PLASTEC REPORT 8

SUBJECT INDEX, BIBLIOGRAPHY, AND CODE DESCRIPTION OF TECHNICAL CONFERENCE PAPERS ON PLASTICS: MARCH 1960 – FEBRUARY 1961

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PLASTEC Report 6 OTS PB 171037	METHODS OF BONDING FLUOROCARBON PLASTICS TO STRUCTURAL MATERIALS, by Marjorie C. St. Cyr	- - -
PLASTEC Report 7 OTS PB 171038	GUIDE TO SPECIFICATIONS ON PLASTIC LAMINATES, by Ruth Kobler (under publication)	- - -
PLASTEC Note 1 OTS PB 171810	THE APPLICATION OF NONDESTRUCTIVE TESTING TO PLASTICS, by Alfred M. Anzalone (under publication)	- - -

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SUBJECT INDEX, BIBLIOGRAPHY, AND CODE DESCRIPTION OF TECHNICAL CONFERENCE PAPERS ON PLASTICS: MARCH 1960 — FEBRUARY 1961

By

Arnold E. Molzon

Plastics Technical Evaluation Center

ABSTRACT

The papers presented at the technical conferences on plastic materials and related technology, within a 1-year period ending on 15 February 1961, have been listed and indexed by subject. Over 450 papers from 14 conferences are covered. This report serves as a guide to the subjects presented, and by means of a code system, it tells the reader what type of information each article contains. Included are a bibliography and identification of the company affiliations of the authors.

The conferences were: Spring and Fall meetings, American Chemical Society (Division of Paint, Plastics, and Printing Ink Chemistry); 3d Annual Conference on the Application of Electrical Insulation; 15th Annual Meeting of the American Rocket Society; Industrial Glass Fabric Design Engineering Symposium; Symposium on Processing Materials for Re-entry Structures; 17th Annual Technical Conference of the Society of Plastics Engineers; Conference on Plastics in Business Machines; Conference on Plastics vs. Corrosion; 16th Annual Technical and Management Conference of the Reinforced Plastics Division of the Society of the Plastics Industry; 6th JANAF Conference on Elastomer Research and Development; 9th Annual Conference on Technical Progress in Communication Wire and Cable; National Academy of Science Conference on Electrical Insulation; and Conference on Coatings for the Aerospace Environment.

ACKNOWLEDGMENT

The author wishes to acknowledge the valuable assistance given by members of commercial and Government facilities in producing this report. Miss Virginia Valerie and Mrs. Dorothy Stivers were particularly helpful.

CONTENTS

1. INTRODUCTION

The number and frequency of technical conferences on plastic materials, applications, and related technology have increased over the past few years. A point has been reached at which it is impossible for the average engineer to keep up with the new developments or to put to use the mass of technical data presented at such meetings, without laborious searching. Time for this searching is a luxury which the military application engineer does not have.

Generally, the most up-to-date information has been made available through the publications emanating from these conferences. Commensurate with its high value, it deserves wider dissemination than is achieved by the intra-group distribution which is usually given to the preprints and proceedings of such meetings.

Little has been done in the past to identify the subjects covered in such conferences within a cross-reference system so that one can rapidly determine (1) what has been presented on a particular subject or (2) what particular information and/or data are contained in each paper. This report is intended to fulfill this need — one document covering the output of the major domestic conferences within a 1-year period ending February 1961.

Only conferences for which preprints or proceedings were issued, or which are in some permanent published record, have been included in this report. Some conferences have thus been omitted. It is expected that the next report (depending upon the reception of this one) will consider others, especially foreign conferences. Comments will be welcomed.

The Plastics Technical Evaluation Center does not have copies of the publications for distribution. It recommends that the interested reader contact the society which promoted or the group which sponsored the meeting at which the particular paper was presented. As an alternative, the reader may contact the (or an) author of the paper of interest. Fair coverage of author affiliation has been included in BIBLIOGRAPH and in AUTHOR AFFILIATION — LIMITED DIRECTORY.

2. ORGANIZATION

CODE SHEET

The code sheet is based on the area designations used by the Society of Plastics Engineers in their annual conferences. These are: General (1), Materials (2), Properties (3), Processes and Processing Equipment (4), Intermediate Products (5), Applications (6), and Research (7). Within these general areas, the specifics are coded in subdigits, for example: low temperature properties (3.10), high temperature properties (3.11); laminating (4.4), blow molding (4.5); test methods (1.1), hazards (1.7), specifications (1.10). Thus, the code sheet gives the numerical reference key to the type of information presented in the particular conference paper.

Two code sheets are provided for simplification of handling. One is in the forepart of the report, opening out on the verso side of the sheet for left-side reference. The other is at the rear of the report, in recto position, for right-side usage.

