0	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.9227	-1109.02	232.35		-.03	30.
EQUATION 2	69.389	-5577.1	-7.85	15.0206	.08	30.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
			-29.	10(L,ZZ)

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.5	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
45.6 (63)	2350 (7)	3.37 (72)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

1,4-PENTADIENE

SYNONYMS.

FORMULA= C5H8 C/H= 7.448 MW= 68.120 VD= 2.3489

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	721.20	10587.	11
HEAT OF VAPORIZATION(25 C)		763.28	11205.	11
		5.45	80.01	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.66076	11	.65571	11
REFRACTIVE INDEX	1.38876	11	1.38542	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-83.5	-57.1		-37.0	-20.6	8.3	26.1	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.1200	-1142.58	243.94		-2.68 400.
EQUATION 2	33.422	-4040.5	-2.31	-12.8008	1.99 100.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS

LOWER	UPPER
VOL PER REF	VOL PER REF
1.5 8(DD)	

AUTOIGNITION TEMPERATURE

DEG C DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
46.6 (63)	2372 (7)	3.33 (72)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

2,3-PENTADIENE

SYNONYMS.

FORMULA= C5H8 C/H= 7.448 MW= 68.120 VD= 2.3489

HEAT OF COMBUSTION OF GAS	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	734.55	10783.	11
HEAT OF VAPORIZATION(25 C)		776.63	11401.	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.69502	11	.69000	11	.68494	20
REFRACTIVE INDEX	1.42842	11	1.42509	11	1.42170	20
SURFACE TENSION	19.87	20			18.69	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-65.2	-38.4	-22.1		-0.6		48.3	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.8976	-1091.56	223.49		-.13	100.
EQUATION 2	82.521	-6333.4	-9.75	17.1003	.19	30.

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
	1.5	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
50.7 (63)	2378 (7)	3.43 (72)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=

QUENCHING DISTANCE(CM)=

CYCLOPENTADIENE

SYNONYMS.

FORMULA= C5H6 C/H= 9.930 MW= 66.104 VD= 2.2794

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF
DENSITY (GRAM/ML)	.8021	2
REFRACTIVE INDEX	1.4429	2
SURFACE TENSION	*	
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							40.8	2

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
510.		(22)(24)(B)	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	.67 (7)(57)	
QUENCHING DISTANCE(CM)=	.28 7	

3-METHYL-1,2-BUTADIENE

SYNONYMS.

FORMULA= C5H8 C/H= 7.448 MW= 68.120 VD= 2.3489

HEAT OF COMBUSTION OF GAS (NET) 732.45 KCAL/MOLE 10752. CAL/GRAM 11 REF
 (GROSS) 774.53 11370. 11 REF
 HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML) 20 C REF 25 C REF 30 C REF
 .68607 11 .68064 11 .670 20
 REFRACTIVE INDEX 1.42026 11 1.41692 11 1.404 20
 SURFACE TENSION 18.16 20 17.05 20
 VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
 P 1 10 30 40 100 400 760 REF
 T -72.7 -46.0 -30.0 -8.0 40.0 20

VAPOR PRESSURE EQUATION COEFFICIENTS
 A B C D MAX ERR AT P
 EQUATION 1 6.9244 -1097.07 231.16 1.94 100.
 EQUATION 2 92.007 -6358.1 -11.37 38.0557 -1.10 30.

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF
 1.5 8(DD)

AUTOIGNITION TEMPERATURE
 DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
 STOICH REF ABS MIN REF
 MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

2-METHYL-1,3-BUTADIENE

SYNONYMS. ISOPRENE

FORMULA= C5H8 C/H= 7.448 MW= 68.120 VD= 2.3489

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		713.25	10471.	11
	(GROSS)	755.33	11088.	11
HEAT OF VAPORIZATION(25 C)		6.30	92.48	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.68095	11	.67587	11
REFRACTIVE INDEX	1.42194	11	1.41852	11
SURFACE TENSION	16.9	(8)(61)		
VISCOSITY (CS)	.317	(8)(61)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-79.8	-53.3		-32.6	-16.0	15.4	32.6	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8205	-1049.84	233.72		.98 400.
EQUATION 2	69.999	-5353.5	-8.04	16.9774	.54 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-48.5	(8)(9)		
	18.5	1		
	-54.	3,4		

FLAMMABLE LIMITS

LOWER	UPPER
VOL PER	VOL PER
REF	REF
1.5	
8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
220.		1	440	3,4,(22)(24)(8)

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
45.0 (63)	2344 (7)	3.41 (72)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=

QUENCHING DISTANCE(CM)=

1,4-HEXADIENE

SYNONYMS. ALLYLPROPENYL

FORMULA= C6H10 C/H= 7.150 MW= 82.147 VD= 2.8326

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.700	11	.695	11	.690	20
REFRACTIVE INDEX	1.415	11	1.412	11	1.409	20
SURFACE TENSION	19.31	20			18.19	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-54.7	-26.1	-8.9		13.8		65.0	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.0184	-1206.44	226.59		.22	10.
EQUATION 2	158.350	-9290.8	-21.50	272.1810	-1.58	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-21.	6		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	2.0	6	6.1	6

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

1,5-HEXADIENE

SYNONYMS. DIALLYL, BIALLYL

FORMULA= C6H10 C/H= 7.150 MW= 82.147 VD= 2.8326

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	867.40	10559.	11
	(GROSS)	920.00	11199.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.6923	11	.6878	11	.6833	20
REFRACTIVE INDEX	1.4042	11	1.4010	11	1.3978	20
SURFACE TENSION	18.46	20			17.47	20
VISCOSITY (CS)	.394	(8)(61)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-58.6	-30.4	-13.4		8.9		59.5	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.0067	-1184.62	227.66		.02	10.
EQUATION 2	74.319	-6186.6	-8.47	16.7240	.08	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.2	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
330.		(22)(24)(B,AB)		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
44.2 (63)		2.83 (72)

MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

CYCLOHEXADIENE

SYNONYMS.

FORMULA= C6H8 C/H= 8.937 MW= 80.131 VD= 2.7631

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T								

VAPOR PRESSURE EQUATION COEFFICIENTS					MAX ERR AT P
	A	B	C	D	
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER	UPPER		
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF
360.		(22)(24)(B)		

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL		
	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE)=				
QUENCHING DISTANCE (CM)=				

2-METHYL-1,3-PENTADIENE

SYNONYMS.

FORMULA= C6H10 C/H= 7.150 MW= 82.147 VD= 2.8326

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF	40 C	REF
DENSITY (GRAM/ML)	.719	11	.714	11		
REFRACTIVE INDEX	1.446	11	1.443	11		
SURFACE TENSION	21.52	20			19.16	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							76.0	11

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF

AUTOIGNITION TEMPERATURE	
DEG C DELAY(SEC)	REF DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
39.0 (62)	2345 (62)	2.78 (73)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

4-METHYL-1,3-PENTADIENE

SYNONYMS.

FORMULA= C₆H₁₀ C/H= 7.150 MW= 82.147 VD= 2.8326

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	859.40	10462.	11
	(GROSS)	912.00	11102.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.719	11	.714	11	.709	20
REFRACTIVE INDEX	1.451	11	1.448	11	1.445	20
SURFACE TENSION	21.52	20			20.32	20

VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-46.9	-17.5	.3		23.7		76.3	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.0348	-1249.80	224.57		.01	30.
EQUATION 2	79.681	-6735.2	-9.21	22.7066	.13	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-34.5	1,3,4		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.2	8(DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

METHYLCYCLOPENTADIENE

SYNONYMS.

FORMULA= C6H8 C/H= .894 MW= 152.704 VD= 5.2657

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
 REFRACTIVE INDEX
 SURFACE TENSION
 VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							72.8	3

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	49.	3		

FLAMMABLE LIMITS LOWER			UPPER		
VOL PER	REF		VOL PER	REF	
1.3 AT 100 C	3		7.6 AT 100 C	3	

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
446.		3		

MAX FLAME VEI.(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2,3-DIMETHYL-1,3-BUTADIENE

SYNONYMS.

FORMULA= C6H10 C/H= 7.150 MW= 82.147 VD= 2.8326

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	855.90	10419.	11
	(GROSS)	908.50	11059.	11
HEAT OF VAPORIZATION(25 C)				

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.7267	11	.7222	11	.7177	20
REFRACTIVE INDEX	1.4394	11	1.4362	11	1.4330	20
SURFACE TENSION	22.44	20			21.32	20
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-52.1	-23.2	-5.8		17.1		68.8	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.0230	-1220.46	225.86		.02	30.
EQUATION 2	75.504	-6424.2	-8.60	17.6672	.13	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.2	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
41.6 (63)	2317 (7)	2.85 (72)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

1,5-CYCLOOCTADIENE

SYNONYMS.

FORMULA= C8H12 C/H= 7.944 MW= 108.185 VD= 3.7305

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.8833	8	.880	8
REFRACTIVE INDEX	1.4933	8		
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							150.0	8

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	38.	8		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)		VOL PERCENT FUEL	
		STOICH REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

DICYCLOPENTADIENE

SYNONYMS.

FORMULA= C10H12 C/H= 9.930 MW= 132.207 VD= 4.5589

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	35 C	REF
DENSITY (GRAM/ML)	.9302	2
REFRACTIVE INDEX	1.5050	2
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							170.0	2

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
			32.	3

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
510.		(22)(24)(B)	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIX REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

ETHYNE

SYNONYMS. ACETYLENE, ETHINE

FORMULA= C2H2 C/H= 11.916 MW= 26.038 VD= .8979

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF GAS	(NET)	300.10	11525.	11
	(GROSS)	310.62	11929.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	-84 C	REF
DENSITY (GRAM/ML)	.6154	11		
REFRACTIVE INDEX				
SURFACE TENSION			19.6	8
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-153.3	-129.5	-120.1		-108.3		-84.0	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	1.5859	8.11	95.01		2697.49	1.
EQUATION 2	-258.375	4371.0	46.36	-54.7737	-4.04	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-18.	1		

FLAMMABLE LIMITS

	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	2.5	1,3,4	81.	3,4
	2.5	(8)(15)	80.	1,(8)(15)
	2.5	12(A)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
335.		1	300	3,4
305.	5.8	26(AW)		
296.	6.8	26(B,AV)		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
141. (73)		10.1 (73)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	.03 (7)(57)(E)	.051 58
QUENCHING DISTANCE(CM)=	.08 7	

PROPYNE

SYNONYMS. METHYLACETYLENE

FORMULA= C3H4 C/H= 8.937 MW= 40.065 VD= 1.3816

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF GAS	(NET)	442.07	11034.	11
	(GROSS)	463.11	11559.	11
HEAT OF VAPORIZATION(25 C)		4.07	101.58	11

-23.2 C REF
 DENSITY (GRAM/ML) .6711 11
 REFRACTIVE INDEX
 SURFACE TENSION
 VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-110.6	-90.2	-78.2		-61.1		-23.2	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.6594	-764.00	225.32		-2.45 30.
EQUATION 2	116.494	-6057.6	-15.56	24.9191	-2.11 30.

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF
 1.7 1.3

AUTOIGNITION TEMPERATURE
 DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL
 69.9 (69) 2472 (55) 5.86 (69)
 MIN IGN ENERGY (MILLIJOULE)= STOICH REF ABS MIN REF
 QUENCHING DISTANCE (CM)= .115 50

1-BUTYNE

SYNONYMS. ETHYLACETYLENE

FORMULA= C4H6 C/H= 7.944 MW= 54.092 VD= 1.8653

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF GAS	(NET)	589.08	10890.	11
	(GROSS)	620.64	11474.	11
HEAT OF VAPORIZATION(25 C)		4.98	92.06	11

	20 C	REF	40 C	REF
DENSITY (GRAM/ML)	.65	11(DD)		
REFRACTIVE INDEX				
SURFACE TENSION	16.40	20	16.03	20
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-92.5	-68.7		-50.0	-34.9	-6.9	8.7	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.8312	-949.27	231.47		-.48 760.
EQUATION 2	83.024	-5509.3	-10.11	18.9532	.27 100.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
58.1 (69)	2413 (55)	4.36 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2-BUTYNE

SYNONYMS. DIMETHYLACETYLENE, CROTONYLENE

FORMULA= C4H6 C/H= 7.944 MW= 54.092 VD= 1.8653

HEAT OF COMBUSTION OF GAS	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	584.57	10807.	11
HEAT OF VAPORIZATION(25 C)		616.13	11390.	11
		5.47	101.12	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.6910	11	.6856	11
REFRACTIVE INDEX	1.3921	11	1.3893	11
SURFACE TENSION	17.4	(8)(60)		
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-80.0	-54.5	-39.0		-18.7		27.0	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.0224	-1080.54	233.88		-.31 10.
EQUATION 2	73.970	-5566.7	-8.58	16.7574	.28 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	18.	1(AC)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.4	1(AC)	

AUTOIGNITION TEMPERATURE	
DEG C DELAY(SEC)	REF DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
51.5 (69)	2401 (55)	4.36 (69)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1-PENTYNE

SYNONYMS.

FORMULA= C5H8 C/H= 7.448 MW= 68.120 VD= 2.3489

HEAT OF COMBUSTION OF GAS	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	735.95	10804.	11
HEAT OF VAPORIZATION(25 C)		778.03	11422.	11
		5.45	80.01	11

	20 C	REF	25 C	REF	40 C	REF
DENSITY (GRAM/ML)	.6901	11	.6849	11		
REFRACTIVE INDEX	1.3852	11	1.3826	11		
SURFACE TENSION	19.34	20			16.94	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-70.0	-44.0	-28.0		-7.0		40.2	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9279	-1073.59	224.99		-.89	10.
EQUATION 2	96.416	-6684.1	-11.95	31.4218	.47	30.

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
52.9 (69)	2370 (55)	3.51 (69)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

2-PENTYNE

SYNONYMS.

FORMULA= C5H8 C/H= 7.448 MW= 68.120 VD= 2.3489

HEAT OF COMBUSTION OF GAS	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	732.25	10749.	11
HEAT OF VAPORIZATION(25 C)		774.33	11367.	11
		6.15	90.28	11

	20 C	REF	25 C	REF	40 C	REF
DENSITY (GRAM/ML)	.7107	11	.7055	11		
REFRACTIVE INDEX	1.4039	11	1.4009	11		
SURFACE TENSION	21.84	20			19.27	20
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-61.0	-32.8	-16.0		6.2		56.1	20

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	7.1017	-1217.90	232.48		.56 10.
EQUATION 2	61.567	-5639.9	-6.53	7.0632	-.28 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS	LOWER	UPPER		
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE	DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
51.3 (62)	2378 (62)	3.36 (73)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1-HEXYNE

SYNONYMS.

FORMULA= C6H10 C/H= 7.150 MW= 82.147 VD= 2.8326

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	877.20	10678.	11
	(GROSS)	929.80	11319.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF	40 C	REF
DENSITY (GRAM/ML)	.7155	11	.7106	11		
REFRACTIVE INDEX	1.3989	11	1.3960	11		
SURFACE TENSION	21.16	20			18.85	20

VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-52.2	-22.9	-5.2		18.2		71.3	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.9293	-1202.48	225.73		.18 10.
EQUATION 2	72.893	-6278.1	-8.24	16.4378	-.02 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
--------------------	------	-----	------	-----

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE		
DEG C	DELAY(SEC)	REF
		DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
48.5 (69)	2333 (55)	2.97 (69)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=

QUENCHING DISTANCE(CM)=

3-HEXYNE

SYNONYMS.

FORMULA= C6H10 C/H= 7.150 MW= 82.147 VD= 2.8326

HEAT OF COMBUSTION OF LIQUID (NET) 873.00 KCAL/MOLE 10627. CAL/GRAM 11 REF
(GROSS) 925.60 11268. 11

HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML) 20 C REF 25 C REF
.7227 11 .7182 11
REFRACTIVE INDEX 1.4113 11 1.4088 11
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P 1 10 30 40 100 400 760 REF
T 81.4 11

VAPOR PRESSURE EQUATION COEFFICIENTS

A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
45.4 (69) 2306 (7) 3.05 (69)
STOICH REF ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

4-METHYL-2-PENTYNE

SYNONYMS.

FORMULA= C6H10 C/H= 7.150 MW= 82.147 VD= 2.8326

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.7157	11	.7112	11
REFRACTIVE INDEX	1.4057	11	1.4032	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							72.3	11

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS		LOWER	UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
45.6 (62)	2311 (62)	
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

3,3-DIMETHYL-1-BUTYNE

SYNONYMS. TERT-BUTYLACETYLENE

FORMULA= C6H10 C/H= 7.150 MW= 82.147 VD= 2.8326

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
(GROSS)
HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML) 20 C REF
.6695 2
REFRACTIVE INDEX 1.3749 2
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T 39.5 2

VAPOR PRESSURE EQUATION COEFFICIENTS
A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
47.7 (63) 2339 (7) 2.89 (72)
MIN IGN ENERGY(MILLIJOULE)= STOICH REF ABS MIN REF
QUENCHING DISTANCE(CM)=

1-HEPTYNE

SYNONYMS.

FORMULA= C7H12 C/H= 6.951 MW= 96.174 VD= 3.3163

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1025.80	10635.	11
	(GROSS)	1085.92	11291.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF	40 C	REF
DENSITY (GRAM/ML)	.7328	11	.7283	11		
REFRACTIVE INDEX	1.4087	11	1.4061	11		
SURFACE TENSION	22.34	20			20.19	20

VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-38.0	-6.0	13.6		39.6		99.7	20

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	6.6887	-1217.30	219.99		-.14 100.
EQUATION 2	75.492	-6673.2	-8.63	23.9489	.18 30.

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOCIGNITION TEMPERATURE
DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=	.931	(7)(57)(E)		
QUENCHING DISTANCE(CM)=	.33	7		

BENZENE

SYNONYMS. BENZOL, PHENYL HYDRIDE, COAL NAPHTHA
 FORMULA= C6H6 C/H= 11.916 MW= 78.115 VD= 2.6936

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	749.42	9594.	11
HEAT OF VAPORIZATION(25 C)		780.98	9998.	11
		8.09	103.57	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.87901	11	.87370	11		
REFRACTIVE INDEX	1.50112	11	1.49792	11		
SURFACE TENSION	28.88	(8)(60)	28.18	11		
VISCOSITY (CS)	.736	(8)(60)			.5870	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-36.7	-11.5		7.6	26.1	60.6	80.1	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	5.7715	-679.02	154.30		-5.51	40.
EQUATION 2	277.256	-15375.2	-38.83	119.9670	-4.80	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	-11.	1,3,4		
	-11.	70(J)		

FLAMMABLE LIMITS		LOWER	UPPER	
	VOL PER	REF	VOL PER	REF
	1.46	75(Z)	5.55	75(Z)
	1.41	75(X)	7.45	75(X)
	1.4	1,4,12(A)	8.0	1,4
	1.3	6	7.1	3,6,12(A)
	1.34	14(U)	9.2	14(U)
	1.4 AT 100 C	3	6.75	52
	1.3 AT 100 C	(8)(15)	7.9 AT 100 C	(8)(15)

AUTOIGNITION TEMPERATURE					
DEG C	DELAY(SEC)	REF	DEG C	REF	
538.		1	563.	3,4	
656.		40(N)	645.	50	
662.		(22)(23)(B)	740.	(22)(23)	
690.		(22)(24)(B)	566.	(22)(34)(B)	
592.	42.	49	580.	38	
724.		70	652.	46	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
44.6 (62)(P)	2362 (62)	2.94 (73)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=	.79 56	.225 58
QUENCHING DISTANCE(CM)=	.28 7	.18 7

TOLUENE

SYNONYMS. METHYLBENZENE, PHENYLMETHANE, TOLUOL
 FORMULA= C7H8 C/H= 10.427 MW= 92.142 VD= 3.1773

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		892.42	9685.	11
	(GROSS)	934.50	10142.	11
HEAT OF VAPORIZATION(25 C)		9.08	98.54	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.86696	11	.86231	11		
REFRACTIVE INDEX	1.49693	11	1.49413	11		
SURFACE TENSION	28.53	(8)(60)	27.92	11		
VISCOSITY (CS)	.675	(8)(60)			.5584	11

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-26.7	6.4		31.8	51.9	89.5	110.6	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.0925	-1422.11	227.17		.93	10.
EQUATION 2	55.208	-6226.1	-5.44	.4542	.31	400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	4.5	1,3,4,6	7.	4
	7.	10(J)		

FLAMMABLE LIMITS				
LOWER			UPPER	
VOL PER	REF		VOL PER	REF
1.2 AT 100 C	(8)(15)		7.1 AT 100 C	(8)(15)
1.2	6		7.1	6
1.27	1,75(X)		7.0	1,4
1.3	4		6.7	3
1.4	3,12(A)		6.75	75(X)
1.28	75(Z)		4.60	75(Z)
0.91	14(U)		7.4	14(U)

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
552.		1	536.	3,4
552.		(22)(23)(8)	810.	(22)(23)
640.		(22)(24)(8)	516.	(22)(35)(8)
552.		38	540.	(22)(30)
568.	48.	49	635.	50
633.		40(N)	629.	46

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
38.8 (62)(P)	2343 (62)	2.39 (73)
	STOICH REF	A35 MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

ETHYLBENZENE

SYNONYMS. ETHYLBENZOL, PHENYLETHANE

FORMULA= C8H10 C/H= 9.533 MW= 106.169 VD= 3.6610

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1038.43	9781.	11
HEAT OF VAPORIZATION(25 C)		1091.03	10276.	11
		10.10	95.13	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.86702	11	.86264	11		
REFRACTIVE INDEX	1.49588	11	1.49320	11		
SURFACE TENSION	29.04	(8)(60)	28.48	11		
VISCOSITY (CS)	.780	(8)(60)			.6428	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-9.8	25.9		52.8	74.1	113.8	136.2	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.2418	-1596.68	230.21		1.73	10.
EQUATION 2	39.371	-5944.9	-3.01	-19.7328	.57	10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	15.	3,4	29.5	1
			24.	4
			22.	10(L)

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.99 AT 100 C	(8)(15)	6.7 AT 100 C	(8)(15)
	1.0	3,4,12(A)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
466.		1	432.	3,4
460.	18.	49	553.	40(N)
477.	13.	54(AX)		
468.	14.	54(B,AX)		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL		
	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

O-XYLENE

SYNONYMS. O-XYLOL, 1,2-DIMETHYLBENZENE, 2-XYLENE
 FORMULA= C8H10 C/H= 9.533 MW= 106.169 VD= 3.6610

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1035.56	9754.	11
	(GROSS)	1088.16	10249.	11
HEAT OF VAPORIZATION(25 C)		10.38	97.77	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.88020	11	.87596	11		
REFRACTIVE INDEX	1.50545	11	1.50295	11		
SURFACE TENSION	30.03	(8)(60)	29.84	11		
VISCOSITY (CS)	.917	(8)(60)			.740	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-3.8	32.1		59.5	81.3	121.7	144.4	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.1536	-1570.50	223.30		1.02	10.
EQUATION 2	55.649	-6834.1	-5.41	-.0015	-.39	40.