SUBJECT INDEX

The subject index is presented in three horizontal parts: subject, code designations, and reference number.

The principal subjects discussed in the presentations are listed alphabetically and margined. The variations upon the principal subject are sublisted and indented, in alphabetical order also. In cases in which the same variation is cited in multiple papers, the variation is repeated for each instance. A typical example is the first subject: Ablation. The variations on this subject are: heat shield, high heat rates, materials evaluation, materials evaluation, materials evaluation, and nozzle.

The code designations are for the areas of information on the subject or variation, as covered within the referenced conference paper. For example, in Reference No. 147, "heat shield" is discussed as it relates to: thermal data (3. 5), ablative data (3. 12), application in spacecraft, aircraft, rockets (6. 4), and research analysis, theoretical (7. 2). In this usage, the code is thus a guide for the reader, in determining whether the particular reference contains what he is looking for.

In another application, the code designations provide a means for determining in what conference reports a particular area of information is discussed. For example, if the reader wished to know whether safety or hazards had been considered within the conferences, he would scan the code designations in the subject index for the code 1. 7. He would find that hazards had not been a live issue; but that Reference No. 219 had touched upon the subject. If the reader wished to find all the articles on epoxy materials, he would check the variations under the subject "epoxy" for those papers dealing primarily with them; and then check all code designations within the subject index for 2. 3, to locate other papers which, while dealing primarily with another subject, contain some information on epoxies. The code system is thus a means of cross-reference in the widest sense. For ease in scanning the code designations for this purpose, the codes are cited in numerical progression within the individual listings.

The reference numbers are those which were assigned, for this report, to the conference presentations. They appear on the margins of the BIBLIOGRAPHY. The bibliographical listings identify the title of the presentation, its author(s), and a company affiliation. The papers are listed under the headings identifying the conferences at which they were presented; and in the proceedings of which the report may be found.

BIBLIOGRAPHY

The bibliography lists the presentations within the fourteen conferences covered and in the order in which they appear in the published proceedings. The conferences were:

Division of Paint, Plastics and Printing Ink Chemistry, at the 137th National Meeting, April 1960, Cleveland. The American Chemical Society.

Division of Organic Coatings and Plastics Chemistry, at the 138th National Meeting, September 1960, New York. The American Chemical Society. Volume 20, Number 2.

National Conference on the Application of Electrical Insulation, Third Annual, December 1960, Chicago. Cosponsored by: American Institute of Electrical Engineers, and National Electrical Manufacturers Association.

Fifteenth Annual Meeting, December 1960, Washington, D. C. The American Rocket Society.

Industrial Glass Fabric Design Engineering Symposium, May 1960, New York. Sponsored by: Owens-Corning Fiberglas Corporation.

Symposium on Processing Materials for Re-Entry Structures, May 1960, Wright-Patterson Air Force Base, Ohio. Sponsored by: Materials Central, Wright Air Development Division. Published as: WADD Technical Report 60-58.

Seventeenth Annual Technical Conference (ANTEC), January 1961, Washington, D. C. Sponsored by: The Baltimore-Washington Section, Society of Plastics Engineers, Inc.

Regional Technical Conference, "Plastics in Business Machines," September 1960, Binghamton, N. Y. Sponsored by: The Binghamton Section, Society of Plastics Engineers, Inc.

Regional Technical Conference, "Plastics vs. Corrosion," October 1960, San Francisco, California. Sponsored by: The Golden Gate Section, Society of Plastics Engineers, Inc.

Sixteenth Annual Technical and Management Conference, February 1961, Chicago, Illinois; Reinforced Plastics Division, The Society of the Plastics Industry, Inc.

Conference on Elastomer Research and Development, Sixth Joint Army-Navy-Air Force Conference: October 1960, Boston, Massachusetts. Sponsored by: U. S. Army Quartermaster Research and Engineering Command, Natick, Massachusetts.

Ninth Annual Conference, "Technical Progress in Communication Wires and Cables," November-December 1960, Asbury Park, New Jersey. Sponsored by: Communications Security Division, U. S. Army Signal Research and Development Laboratory, Fort Monmouth, New Jersey.

Conference on Electrical Insulation, October 1960, Washington, D. C. Sponsored by: Division of Engineering and Industrial Research, National Academy of Sciences — National Research Council, Washington, D. C., Publication 842, 1961.

"Coatings for the Aerospace Environment," November 1960, Dayton, Ohio. Sponsored by: Materials Central, Wright Air Development Division, Dayton, Ohio. Preprint published as WADD Technical Report 60-773.