FLASH POINT(DEG C)

(CC)	REF	(OC)	REF
17.	3,4	46.	(1,10)(L)
32.	6	24.	3
27.0	19(AV)		

FLAMMABLE LIMITS

LOWER		UPPER	
VOL PER	REF	VOL PER	REF
1.1 AT 100 C	(8)(15)	6.4 AT 100 C	(8)(15)
1.0	3,4	6.0	3,4
1.1	1	7.0	1

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
464.		3,4	551.	50
501.	30.	49	496.	38
592.		46		

MAX FLAME VEL(CM/SEC)

34.4 (62)(P)	FLAME TEMP(DEG K)	2337 (62)	VOL PERCENT FUEL	2.12 (73)
	STOICH REF		ABS MIN REF	

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

M-XYLENE

SYNONYMS. M-XYLOL, 1,3-DIMETHYLBENZENE, 3-XYLENE
 FORMULA= C₈H₁₀ C/H= 9.533 MW= 106.169 VD= 3.6610

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		1035.32	9752.	11
	(GROSS)	1087.92	10247.	11
HEAT OF VAPORIZATION(25 C)		10.20	96.07	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.86417	11	.85990	11		
REFRACTIVE INDEX	1.49722	11	1.49464	11		
SURFACE TENSION	28.63	(8)(60)	28.08	11		
VISCOSITY (CS)	.712	(8)(60)			.591	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-6.9	28.3		55.3	76.8	116.7	139.1	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.0995	-1516.53	220.48		.84	10.
EQUATION 2	62.117	-7061.7	-6.37	6.0783	-.31	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	23.2	19(AY)		
	25.	1,3,4		

FLAMMABLE LIMITS		LOWER	UPPER	
	VOL PER	REF	VOL PER	REF
	1.1 AT 100 C	(8)(15)	6.4 AT 100 C	(8)(15)
	0.88	14(U)	6.1	14(U)
	1.1	1,3,4	7.0	1,3,4

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
528.		3,4	652.	50
563.	54.	49	689.	46

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

P-XYLENE

SYNONYMS. P-XYLOL, 1,4-DIMETHYLBENZENE, 4-XYLENE
 FORMULA= C8H10 C/H= 9.533 MW= 106.169 VD= 3.6610

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1035.56	9754.	11
HEAT OF VAPORIZATION(25 C)		1088.16	10249.	11
		10.13	95.41	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.86105	11	.85669	11		
REFRACTIVE INDEX	1.49582	11	1.49325	11		
SURFACE TENSION	28.31	(8)(60)	27.76	11		
VISCOSITY (CS)	.746	(8)(60)			.613	11

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-8.1	27.3		54.4	75.9	115.9	138.3	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.1342	-1540.53	224.00		.92	10.
EQUATION 2	56.675	-6763.1	-5.58	2.2325	.31	10.

FLASH POINT (DEG C)

(CC)	REF	(OC)	REF
25.	3,4	39.5	1(L)
27.	(8)(9)(J)		
23.0	19(AV)		

FLAMMABLE LIMITS

LOWER	UPPER
VOL PER	VOL PER
REF	REF
1.1	7.0
1,3,4	1,3,4
1.1 AT 100 C	6.6 AT 100 C
(8)(15)	(8)(15)

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
529.		3,4	618.	40(N)
564.	42.	49	657.	50
691.		46		

MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE)=				
QUENCHING DISTANCE (CM)=				

N-PROPYLBENZENE

SYNONYMS. 1-PHENYLPROPANE

FORMULA= C9H12 C/H= 8.937 MW= 120.196 VD= 4.1447

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1184.07	9851.	11
	(GROSS)	1247.19	10376.	11
HEAT OF VAPORIZATION(25 C)		11.05	91.93	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.86204	11	.85780	11		
REFRACTIVE INDEX	1.49202	11	1.48951	11		
SURFACE TENSION	28.99	(8)(60)	28.45	11		
VISCOSITY (CS)	.992	(8)(60)			.7944	11

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	6.3	43.4		71.6	94.0	135.7	159.2	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.1573	-1621.66	220.22		1.34 10.
EQUATION 2	53.180	-6991.2	-5.00	-7.9504	.43 10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	30.	1,3,4	39.	19(K)

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.88	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
456.	12.	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

ISOPROPYLBENZENE

SYNONYMS. CUMENE, 2-PHENYLPROPANE, CUMOL

FORMULA= C9H12 C/H= 8.937 MW= 120.196 VD= 4.1447

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		1183.40	9846.	11
	(GROSS)	1246.52	10371.	11
HEAT OF VAPORIZATION(25 C)		10.79	89.77	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.86179	11	.85751	11		
REFRACTIVE INDEX	1.49145	11	1.48890	11		
SURFACE TENSION	28.20	(8)(60)	27.68	11		
VISCOSITY (CS)	.916	(8)(60)			.740	11

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	2.9	38.3		66.1	88.1	129.2	152.4	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	6.9254	-1453.49	206.98		.18	40.
EQUATION 2	84.946	-8416.2	-9.69	27.9321	.32	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	39.	1,4	46.	10(L)
	44.	3		

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF
	.88 AT 100 C (8)(15)	6.5 AT 100 C (8)(15)
	0.91 14(U)	6.4 14(U)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
467.	6.	49	424.	3,4

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

1-METHYL-2-ETHYLBENZENE

SYNONYMS. O-ETHYLTOLUENE, 2-ETHYLTOLUENE

FORMULA= C9H12 C/H= 8.937 MW= 120.196 VD= 4.1447

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		1182.14	9835.	11
	(GROSS)	1245.26	10360.	11
HEAT OF VAPORIZATION(25 C)		11.40	94.85	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.88069	11	.87657	11
REFRACTIVE INDEX	1.50456	11	1.50208	11
SURFACE TENSION	30.20	(8)(60)	29.66	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	9.4	47.6		76.4	99.0	141.4	165.1	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.2928	-1735.20	228.46		1.67	10.
EQUATION 2	38.901	-6358.0	-2.91	-22.0280	.66	400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	43.0	19(AY)		

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER	VOL PER
	REF	REF
	.88	8(DD)

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
447.	18.	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH	REF
	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1-METHYL-3-ETHYLBENZENE

SYNONYMS. M-ETHYLTOLUENE, 3-ETHYLTOLUENE

FORMULA= C9H12 C/H= 8.937 MW= 120.196 VD= 4.1447

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		1181.59	9831.	11
	(GROSS)	1244.71	10356.	11
HEAT OF VAPORIZATION(25 C)		11.21	93.26	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.86452	11	.86040	11
REFRACTIVE INDEX	1.49660	11	1.49406	11
SURFACE TENSION	29.07	(8)(60)	28.52	11
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	7.2	44.7		73.3	95.9	137.8	161.3	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.2246	-1676.48	224.81		.95	10.
EQUATION 2	51.350	-6896.3	-4.75	-3.1771	.26	10.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	41.0	19 (AY)		

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER	VOL PER
	REF	REF
	.88	8 (DD)

AUTOIGNITION TEMPERATURE	DEG C	DELAY (SEC)	REF	DEG C	REF
	485.	18.	49		

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH	REF
	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

1-METHYL-4-ETHYLBENZENE

SYNONYMS. P-ETHYLTOLUENE, 4-ETHYLTOLUENE

FORMULA= C9H12 C/H= 8.937 MW= 120.196 VD= 4.1447

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1181.33	9828.	11
HEAT OF VAPORIZATION(25 C)		1244.45	10354.	11
		11.14	92.68	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.86118	11	.85702	11		
REFRACTIVE INDEX	1.49500	11	1.49244	11		
SURFACE TENSION	28.84	(8)(60)	28.28	11		
VISCOSITY (CS)	.816	(8)(60)			.671	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	7.6	44.9		73.6	96.3	136.4	162.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.2217	-1668.22	223.35		-3.95 400.
EQUATION 2	32.921	-6083.6	-2.00	-42.4741	-2.57 400.

FLASH POINT(DEG C) (CC) REF (OC) REF

42.0 19(AV)

FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
	.88	8(DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
483.	12.	49		

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)= STOICH REF ABS MIN REF

QUENCHING DISTANCE(CM)=

1,2,3-TRIMETHYLBENZENE

SYNONYMS. HEMIMELLITENE

FORMULA= C9H12 C/H= 8.937 MW= 120.196 VD= 4.1447

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1179.24	9811.	11
HEAT OF VAPORIZATION(25 C)		1242.36	10336.	11
		11.73	97.59	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)				
REFRACTIVE INDEX				
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	16.8	55.9		85.4	108.8	152.0	176.1	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.3201	-1794.28	228.26		1.34	10.
EQUATION 2	44.302	-6777.1	-3.69	-10.2534	.56	10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
449.	18.	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

1,2,4-TRIMETHYLBENZENE

SYNONYMS. PSEUDOCUMENE

FORMULA= C9H12 C/H= 8.937 MW= 120.196 VD= 4.1447

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MO'LE	CAL/GRAM	REF
	(GROSS)	1178.46	9804.	11
HEAT OF VAPORIZATION(25 C)		1241.58	10330.	11
		11.46	95.34	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.87582	11	.87180	11		
REFRACTIVE INDEX	1.50484	11	1.50237	11		
SURFACE TENSION	29.71	(8)(60)	29.19	11	28.67	19
VISCOSITY (CS)	1.151	(8)(60)			.936	19

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	13.6	50.7		79.8	102.8	145.4	169.2	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.0301	-1576.45	210.66		-.37 10.
EQUATION 2	81.643	-8537.8	-9.17	34.7333	-.34 10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	46.0	19(AV)	54.5	(8)(9)(L)

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	.88	8(DD)	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
521.	24.	49	528.	50

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
34.3 (62)(P)	2324 (62)	1.87 (73)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

1,3,5-TRIMETHYLBENZENE

SYNONYMS. MESITYLENE

FORMULA= C9H12 C/H= 8.937 MW= 120.196 VD= 4.1447

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1178.07	9801.	11
	(GROSS)	1241.19	10326.	11
HEAT OF VAPORIZATION(25 C)		11.35	94.43	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.86518	11	.86111	11
REFRACTIVE INDEX	1.49937	11	1.49684	11
SURFACE TENSION	28.83	(8)(60)	28.31	11
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	9.6	47.4		76.1	98.9	141.0	164.7	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.2327	-1691.94	224.28		1.16	10.
EQUATION 2	49.925	-6895.2	-4.52	-6.6180	-.44	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	43.0	19(AY)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	.88	8(DD)	

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
559.	48.	49	621.	40(N)
577.		50		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

N-BUTYLBENZENE

SYNONYMS. 1-PHENYLBUTANE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1329.82	9908.	11
	(GROSS)	1403.46	10456.	11
HEAT OF VAPORIZATION(25 C)		11.98	89.25	11

	20 C	REF	25 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	.86013	11	.85607	11		
REFRACTIVE INDEX	1.48979	11	1.48742	11		
SURFACE TENSION	29.19	19				
VISCOSITY (CS)	1.200	(8)(60)			.947	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	22.7	62.0		92.4	116.2	159.2	183.1	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.4428	-1891.26	231.43		-.59 10.
EQUATION 2	57.871	-7576.2	-5.67	24.2707	-.56 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	57.0	19(AY)	71.	(1,3,4,10)(L)

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER
	.8	3,4,(8)(15)	5.8
			3,4,(8)(15)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
438.	6.	49	412.	3,4

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
35.9 (62)(P)	2327 (62)	1.65 (73)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY(MILLIJOULE)=
 QUENCHING DISTANCE(CM)=

ISOBUTYLBENZENE

SYNONYMS. 1-PHENYL-2-METHYLPROPANE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1331.20	9918.	11
	(GROSS)	1404.84	10466.	11
HEAT OF VAPORIZATION(25 C)		11.82	88.06	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.85321	11	.84907	11	.84492	19
REFRACTIVE INDEX	1.48646	11	1.48400	11	1.48456	19
SURFACE TENSION	28.26	19			27.18	19
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	14.1	53.7		83.3	107.0	149.6	172.8	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.5952	-1972.70	245.60		-1.08	40.
EQUATION 2	38.798	-6379.4	-2.93	5.1250	-1.04	40.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	52.	1,4	60.	10(L)
	49.0	19 (AY)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.8	3,4	6.0	3,4

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF
456.	12.	49	428.	1,3,4

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

SEC-BUTYLBENZENE

SYNONYMS. 2-PHENYLBUTANE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1331.30	9919.	11
HEAT OF VAPORIZATION(25 C)		1404.94	10467.	11
		11.83	88.14	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.86207	11	.85797	11	.85387	19
REFRACTIVE INDEX	1.49020	11	1.48779	11	1.48539	19
SURFACE TENSION	29.46	19			28.35	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	18.6	57.0		86.2	109.5	150.3	173.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.6089	-1932.89	235.44		1.24 100.
EQUATION 2	51.232	-7214.9	-4.67	12.9716	1.25 100.

FLASH POINT(DEG C)

(CC)	REF	(OC)	REF
49.	4	63.	(1,4,10)(L)
52.	3	49.	19(K)

FLAMMABLE LIMITS

LOWER	UPPER
VOL PER	VOL PER
REF	REF
.8	5.8
3,4	4
	6.9
	3

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
418.		3,4	443.	(22)(30)
447.	18.	49		

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

T-BUTYLBENZENE

SYNONYMS. 2-PHENYL-2-METHYLPROPANE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1328.80	9900.	11
	(GROSS)	1402.44	10449.	11
HEAT OF VAPORIZATION(25 C)		11.73	87.39	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.86650	11	.86240	11	.85826	19
REFRACTIVE INDEX	1.49266	11	1.49024	11	1.48784	19
SURFACE TENSION	30.07	19			28.94	19
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	13.0	51.7		80.8	103.8	145.8	168.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.5581	-1908.64	239.50		.86	10.
EQUATION 2	44.529	-6689.4	-3.74	6.4522	.68	10.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	46.0	19 (AY)	60.	(1,3,10) (L)

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.7 AT 100 C	3	5.7 AT 100 C	3
	.8	4	5.6	4

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
450.		3,4	448.	(22) (30)
477.	72.	49		

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
36.6 (62) (P)	2321 (62)	1.61 (73)
	STOICH REF	ABS MIN REF

MIN IGN ENERGY (MILLIJOULE)=
 QUENCHING DISTANCE (CM)=

1-METHYL-3-N-PROPYLBENZENE

SYNONYMS. M-PROPYLTOLUENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6234

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8609	11	.8569	11	.8530	19
REFRACTIVE INDEX	1.4935	11	1.4911	11	1.4887	19
SURFACE TENSION	29.31	19			28.23	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	23.1	61.4	84.3		114.2		181.8	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.1397	-1673.99	211.34		-.57 100.
EQUATION 2	67.382	-8158.3	-7.00	8.3990	.07 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	56.0	19(AY)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

1-METHYL-4-N-PROPYLBENZENE

SYNONYMS. P-PROPYLTOLUENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
 (GROSS)
HEAT OF VAPOORIZATION(25 C)

DENSITY (GRAM/ML) 20 C REF 25 C REF 30 C REF
 .8584 11 .8544 11 .8504 19
REFRACTIVE INDEX 1.4922 11 1.4898 11 1.4870 19
SURFACE TENSION 28.96 19 27.89 19
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T 23.3 61.9 84.9 115.1 183.3 19

VAPOR PRESSURE EQUATION COEFFICIENTS
 A B C D MAX ERR AT P
EQUATION 1 7.1230 -1677.08 212.12 .63 10.
EQUATION 2 65.703 -8058.2 -6.77 7.3356 -.12 30.

FLASH POINT(DEG C) (CC) REF (OC) REF
 57.0 19(AV)

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
 DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
 STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

1-METHYL-2-ISOPROPYLBENZENE

SYNONYMS. O-CYMENE, 2-ISOPROPYLTOLUENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1329.00	9901.	11
	(GROSS)	1402.64	10450.	11
HEAT OF VAPORIZATION(25 C)		12.10	90.15	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8766	11	.8726	11	.8530	19
REFRACTIVE INDEX	1.5005	11	1.4983	11	1.4881	19
SURFACE TENSION	29.31	19			28.23	19
VISCOSITY (CS)			1.0210	19		

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	19.1	57.3	80.2		110.2		178.2	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.0761	-1638.06	212.37		-.51 100.
EQUATION 2	67.605	-8015.9	-7.08	11.3318	.05 30.

FLASH POINT (DEG C) (CC) REF (OC) REF

53.0 19 (AY)

FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
	.8	8 (DD)		

AUTOIGNITION TEMPERATURE

DEG C	DELAY (SEC)	REF	DEG C	REF
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MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE)=				
QUENCHING DISTANCE (CM)=				

1-METHYL-3-ISOPROPYLBENZENE

SYNONYMS. M-CYMENE, 3-ISOPROPYLTOLUENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
		1328.40	9897.	11
	(GROSS)	1402.04	10446.	11
HEAT OF VAPORIZATION(25 C)		11.94	88.96	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8610	11	.8570	11	.8530	19
REFRACTIVE INDEX	1.4929	11	1.4905	11	1.4881	19
SURFACE TENSION	29.31	19			28.23	19
VISCOSITY (CS)			1.0210	19		

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	17.1	55.0		84.3	107.6	150.9	175.1	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.0534	-1613.81	211.68		.44	10.
EQUATION 2	72.279	-8184.5	-7.77	19.3165	-.13	40.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	50.0	19 (AY)		

FLAMMABLE LIMITS			
LOWER		UPPER	
VOL PER	REF	VOL PER	REF
.8	8 (DD)		

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL		
	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE)=				
QUENCHING DISTANCE (CM)=				

1-METHYL-4-ISOPROPYLBENZENE

SYNONYMS. P-CYMENE, 4-ISOPROPYLTOLUENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1328.40	9897.	11
	(GROSS)	1402.04	10446.	11
HEAT OF VAPORIZATION(25 C)		12.02	89.55	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8573	11	.8533	11	.8493	19
REFRACTIVE INDEX	1.4909	11	1.4885	11	1.4859	19
SURFACE TENSION	28.61	19			27.74	19
VISCOSITY (CS)			.9296	19		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	17.3	57.0		87.0	110.8	153.5	177.2	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.5681	-1968.06	242.73		-.61	40.
EQUATION 2	40.187	-6533.9	-3.12	4.1575	-.57	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	47.	1,3,4	63.	4
	53.	3(AD)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.7 AT 100 C	1,3,4	5.6	3(AD),4
	.85	(8)(15)	5.5	(8)(15)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
494.		1	445.	3(AD)
436.		3,4	466.	40(N)
445.		(22)(42)		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

1,2-DIETHYLBENZENE

SYNONYMS.

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)	12.61	93.95	11

DENSITY (GRAM/ML)
 REFRACTIVE INDEX
 SURFACE TENSION
 VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	22.3	62.0		92.5	116.2	159.0	183.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.5085	-1940.84	236.18		-1.11 400.
EQUATION 2	41.026	-6733.6	-3.21	-3.7928	-.79 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	360.	1,3,4		

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

1,3-DIETHYLBENZENE

SYNONYMS. M-DIETHYLBENZENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET) (GROSS)			
HEAT OF VAPORIZATION(25 C)	12.55	93.50	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.86394	11	.85993	11	.85590	19
REFRACTIVE INDEX	1.49552	11	1.49310	11	1.49050	19
SURFACE TENSION	29.71	19			28.62	19
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	20.7	59.9		90.4	114.4	156.9	181.1	21

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	7.4565	-1899.58	234.10		1.34 100.
EQUATION 2	57.244	-7469.5	-5.60	27.3957	-1.36 400.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	55.5	1(AF)		
	56.	19(AY)		
	56.	3,4		

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF
455.	12.	49	430.	3,1(AF)

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY (MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE (CM)=				

1,4-DIETHYLBENZENE

SYNONYMS. P-DIETHYLBENZENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)	12.54	93.43	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.86196	11	.85794	11	.85390	19
REFRACTIVE INDEX	1.49483	11	1.49245	11	1.48981	19
SURFACE TENSION	29.44	19			28.36	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	20.7	60.3		91.1	115.2	159.0	183.8	21

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	7.3086	-1831.25	229.88		-.57 400.
EQUATION 2	54.489	-7307.0	-5.21	16.8382	-.72 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	55.5	1(AF)		
	57.	19(AY)		
	56.5	3,4		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
451.	12.	49	430. 3,4,1(AF)

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1,2-DIMETHYL-3-ETHYLBENZENE

SYNONYMS. 3-ETHYL-O-XYLENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)	13.11	97.67	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8921	11	.8881	11	.8841	19
REFRACTIVE INDEX	1.5117	11	1.5095	11	1.5068	19
SURFACE TENSION	33.78	19			32.58	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	31.7	71.0	94.4		125.0		193.9	19

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.1907	-1743.93	210.80		-.54	100.
EQUATION 2	66.614	-8363.3	-6.85	8.1452	.01	10.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	65.	19(AY)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1,2-DIMETHYL-4-ETHYLBENZENE

SYNONYMS. 4-ETHYL-O-XYLENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)	12.89	96.03	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8745	11	.8706	11	.8667	19
REFRACTIVE INDEX	1.5031	11	1.5009	11	1.4983	19
SURFACE TENSION	31.19	19			30.09	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	28.9	67.8	91.1		121.4		189.7	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.1754	-1719.65	210.74		-.48 100.
EQUATION 2	68.817	-8395.8	-7.18	11.8053	.09 30.