When the conferences were subdivided into specific interest segments, the subject headings have been maintained. In one case, the report is in two volumes; these are identified also. As may be noted, assigned publication numbers are included.

The listings include all authors; but in the identification of author affiliation for reports jointly prepared by people from different companies, the company connection of one randomly selected author is given. In such cases, the name of that author is underlined. This establishes a contact on the multiple-affiliation reports without unduly complicating the entry in the bibliography. Simplification has also been the aim in limiting all author affiliations to brief form. The full designations, when available, have been compiled in the AUTHOR AFFILIATIONS — LIMITED DIRECTORY.

The Reference Number is the identification media for integration between subject index and bibliography.

AUTHOR AFFILIATIONS — LIMITED DIRECTORY

In recognition that a need may arise for the contacting of an author, as in a case in which the published conference proceedings are not available to the reader, the brief statements of affiliation have been expanded in this limited directory.

This listing is limited to those affiliations which were completely identified in the conference proceedings. Those in which the identification was lacking, or incomplete (for example, ".....General Electric") have been omitted. In the case of the single-choice author affiliation for those papers prepared by people from different companies, the affiliations of the other authors are not listed. Hence this is not, and should not be construed as, a directory of company participants in the conferences.

ADDENDUM — SUPPLEMENTARY BIBLIOGRAPHY

Subsequent to the compilation of the subject index, there came to the knowledge of the writer three other conferences on plastics. Two were: on the behavior of plastics in advanced flight vehicle environments (February 1960) and on high modulus glass fibers for structural plastics (October 1960). Both were sponsored by the Wright Air Development Division. The third was on semiconduction in molecular solids, sponsored by Princeton University.

Revision of the subject index to incorporate the papers presented at these meetings, a task which would have seriously delayed publication, was not attempted. However, in order to present as complete a record as possible, the titles of these papers, their authors and company affiliations are given in the supplementary bibliography.

It is again cautioned that these conference papers are not cross-referenced in the body of this report.

3. CODE SHEET

1. GENERAL
   - 1.1 Test methods
   - 1.2 Synthesis
   - 1.3 Design of Products
   - 1.4 Statistical analysis, quality control
   - 1.5 Cost estimating
   - 1.6 Plant management
   - 1.7 Hazards
   - 1.8 Design Criteria
   - 1.9 Education, user experience
   - 1.10 Specifications
   - 1.11 Codes
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2. MATERIALS (POLYMERIC)
   - 2.1 Phenolic
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   - 2.3 Epoxy
   - 2.4 Urethane
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   - 2.8 Polyamide, nylon
   - 2.9 Polyolefin
   - 2.10 Fluorocarbon
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   - 2.12 Cellulosic
   - 2.13 Acrylic
   - 2.14 Styrene
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3. PROPERTIES (DATA)
   - 3.1 Mechanical
   - 3.2 Rheological
   - 3.3 Surface
   - 3.4 Optical
   - 3.5 Thermal
   - 3.6 Electrical
   - 3.7 Molecular structure

3. PROPERTIES (DATA) (Continued)
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   - 3.9 Stability, aging
   - 3.10 Low temperature
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   - 3.12 Ablative
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   - 3.15 Compatibility
   - 3.16 Thermo-dynamic
   - 3.17 Dynamic
   - 3.18 Radiation effects
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   - 3.20 Ballistic
   - 3.21 Weathering
   - 3.22 Crystalline
   - 3.23 Transmission (vapor, etc.)
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4. PROCESSES AND PROCESSING EQUIPMENT
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   - 4.4 Laminating
   - 4.5 Blow molding
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5. INTERMEDIATE PRODUCTS
   - 5.1 Castings, encapsulants
   - 5.2 Sheets, rods
   - 5.3 Film, coatings
   - 5.4 Pipe, tubing
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   - 5.6 Foams
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   - 5.8 Coatings, paints
   - 5.9 Adhesives
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   - 5.14 Fabric

6. APPLICATIONS
   - 6.1 Boats, marine
   - 6.2 Building
   - 6.3 Electrical
   - 6.4 Spacecraft, aircraft, rockets
   - 6.5 Packaging
   - 6.6 Gaskets, O-rings
   - 6.7 Transportation other than 6.4
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   - 6.9 Medical, surgical, prostheses
   - 6.10 Chemical plant, maintenance
   - 6.11 Business equipment
   - 6.12 Space
   - 6.13 Appliances
   - 6.14 Rocket nozzle
   - 6.15 Gear

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   - 7.2 Analysis, theoretical
   - 7.3 Molecular structure
   - 7.4 Radiation
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   - 7.6 Developments, programs
   - 7.7 Molecular weight
   - 7.8 Mechanism

4. SUBJECT INDEX

*Refers to items in Bibliography.