FLASH POINT(DEG C) (CC) REF (OC) REF

71. 19(AV)

FLAMMABLE LIMITS LOWER UPPER

VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)= STOICH REF ABS MIN REF

QUENCHING DISTANCE(CM)=

1,3-DIMETHYL-2-ETHYLBENZENE

SYNONYMS. 2-ETHYL-M-XYLENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)	12.88	95.96	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8904	11	.8864	11	.8824	19
REFRACTIVE INDEX	1.5107	11	1.5085	11	1.5054	19
SURFACE TENSION	33.52	19			32.33	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	28.9	67.9	91.2		121.6		190.0	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.1800	-1725.24	211.36		-.53 100.
EQUATION 2	66.661	-8284.4	-6.87	8.5466	.01 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	62.	19(AY)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

1,3-DIMETHYL-5-ETHYLBENZENE

SYNONYMS. 5-ETHYL-M-XYLENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)	12.52	93.28	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8648	11	.8608	11	.8568	19
REFRACTIVE INDEX	1.4981	11	1.4958	11	1.4931	19
SURFACE TENSION	29.83	19			28.74	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	24.4	63.0	86.0		116.1		183.7	19

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.1886	-1711.77	213.70		-.54	100.
EQUATION 2	64.310	-8035.7	-6.55	6.6408	.01	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	57.	19(AV)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1,4-DIMETHYL-2-ETHYLBENZENE

SYNONYMS. 2-ETHYL-P-XYLENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET) (GROSS)			
HEAT OF VAPORIZATION(25 C)	12.58	93.72	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8772	11	.8732	11	.8692	19
REFRACTIVE INDEX	1.5043	11	1.5020	11	1.4994	19
SURFACE TENSION	31.58	19			30.44	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	25.9	64.9	88.1		118.5		186.9	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.1787	-1723.09	214.10		.64	10.
EQUATION 2	61.888	-7939.9	-6.20	3.3879	-.08	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	60.	19(AV)		

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER	VOL PER
	REF	REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULES)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

2,4-DIMETHYL-1-ETHYLBENZENE

SYNONYMS. 1,3-DIMETHYL-4-ETHYLBENZENE, 4-ETHYL-M-XYLENE
 FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET) (GROSS)			
HEAT OF VAPORIZATION(25 C)	12.74	94.92	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8763	11	.8723	11	.8683	19
REFRACTIVE INDEX	1.5037	11	1.5015	11	1.4990	19
SURFACE TENSION	31.45	19			30.31	19
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	27.5	66.5	89.7		120.0		188.4	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.1876	-1727.73	212.85		.64 10.
EQUATION 2	63.431	-8077.1	-6.41	4.2421	-.09 30.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	61.	19 (AY)		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE	
DEG C	DEG C REF
DELAY (SEC)	REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE)=				
QUENCHING DISTANCE (CM)=				

1,2,3,4-TETRAMETHYLBENZENE

SYNONYMS. PREHNITENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)	13.66	101.77	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.9052	11	.9015	11	.8978	19
REFRACTIVE INDEX	1.5203	11	1.5181	11	1.5155	19
SURFACE TENSION	35.81	19			34.65	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	42.6	81.8		111.5	135.7	180.0	204.4	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.1275	-1700.46	195.94		-1.28	40.
EQUATION 2	90.142	-10007.1	-10.16	29.4292	-1.12	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	73.	19(AV)		

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF

AUTOIGNITION TEMPERATURE	DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1,2,3,5-TETRAMETHYLBENZENE

SYNONYMS. ISODURENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)	13.34	99.39	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8903	11	.8865	11	.8827	19
REFRACTIVE INDEX	1.5130	11	1.5107	11	1.5074	19
SURFACE TENSION	33.51	19			32.38	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	40.6	77.8		105.8	128.3	173.7	197.9	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	6.6524	-1369.46	165.13		3.55	10.
EQUATION 2	121.444	-11747.3	-14.61	19.3454	2.58	400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	68.	19(AY)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
	DEG C	DELAY(SEC)	REF	DEG C
				REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH	REF
		ABS MIN
		REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1,2,4,5-TETRAMETHYLBENZENE

SYNONYMS. DURENE

FORMULA= C10H14 C/H= 8.512 MW= 134.223 VD= 4.6284

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET) (GROSS)			
HEAT OF VAPORIZATION(25 C)	13.27	98.87	11

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8875	11(T)	.8837	11(T)	.8799	19
REFRACTIVE INDEX	1.5116	11(T)	1.5093	11(T)	1.5073	19
SURFACE TENSION	33.09	19			31.97	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	45.0	74.6		104.2	128.1	172.1	195.9	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P	
EQUATION 1	5.6948	-856.92	105.94		-11.21	10.
EQUATION 2	434.372	-28071.6	-60.06	453.9057	-13.75	400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	67.	19(AY)		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

N-PENTYLBENZENE

SYNONYMS. N-AMYL BENZENE, 1-PHENYLPENTANE

FORMULA= C₁₁H₁₆ C/H= 8.192 MW= 148.250 VD= 5.1121

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8585	11	.8507	19		
REFRACTIVE INDEX	1.4878	11	1.4830	19		
SURFACE TENSION	29.41	19	28.35	19		
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	40.7	80.6	104.3		135.4		205.4	19

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.1834	-1765.81	205.09		.59	10.
EQUATION 2	71.251	-8893.4	-7.47	9.2062	-.08	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
			65.5	1,3,4

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
255.		(22)(33)(B)	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

SEC-PENTYLBENZENE

SYNONYMS. (1-METHYLBUTYL)BENZENE, 2-PHENYLPENTANE
 FORMULA= C11H16 C/H= 8.192 MW= 148.250 VD= 5.1121

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
 (GROSS)
 HEAT OF VAPORIZATION(25 C)

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8585	19	.8507	19
REFRACTIVE INDEX	1.4876	19	1.4829	19
SURFACE TENSION	29.41	19	28.35	19
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	31.0	70.0	93.4		123.9		193.0	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.1137	-1692.27	206.87		-.56	100.
EQUATION 2	72.056	-8623.8	-7.64	12.5246	.18	30.

FLASH POINT(DEG C) (CC) REF (OC) REF
 68.5 10(L)

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
 DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)= STOICH REF ABS MIN REF
 QUENCHING DISTANCE(CM)=

1-METHYL-3,5-DIETHYLBENZENE

SYNONYMS. 3,5-DIETHYLTOLUENE

FORMULA= C11H16 C/H= 8.192 MW= 148.250 VD= 5.1121

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8630	19	.8552	19
REFRACTIVE INDEX	1.4969	19	1.4921	19
SURFACE TENSION	30.03	19	28.96	19
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	36.0	76.0	100.0		130.7		200.7	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.2386	-1801.48	212.84		-1.21 100.
EQUATION 2	56.052	-7940.8	-5.30	-9.7425	.63 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
461.	12.	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

AMYL TOLUENE

SYNONYMS.

FORMULA= C12H18 C/H= 7.944 MW= 162.277 VD= 5.5958

HEAT OF COMBUSTION (NET) (GROSS) KCAL/MOLE CAL/GRAM REF
HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML) 16 C REF
.8568 2(AE)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T 214.0 2

VAPOR PRESSURE EQUATION COEFFICIENTS
A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF
82. 1,3,4

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
MIN IGN ENERGY(MILLIJOULE)= STOICH REF ABS MIN REF
QUENCHING DISTANCE(CM)=

1,2-DIISOPROPYLBENZENE

SYNONYMS.

FORMULA= C12H18 C/H= 7.944 MW= 162.277 VD= 5.5958

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8771	2	.86932	19
REFRACTIVE INDEX	1.4960	2	1.4916	19
SURFACE TENSION	32.31	19	31.19	19
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	38.6	78.7	102.6		133.7		203.8	19

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	7.2186	-1794.30	209.94		-.65 100.
EQUATION 2	64.755	-8463.7	-6.55	4.4654	.09 30.

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	77.	19 (AY)	76.5	(1,3,4) (AG)

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY (SEC)	REF	DEG C REF
449.		(1,3,4) (AG)	

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

1,4-DIISOPROPYLBENZENE

SYNONYMS.

FORMULA= C12H18 C/H= 7.944 MW= 162.277 VD= 5.5958

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	.8568	2	.84903	19
REFRACTIVE INDEX	1.4898	2	1.4851	19
SURFACE TENSION	29.42	19	28.38	19
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	40.0	81.8		114.0	138.7	184.3	209.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.5655	-2080.56	235.02		.53 40.
EQUATION 2	51.047	-7653.9	-4.63	19.6015	.61 40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	81.	19(AV)	76.5	1(AG)

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
449.		1(AG)		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

1,2,4-TRIETHYLBENZENE

SYNONYMS.

FORMULA= C12H18 C/H= 7.944 MW= 162.277 VD= 5.5958

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF
DENSITY (GRAM/ML)	.8738	2
REFRACTIVE INDEX	1.5024	2
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	46.0	88.5		121.7	146.8	193.7	218.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	7.6003	-2148.82	236.79		1.55 400.
EQUATION 2	63.368	-8411.8	-6.42	53.8917	1.16 40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	83.	1,3		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

HEXAMETHYLBENZENE

SYNONYMS. MELLITENE

FORMULA= C12H18 C/H= 7.944 MW= 162.277 VD= 5.5958

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							265.0	2

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS	LOWER	UPPER		
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
375.		(22)(24)		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

PHENYLCYCLOHEXANE

SYNONYMS. CYCLOHEXYLBENZENE

FORMULA= C12H16 C/H= 8.937 MW= 160.261 VD= 5.5263

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF
DENSITY (GRAM/ML)	.9502	2
REFRACTIVE INDEX	1.5329	2
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	67.5	111.3		144.0	169.3	214.6	240.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	7.9614	-2416.86	236.03		-.91 400.
EQUATION 2	32.533	-7532.1	-1.79	-22.8986	.33 100.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
			99.	1,3

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
105.		1	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

BIPHENYL

SYNONYMS. DIPHENYL, PHENYLBENZENE

FORMULA= C12H10 C/H= 14.299 MW= 154.214 VD= 5.3177

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	77 C	REF
DENSITY (GRAM/ML)	1.9896	2
REFRACTIVE INDEX	1.588	2
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	70.6	117.0		152.5	180.7	229.4	254.9	21

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	7.9609	-2598.32	255.90		2.24 100.
EQUATION 2	58.783	-8732.1	-5.72	82.2036	.88 100.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	113.	1,3,4	124.	4

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER
	.6 AT 111 C	3	5.8 AT 155 C
			3

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C
259.		1	540.
577.	36.	49	3,4

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

2-METHYLBIPHENYL

SYNONYMS.

FORMULA= C13H12 C/H= 12.909 MW= 168.241 VD= 5.8014

HEAT OF COMBUSTION (NET) (GROSS) KCAL/MOLE CAL/GRAM REF
HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML) 20 C REF
REFRACTIVE INDEX 1.5914 2
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA
P 1 10 30 40 100 400 760 REF
T 255.3 2

VAPOR PRESSURE EQUATION COEFFICIENTS
A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT (DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY (SEC) REF DEG C REF
502. 12. 49

MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL
MIN IGN ENERGY (MILLIJOULE)= STOICH REF ABS MIN REF
QUENCHING DISTANCE (CM)=

2-ETHYLBIPHENYL

SYNONYMS.

FORMULA= C14H14 C/H= 11.916 MW= 182.268 VD= 6.2851

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)	.89438	11	.89044	11
REFRACTIVE INDEX	1.51393	11	1.51150	11
SURFACE TENSION	31.27	(8)(60)	30.76	11
VISCOSITY (CS)	51.0	19(AY)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	i	10	30	40	100	400	760	REF
T								

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS

LOWER	UPPER
VOL PER	VOL PER
REF	REF
.88	8(DD)

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
479.	24.	49	510.	50

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

NONYLBENZENE

SYNONYMS. 1-PHENYLNONANE, NONYLBENZOL

FORMULA= C15H24 C/H= 7.448 MW= 204.359 VD= 7.0468

		KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)				
	(GROSS)			
HEAT OF VAPORIZATION(25 C)				

	20 C	REF	30 C	REF	40 C	REF
DENSITY (GRAM/ML)	.8558	19	.8486	19		
REFRACTIVE INDEX	1.4838	11	1.4781	19		
SURFACE TENSION	29.85	19	28.86	19		
VISCOSITY (CS)	3.66	19			2.47	19

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	96.0	141.5	168.5		203.6		282.0	19

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.3342	-2107.53	191.33		-.52	100.
EQUATION 2	77.319	-10904.2	-8.08	14.2932	.03	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	99.	1		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE		
DEG C	DELAY(SEC)	REF
		DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

TRIIISOPROPYLBENZENE

SYNONYMS.

FORMULA= C15H24 C/H= 7.448 MW= 204.359 VD= 7.0468

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	25 C	REF
DENSITY (GRAM/ML)	.854	1
REFRACTIVE INDEX		
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							236.5	1

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	96.	1		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2-N-PROPYLBIPHENYL

SYNONYMS.

FORMULA= C15H16 C/H= 11.171 MW= 196.295 VD= 6.7688

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T								

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
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AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
452.	18.	49		

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
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MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

2-MONOISOPROPYLBIPHENYL

SYNONYMS.

FORMULA= C15H16 C/H= 11.171 MW= 196.295 VD= 6.7688

HEAT OF COMBUSTION (NET) (GROSS) KCAL/MOLE CAL/GRAM REF
HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE (MM Hg)-TEMPERATURE (DEG C) DATA
P 1 10 30 40 100 400 760 REF
T 270.0 3

VAPOR PRESSURE EQUATION COEFFICIENTS
A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT (DEG C) (CC) REF (OC) REF
140.5 3

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF
.5 AT 175 C 3 3.2 AT 200 C 3

AUTOIGNITION TEMPERATURE
DEG C DELAY (SEC) REF DEG C REF
434. 3

MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL
STOICH REF ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=
QUENCHING DISTANCE (CM)=

DECYLBENZENE

SYNONYMS. 1-PHENYLDECANE

FORMULA= C16H26 C/H= 7.333 MW= 218.386 VD= 7.5305

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	30 C	REF	40 C	REF
DENSITY (GRAM/ML)	.85553	19	.84825	19		
REFRACTIVE INDEX	1.48319	11	1.47999	19		
SURFACE TENSION	29.95	19			28.94	19
VISCOSITY (CS)	4.44	19			2.92	19

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	109.0	156.0	184.0		220.0		300.0	19

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.4540	-2259.17	194.07		-.46	100.
EQUATION 2	75.514	-11172.4	-7.78	19.7925	.33	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	107.	3		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

2-BUTYLBIPHENYL

SYNONYMS.

FORMULA= C16H18 C/H= 10.592 MW= 210.322 VD= 7.2525

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET) (GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T								

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
--------------------	------	-----	------	-----

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
433.	12.	49		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
-----------------------	-------------------	------------------

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

DODECYLBENZENE

SYNONYMS. 1-PHENYLDODECANE

FORMULA= C18H30 C/H= 7.150 MW= 246.440 VD= 8.4979

		KCAL/MOLE		CAL/GRAM	REF
HEAT OF COMBUSTION (NET)					
	(GROSS)				
HEAT OF VAPORIZATION(25 C)					

	20 C	REF	30 C	REF	40 C	REF
DENSITY (GRAM/ML)	.8551	19	.8481	19		
REFRACTIVE INDEX	1.4824	11	1.4782	19		
SURFACE TENSION	30.12	19	29.14	19	28.19	19
VISCOSITY (CS)	6.39	19			4.06	19

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	132.0	181.0	210.0		248.0		331.0	19

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.4598	-2360.05	184.37		-.39	30.
EQUATION 2	92.613	-12972.3	-10.09	57.7290	-.25	30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	140.5	1		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1,3-DIPHENYLBENZENE

SYNONYMS. M-TERPHENYL, M-PHENYLBIPHENYL

FORMULA= C18H14 C/H= 15.321 MW= 230.312 VD= 7.9418

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							365.0	2

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
			184.	1,3,4

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1,4-DIPHENYLBENZENE

SYNONYMS. P-TERPHENYL, P-PHENYLBIPHENYL

FORMULA= C18H14 C/H= 15.321 MW= 230.312 VD= 7.9418

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							405.0	1

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C) (CC) REF (OC) REF
207. 1,3,4

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY (SEC) REF DEG C REF
534. 3

MAX FLAME VEL (CM/SEC) FLAME TEMP (DEG K) VOL PERCENT FUEL
MIN IGN ENERGY (MILLIJOULES) = STOICH REF ABS MIN REF
QUENCHING DISTANCE (CM) =

TRIAMYLBENZENE

SYNONYMS.

FORMULA= C21H36 C/H= 6.951 MW= 288.521 VD= 9.1490

KCAL/MOLE CAL/GRAM REF
HEAT OF COMBUSTION (NET)
(GROSS)
HEAT OF VAPORIZATION(25 C)

T NOT GIVEN
DENSITY (GRAM/ML) .87 1
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T 300.0 1

VAPOR PRESSURE EQUATION COEFFICIENTS
A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF
132. 1,3,4

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

DIAMYLBIIPHENYL

SYNONYMS. DIAMYLDIPHENYL

FORMULA= C22H30 C/H= 8.739 MW= 294.484 VD= 10.1546

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF
DENSITY (GRAM/ML)	.938	1
REFRACTIVE INDEX		
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							370.0	1

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	171.	1,3		

FLAMMABLE LIMITS		LOWER	UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

TETRAAMYLLENZENE (ISOMERS)

SYNONYMS.

FORMULA= C26H46 C/H= 6.735 MW= 358.657 VD= 12.3675

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							335.0	3

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C) (CC) REF (OC) REF

	146.	3		
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FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
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AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
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MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

NAPHTHALENE

SYNONYMS. MOTH FLAKES, WHITE TAR, TAR CAMPHOR
 FORMULA= C10H8 C/H= 14.895 MW= 128.175 VD= 4.4198

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	85 C	REF
DENSITY (GRAM/ML)	.9752	2
REFRACTIVE INDEX	1.5898	2
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	52.6	85.8		119.3	145.5	193.2	217.9	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	5.9284	-1060.58	126.90		-12.48 10.
EQUATION 2	338.774	-23391.2	-46.14	444.0812	-13.75 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	80.	1	88.	4
	79.	3,4		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.9	1,3,4	5.9	1,3,4
	.88	27	5.9	27

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
630.		(22)(24)(8)	557.	(27)(45)(8)
560.		27(8)	587.	27
558.		1	526.	3,4
602.		(27)(33)	580.	(27)(76)

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

1-METHYLNAPHTHALENE

SYNONYMS.

FORMULA= C11H10 C/H= 13.108 MW= 142.202 VD= 4.9035

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	30 C	REF	37.78 C	REF
DENSITY (GRAM/ML)	1.02015	19	1.01245	19		
REFRACTIVE INDEX	1.61755	11	1.6124	19		
SURFACE TENSION	40.68	19	39.46	19		
VISCOSITY (CS)					2.209	11

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	63.5	107.4	133.6		167.8		244.6	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.2026	-1956.16	208.07		-.47 100.
EQUATION 2	64.149	-9014.3	-6.42	11.1050	.04 30.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER	VOL PER
	REF	REF

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
529.		3	553.	50
547.	24.	49	566.	46

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1-ETHYLNAPHTHALENE

SYNONYMS.

FORMULA= C12H12 C/H= 11.916 MW= 156.229 VD= 5.3872

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	30 C	REF
DENSITY (GRAM/ML)	1.00816	19	1.00076	19
REFRACTIVE INDEX	1.6062	11	1.6005	19
SURFACE TENSION	40.54	19	39.37	19
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	76.0	120.0	146.2		180.7		258.7	19

VAPOR PRESSURE EQUATION COEFFICIENTS							
	A	B	C	D	MAX ERR AT P		
EQUATION 1	7.0957	-1895.00	191.03		.70	10.	
EQUATION 2	78.629	-10293.6	-8.39	14.7196	-.16	30.	

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS					
LOWER			UPPER		
VOL PER	REF		VOL PER	REF	

AUTOIGNITION TEMPERATURE					
DEG C	DELAY(SEC)	REF	DEG C	REF	
481.	6.	49			

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

BUTYLNAPHTHALENE

SYNONYMS.

FORMULA= C14H16 C/H= 10.427 MW= 184.284 VD= 6.3546

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							290.0	19

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C) (CC) REF (OC) REF

	360.	1,3,4		
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FLAMMABLE LIMITS LOWER UPPER

	VOL PER	REF	VOL PER	REF
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AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
-------	------------	-----	-------	-----

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

	STOICH	REF	ABS MIN	REF
--	--------	-----	---------	-----

MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

AMYLNAPHTHALENE

SYNONYMS. N-PENTYLNAPHTHALENE

FORMULA= C15H18 C/H= 9.930 MW= 198.311 VD= 6.8383

KCAL/MOLE CAL/GRAM REF
HEAT OF COMBUSTION (NET)
(GROSS)
HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T 288.0 11

VAPOR PRESSURE EQUATION COEFFICIENTS
A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF
107. 1,4
124. 3

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

NONYLNAPHTHALENE

SYNONYMS.

FORMULA= C19H26 C/H= 8.708 MW= 254.419 VD= 8.7731

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
 REFRACTIVE INDEX
 SURFACE TENSION
 VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							372.0	11

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	160.	1		

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE	
DEG C	DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

DECYLNAPHTHALENE

SYNONYMS.

FORMULA= C20H28 C/H= 8.512 MW= 268.446 VD= 9.2568

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
 REFRACTIVE INDEX
 SURFACE TENSION
 VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							387.0	11

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	185.	1		
	176.5	3		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
	DEG C	DELAY(SEC)	REF	DEG C
				REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH	REF
MIN IGN ENERGY(MILLIJOULE)=		ABS MIN
QUENCHING DISTANCE(CM)=		REF

ANTHRACENE

SYNONYMS. P-NAPHTHALENE, GREEN OIL

FORMULA= C14H10 C/H= 16.683 MW= 178.236 VD= 6.1461

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	27 C	REF
DENSITY (GRAM/ML)	1.25	2
REFRACTIVE INDEX		
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	145.0	187.2		217.5	250.0	310.2	342.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	6.3963	-1524.02	95.01		-17.29 40.
EQUATION 2	395.132	-33629.8	-52.14	508.6889	-8.26 760.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	121.	1,3,4	196.	4

FLAMMABLE LIMITS LOWER		UPPER	
VOL PER	REF	VOL PER	REF
.6	1,3,4		

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
472.		1,(22)(45)	530. 3,4
580.		(22)(24)(8)	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1,2,3,4,5,6,7,8-OCTAHYDROANTHRACENE

SYNONYMS. OCTHRACENE

FORMULA= C14H18 C/H= 9.268 MW= 186.300 VD= 6.4241

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	0 C	REF	89 C	REF
DENSITY (GRAM/ML)	1.134	2		
REFRACTIVE INDEX			1.5363	2
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							294.0	2

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF

FLAMMABLE LIMITS	LOWER	REF	UPPER	REF
	VOL PER		VOL PER	

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
315.		(22)(24)(B)		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

PHENANTHRENE

SYNONYMS.

FORMULA= C14H10 C/H= 16.683 MW= 178.236 VD= 6.1461

HEAT OF COMBUSTION (NET) (GROSS)
 HEAT OF VAPORIZATION(25 C)

KCAL/MOLE CAL/GRAM REF

20 C REF

DENSITY (GRAM/ML) 1.182 2

REFRACTIVE INDEX 1.5973 2

SURFACE TENSION

VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	118.2	173.0		215.8	249.0	308.0	340.2	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.6545	-2821.88	250.57		-1.74	10.
EQUATION 2	47.993	-9036.6	-4.17	75.6317	-0.96	400.

FLASH POINT(DEG C) (CC) REF (OC) REF

171. 3

FLAMMABLE LIMITS LOWER UPPER

VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE

DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

MIN IGN ENERGY(MILLIJOULE)= STOICH REF ABS MIN REF

QUENCHING DISTANCE(CM)=

FLUORANTHENE

SYNONYMS. IP/RL, 1,2-BENZOACENAPHTHALENE

FORMULA= C16H10 C/H= 19.066 MW= 202.258 VD= 6.9744

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	O C	REF
DENSITY (GRAM/ML)	1.252	2
REFRACTIVE INDEX		
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T							367.0	3

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
			210.	3

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)		VOL PERCENT FUEL	
		STOICH REF	ABS MIN	REF
MIN IGN ENERGY (MILLIJOULE)=				
QUENCHING DISTANCE (CM)=				

DIPHENYLMETHANE

SYNONYMS. BENZYL BENZENE, DITAN

FORMULA= C13H12 C/H= 12.909 MW= 168.241 VD= 5.8014

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF
DENSITY (GRAM/ML)	1.0060	2
REFRACTIVE INDEX	1.5768	2
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	76.0	122.8		157.8	186.3	237.5	264.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.4930	-2266.36	226.45		-1.64	40.
EQUATION 2	61.891	-9113.1	-6.11	46.2985	-1.48	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	130.	1,3,4		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
517.	18.	49	486. 3,4

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
33.2 (62)(P)	2351 (62)	1.39 (73)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

1,1-DIPHENYLBUTANE

SYNONYMS.

FORMULA= C16H18 C/H= 10.592 MW= 210.322 VD= 7.2525

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T								

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS		LOWER	UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF
462.	6.	49		

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

TETRALIN

SYNONYMS. 1,2,3,4-TETRAHYDRONAPHTHALENE

FORMULA= C₁₀H₁₂ C/H= 9.930 MW= 132.207 VD= 4.5589

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.9702	11	.9662	11
REFRACTIVE INDEX	1.54135	11	1.53919	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	38.0	79.0		110.4	135.3	181.8	207.2	21

VAPOR PRESSURE EQUATION COEFFICIENTS						
	A	B	C	D	MAX ERR AT P	
EQUATION 1	7.1604	-1800.41	213.41		.75	10.
EQUATION 2	67.072	-8464.9	-6.95	20.0315	.59	400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	77.	1,4	82.	4
	71.	3		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.8 AT 100 C	3	5.0 AT 100 C	3

AUTOIGNITION TEMPERATURE					
DEG C	DELAY(SEC)	REF	DEG C	REF	
384.		3	420.	(22)(24)(8)	
423.	6.	49			

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
36.2 (62)(P)	2319 (62)	1.61 (73)
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

T-BUTYLTETRALIN

SYNONYMS. O-DIETHYLBENZENE

FORMULA= C14H20 C/H= 8.341 MW= 188.315 VD= 6.4936

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.87996	11	.87592	11	.87186	19
REFRACTIVE INDEX	1.50346	11	1.50106	11	1.49846	19
SURFACE TENSION	31.98	19			30.82	19
VISCOSITY (CS)						

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA

P	1	10	30	40	100	400	760	REF
T								

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	55.5	1(AF)		
	57.	19(AY)		
	57.	3		

FLAMMABLE LIMITS	LOWER	UPPER		
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE	DEG C	DELAY (SEC)	REF	DEG C	REF
	404.	6.	49	430.	1(AF)

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

4-VINYL-1-CYCLOHEXENE

SYNONYMS. 4-ETHENYL-CYCLOHEXENE

FORMULA= C8H12 C/H= 7.944 MW= 108.185 VD= 3.7305

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF
DENSITY (GRAM/ML)	.8299	2
REFRACTIVE INDEX	1.4639	2
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							128.9	2

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	16.	3,4	21.	1(L)
			23.5	4

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF
269.		1,3,4	

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

STYRENE

SYNONYMS. PHENYLETHYLENE, CINNAMENE, VINYL BENZENE

FORMULA= C8H8 C/H= 11.916 MW= 104.153 VD= 3.5915

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1008.44	9682.	11
	(GROSS)	1050.52	10086.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	25 C	REF	30 C	REF
DENSITY (GRAM/ML)	.90600	11	.90122	11	.89644	19
REFRACTIVE INDEX	1.54682	11	1.54395	11	1.54093	19
SURFACE TENSION	32.3	19			30.98	19
VISCOSITY (CS)						

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	-7.0	30.8		59.8	82.0	122.5	145.2	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR	AT P
EQUATION 1	7.6453	-1922.12	258.41		-.66	400.
EQUATION 2	24.299	-5164.1	-.88	-6.4687	.63	40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	31.	1	38.	4
	32.	3,4		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	1.1	1,3,4	6.1	1,3,4
	1.1	68	6.1	68

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
490.		1,3,4	450.	54(B)
490.		54		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
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MIN IGN ENERGY(MILLIJOULE)=

QUENCHING DISTANCE(CM)=

ALPHA-METHYLSTYRENE

SYNONYMS. ISOPROPENYL BENZENE

FORMULA= C9H10 C/H= 10.725 MW= 118.180 VD= 4.0752

HEAT OF COMBUSTION OF LIQUID	(NET)	KCAL/MOLE	CAL/GRAM	REF
	(GROSS)	1151.50	9744.	11
HEAT OF VAPORIZATION(25 C)		1204.10	10189.	11

	20 C	REF	25 C	REF
DENSITY (GRAM/ML)	.9090	11	.9046	11
REFRACTIVE INDEX	1.5386	11	1.5358	11
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	- 400	760	REF
T	7.4	47.1		77.8	102.2	143.0	165.4	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	8.0472	-2287.37	276.98		3.46 100.
EQUATION 2	43.054	-6277.2	-3.67	55.0935	-2.12 400.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	58.	1	56.5	3

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF
	.9	1		
	.7	3		

AUTOIGNITION TEMPERATURE

DEG C	DELAY(SEC)	REF	DEG C	REF
494.		3		

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
-----------------------	-------------------	------------------

MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

VINYLTOLUENE

SYNONYMS. METHYL-ETHENYLBENZENE(M AND P)

FORMULA= C9H10 C/H= 10.725 MW= 118.180 VD= 4.0752

HEAT OF COMBUSTION		KCAL/MOLE	CAL/GRAM	REF
OF LIQUID	(NET)	1152.60	9753.	11
	(GROSS)	1205.20	10198.	11

HEAT OF VAPORIZATION(25 C)

	20 C	REF	30 C	REF	40 C	REF
DENSITY (GRAM/ML)	.89768	19	.88938	19		
REFRACTIVE INDEX	1.54213	19	1.53415	19		
SURFACE TENSION	31.53	19	30.44	19	29.38	19
VISCOSITY (CS)	.9277	19			.7263	19

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA

P	1	10	30	40	100	400	760	REF
T	18.0	54.7		82.7	104.7	145.1	167.7	21

VAPOR PRESSURE EQUATION COEFFICIENTS

	A	B	C	D	MAX ERR AT P
EQUATION 1	7.3634	-1713.36	214.66		.59 10.
EQUATION 2	66.249	-8083.6	-6.78	5.1247	-.07 40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	60.	1	60.	4,19(K)
	FIRE POINT (DEG C)= 68.		REF 19	

FLAMMABLE LIMITS	LOWER		UPPER
	VOL PER	REF	VOL PER REF
	1.9	19	

AUTOIGNITION TEMPERATURE			
DEG C	DELAY(SEC)	REF	DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH REF	ABS MIN REF
QUENCHING DISTANCE(CM)=		

M-DIVINYLBENZENE

SYNONYMS. VINYL STYRENE

FORMULA= C10H10 C/H= 11.916 MW= 130.191 VD= 4.4894

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF
DENSITY (GRAM/ML)	.9289	1
REFRACTIVE INDEX		
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	32.7	73.8		105.5	130.0	175.2	199.5	21

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	7.4990	-2007.88	235.07		.67 400.
EQUATION 2	54.722	-7630.6	-5.20	27.3569	-.45 100.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	74.	1	76.	3

FLAMMABLE LIMITS	LOWER	UPPER
	VOL PER REF	VOL PER REF
	.3 1	

AUTOIGNITION TEMPERATURE	
DEG C DELAY(SEC)	REF DEG C REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=		
QUENCHING DISTANCE(CM)=		

BETA-PHELLANDRENE

SYNONYMS. 1(7),2-P-MENTHADIENE, 3-ISOPROPYL-6-METHYLENECYCLOHEXENE
 FORMULA= C10H16 C/H= 7.448 MW= 136.239 VD= 4.6979

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF	75 C	REF
DENSITY (GRAM/ML)	.8520	2	.846	2
REFRACTIVE INDEX	1.4788	2		
SURFACE TENSION				
VISCOSITY (CS)				

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA							
P	10	30	40	100	400	760	REF
T						171.2	1

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	49.	1(J)		

FLAMMABLE LIMITS		LOWER	UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL
	STOICH REF	ABS MIN REF
MIN IGN ENERGY (MILLIJOULE)=		
QUENCHING DISTANCE (CM)=		

(DL) LIMONENE

SYNONYMS. DIPENTENE, CINENE, P-MENTHADIENE-1,8
FORMULA= C10H16 C/H= 7.448 MW= 136.239 VD= 4.6979

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
 (GROSS)
HEAT OF VAPORIZATION(25 C)

 20 C REF 21 C REF
DENSITY (GRAM/ML) .8402 2
REFRACTIVE INDEX 1.4743 2
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T 14.0 53.8 84.3 108.3 150.5 174.6 21

VAPOR PRESSURE EQUATION COEFFICIENTS
 A B C D MAX ERR AT P
EQUATION 1 7.6440 -2027.85 251.31 1.15 100.
EQUATION 2 35.818 -6186.1 -2.52 8.0835 -1.21 400.

FLASH POINT(DEG C) (CC) REF (OC) REF
 45. 3
 42. 1(AH)

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF
 .7 AT 150 C 3 6.1 AT 150 C 3

AUTOIGNITION TEMPERATURE
 DEG C DELAY(SEC) REF DEG C REF
 263. 30. 49 292. 3

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

 STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

PINANE

SYNONYMS. 2,6,6-trimethylbicyclo(3.1.1)heptane
FORMULA= C10H18 C/H= 6.620 MW= 138.255 VD= 4.7674

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF
DENSITY (GRAM/ML)	.8551	2
REFRACTIVE INDEX	1.4609	2
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							165.0	2

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
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FLAMMABLE LIMITS		LOWER		UPPER	
	VOL PER	REF		VOL PER	REF
	.7 AT 160 C	3		7.2 AT 160 C	3

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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MIN IGN ENERGY(MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE(CM)=				

ALPHA-PINENE

SYNONYMS. 2,6,6-TRIMETHYLBICYCLO(3.1.1)-2-HEPTENE
 FORMULA= C10H16 C/H= 7.448 MW= 136.239 VD= 4.6979

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

	20 C	REF
DENSITY (GRAM/ML)	.8582	2
REFRACTIVE INDEX	1.4658	2
SURFACE TENSION		
VISCOSITY (CS)		

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T	-1.0	37.3		66.8	90.1	132.3	155.0	21

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1	7.4447	-1843.66	248.68		.78 400.
EQUATION 2	48.496	-6375.7	-4.47	30.0658	-.18 40.

FLASH POINT(DEG C)	(CC)	REF	(OC)	REF
	33.	1,3,4		

FLAMMABLE LIMITS	LOWER		UPPER	
	VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY(SEC)	REF	DEG C	REF
263.	60.	49	275.	(22)(33)(8,AJ)

MAX FLAME VEL(CM/SEC)	FLAME TEMP(DEG K)	VOL PERCENT FUEL
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	STOICH	REF	ABS MIN	REF
MIN IGN ENERGY(MILLIJOULE)=				
QUENCHING DISTANCE(CM)=				

1-PHENYL-2-BUTENE

SYNONYMS.

FORMULA= C10H12 C/H= 9.930 MW= 132.207 VD= 4.5589

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
 (GROSS)
HEAT OF VAPORIZATION(25 C)

 20 C REF
DENSITY (GRAM/ML)
REFRACTIVE INDEX 1.511 10
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T 174.5 3

VAPOR PRESSURE EQUATION COEFFICIENTS
 A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF
 71. 3,10(L)

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
 DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL

 STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

1,3-DIMETHYL-1,3-DIPHENYLCYCLOBUTANE

SYNONYMS.

FORMULA= C18H20 C/H= 10.725 MW= 236.360 VD= 8.1503

	KCAL/MOLE	CAL/GRAM	REF
HEAT OF COMBUSTION (NET)			
(GROSS)			
HEAT OF VAPORIZATION(25 C)			

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE (MM HG)-TEMPERATURE (DEG C) DATA								
P	1	10	30	40	100	400	760	REF
T							308.0	3

VAPOR PRESSURE EQUATION COEFFICIENTS					
	A	B	C	D	MAX ERR AT P
EQUATION 1					
EQUATION 2					

FLASH POINT (DEG C)	(CC)	REF	(OC)	REF
	143.	3		

FLAMMABLE LIMITS LOWER		UPPER	
VOL PER	REF	VOL PER	REF

AUTOIGNITION TEMPERATURE				
DEG C	DELAY (SEC)	REF	DEG C	REF

MAX FLAME VEL (CM/SEC)	FLAME TEMP (DEG K)	VOL PERCENT FUEL

MIN IGN ENERGY (MILLIJOULE)=	STOICH	REF	ABS MIN	REF
QUENCHING DISTANCE (CM)=				

METHYLENE CYCLOBUTANE

SYNONYMS.

FORMULA= C6H10 C/H= 7.150 MW= 82.147 VD= 2.8326

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
 (GROSS)
HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG);-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T

VAPOR PRESSURE EQUATION COEFFICIENTS
 A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
 VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
 DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
 51.5 (72) 3.55 (72)
 STOICH REF ABS MIN REF
MIN IGN ENERGY(MILLIJOULE)=
QUENCHING DISTANCE(CM)=

SPIROPENTANE

SYNONYMS.

FORMULA= C5H8 C/H= 7.448 MW= 68.120 VD= 2.3489

HEAT OF COMBUSTION (NET) KCAL/MOLE CAL/GRAM REF
(GROSS)
HEAT OF VAPORIZATION(25 C)

DENSITY (GRAM/ML)
REFRACTIVE INDEX
SURFACE TENSION
VISCOSITY (CS)

VAPOR PRESSURE(MM HG)-TEMPERATURE(DEG C) DATA
P 1 10 30 40 100 400 760 REF
T

VAPOR PRESSURE EQUATION COEFFICIENTS
A B C D MAX ERR AT P
EQUATION 1
EQUATION 2

FLASH POINT(DEG C) (CC) REF (OC) REF

FLAMMABLE LIMITS LOWER UPPER
VOL PER REF VOL PER REF

AUTOIGNITION TEMPERATURE
DEG C DELAY(SEC) REF DEG C REF

MAX FLAME VEL(CM/SEC) FLAME TEMP(DEG K) VOL PERCENT FUEL
59.9 (72) 3.46 (72)
MIN IGN ENERGY(MILLIJOULE)= STOICH REF ABS MIN REF
QUENCHING DISTANCE(CM)=

V. NOTES

- A Upward propagation with lower tube end open.
- B In atmosphere of oxygen.
- C Apparent values at 15.56 degrees C.
- D At saturation pressure.
- E Using flanged electrodes.
- F Using 0.0225-in. S.S. electrodes with spark duration of 1 MSEC.
- G Absolute values from weights in vacuum.
- H Upward propagation in a 2-in. tube closed at both ends.
- J Tag closed cup.
- K Cleveland open cup.
- L Tag open cup.
- M Extrapolated to room temperature from values at higher temps.
- N Values obtained on platinum plate.
- P Measured at elevated temperature by Bunsen Burner Schlieren total-area method and extrapolated to room temp.
- Q Calculated from specific gravity.
- R At normal boiling point.
- S Value listed under cetane.
- T For the undercooled liquid below the normal freezing point.
- U Values were determined in a 2-in. diameter tube closed at both ends with upward propagation. Data were taken off curves since no tabulated data were given. The data were converted from percent stoichiometric at 360 mm pressure.
- V Values were determined in a 2-in. diameter tube closed at both ends with upward propagation. Data were taken off curves since no tabulated data were given. The data were converted from percent stoichiometric at 340 mm pressure.
- W Tube diameter 7.5 cm., tube 150 cm. long closed at both ends.
- X Upward propagation.
- Y Horizontal propagation.
- Z Downward propagation.

- AA Tube diameter 5.0 cm., tube 150 cm. long closed at both ends.
- BB Using unflanged electrodes.
- CC Value listed under Dimethyl Butane.
- DD Reference gives the value as estimated.
- EE For solid-vapor equilibrium.
- FF Value listed under 2-Ethylbutane.
- GG Value listed under Tetramethylpentane.
- HH Value listed under 1,4-Dimethylcyclohexane.
- JJ Value listed under Decalin.
- KK Formula given in reference as $C_{12}H_{18}$.
- LL Value listed under Butylene.
- MM Value listed under Diisobutylene.
- NN Value listed under B-N-Amylene.
- PP Value listed under N-Amylene.
- QQ Value listed under 2,4,4-Trimethyl-1-Pentene.
- RR Value listed under Hexylene.
- SS Value refers to a mixture of 35.6 percent Trans-2-Hexene and 63.6 percent CIS-2-Hexene.
- TT Value listed under Alpha-N-Heptylene.
- UU Value refers to a mixture of 17.0 percent Trans-2-Heptene and 82.3 percent CIS-2-Heptene.
- VV Value refers to a mixture of 4 percent Trans-2-Heptene and 96 percent CIS-2-Heptene.
- WW Value refers to a mixture of 57.5 percent Trans-3-Heptene, 38.8 percent CIS-3-Heptene, 1.2 percent Trans-2-Heptene, 0.6 percent CIS-2-Heptene, and 1.9 percent lights.
- XX Value is average of CIS and Trans isomers.
- YY Value listed under Butadiene.
- ZZ Value refers to a mixture of 83.0 percent Trans-1,3-Pentadiene, 7.9 percent CIS-1,3-Pentadiene, and 8.2 percent Cyclopentene.

- AB Value listed under Diallyl.
- AC Value listed under Crotonylene.
- AD For technical grade material.
- AE Value listed under 4-Methyl Pentyl Benzene.
- AF Value listed under Diethyl Benzene.
- AG Value listed under Diisopropylbenzene.
- AH Value listed under Dipentene.
- AJ Value listed under Pinene.
- AK 5X180-cc vertical tube.
- AL Heated in an 88-cc Quartz Bulb.
- AM Heated in a 131-cc Quartz Bulb.
- AN Procedure involves dropping liquid on bath surface.
- AP Procedure involves dropping liquid into porcelain crucible.
- AQ 740 mm Hg.
- AR Saybolt Seconds Universal
- AS 15 mm Hg.
- AT 125-cc/Min air flow, dropwise addition into 43-cc S.S. cup.
- AU Zero air flow, dropwise addition into 43-cc S.S. cup.
- AV 131-cc Quartz Bulb, 81.6-86.7 percent C_2H_2
- AW 131-cc Quartz Bulb, 30.6-38.4 percent C_2H_2 .
- AX ASTM D86-30, Quartz Flask.

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13. ABSTRACT Many tabulations of hydrocarbon combustion properties are found in the literature. Unfortunately, most of these report what the author believes to be the best value for each property, and do not include all combustion properties. This report presents a compilation of combustion and physical properties which can be used in a variety of combustion problems. Referenced values are included for flash point, flammability limits, autoignition temperature, maximum flame velocity, minimum ignition energy, and quenching distance. The physical properties include molecular weight, carbon-hydrogen ratio, vapor density, heats of combustion and vaporization, liquid density, refractive index, surface tension, viscosity and vapor pressure data.			

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