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Polyurethane propellant	2.4, 3.9, 3.17, 4.17	55
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Chemical	2.0, 7.3	383
Corona discharge	2.9, 2.11, 2.18, 3.6, 5.12, 6.3, 7.2	432
Oxidative	2.9, 7.1, 7.8	384
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Thermal	1.1, 2.1, 2.14, 2.16, 3.1, 3.5, 3.6	248
Thermal	2.10, 3.5, 3.16	387
Thermal	2.0, 5.5, 6.3, 7.2	461
Thermal and oxidative	2.5, 3.1, 3.9, 3.11, 7.2, 7.8	372

Subject	Code designation	Ref. No.
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Polymer solution, rheological properties	1.1, 2.13, 2.14, 3.2, 3.16	403
Polymer structure, chemical resistance	2.0, 7.2, 7.3	383
Polymers, space environment	2.5, 2.15, 2.18, 3.1, 3.13, 3.18, 3.28, 6.12	473
Polypropylene		
Film, density	2.15, 3.22, 5.3, 7.2	213
Molded-in hinge	1.3, 1.8, 1.9, 4.3, 6.0	231
Structure, mfg. prop.	1.2, 2.15, 3.1, 3.5, 3.6, 3.7, 3.9, 7.1, 7.3	42
Polystyrene		
Coatings for	5.3, 6.5	22
Door liners	1.1, 2.14, 3.1, 3.14, 6.13	177
Impact	2.14, 3.1, 3.6, 4.2, 4.3	201
Orientation	1.1, 2.14, 3.8, 7.2	212
Oriented film	2.14, 3.1, 3.14, 3.24, 5.3, 6.5	47
Self-extinguishing	1.1, 2.14, 3.1, 3.6, 3.9, 3.21, 4.2, 4.3	203
Polyurethane		
Cast elastomer	1.1, 1.2, 2.4, 3.1, 4.9	13
Estane	2.4, 3.1, 3.14, 4.1, 4.3, 4.12, 4.17	200

Subject	Code designation	Ref. No.
Polyurethane — Continued		
Estane properties	3.0, 4.0	17
Film	1.2, 3.1, 3.9, 3.14, 5.3, 7.3	53
Highly loaded binders	2.4, 3.9, 4.17	55
Molding flexible foam	2.4, 3.1	11
Paper reinf. emulsion	1.1, 2.4, 3.1, 3.2, 3.7	15
Polymerization	1.2, 3.1, 7.1	12
Polymerization	1.2, 2.4, 7.0	14
Radiation effects	1.1, 2.4, 3.1, 3.2, 3.7	16
2,6-isomer content vs. properties	2.4, 3.1, 7.3	20
Polyvinyl chloride, cross-linking	1.1, 2.11, 3.14, 7.2	192
Polyvinylidene fluoride		
Fabrication and application	3.2, 4.1, 4.2, 4.3, 4.17, 6.0	205
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Cutters	7.6	374B
Glass fibers	7.6	374C
Materials handling	7.6	374D
Mold design	7.6	374E
Molding presses	7.6	374G
Preform binder systems	1.13	374A
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Design parameters	1.1, 1.3, 1.8	309
Filament winding	1.3, 1.8, 7.2	188
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Coatings	1.1, 2.3, 2.4, 3.6	126
Coatings	1.1, 2.3, 2.4, 3.5, 3.6, 3.9, 4.0, 5.8, 6.3	185
Coatings	1.1, 2.0, 3.6, 5.8	186
Dielectric prop.	1.1, 2.0, 3.6, 5.5	449
Mica-epoxy	2.3, 3.1, 3.6, 5.5, 6.3	187
Wiring insulation	1.9, 2.3, 2.5, 5.5	123
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Blown vs. chill cast film	2.9, 3.1, 3.4, 4.5, 4.9, 4.17, 5.3	238
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Extruding wire jackets	2.8, 4.2, 4.17	426
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Molding shrinkage	2.10, 3.5, 4.3, 7.2	269
Phenyl silane	1.1, 3.1, 3.11, 4.17, 5.5	343
Polyethylene	2.1, 2.9, 3.1, 3.2, 4.17	179
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Subject	Code designation	Ref. No.
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Thermo setting polymers	1.1, 2.1, 2.3, 2.5, 2.16, 3.1, 3.5, 3.6	248
Quality control, fabrication plant	1.4, 4.0	221
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Induced elastic memory	2.9, 3.1, 5.4, 6.3	442
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Radiation effects	2.5, 2.11, 3.1, 3.9, 5.3	463
Gamma Rad. on film	2.5, 2.6, 2.9, 3.4, 3.9, 3.13, 3.18, 5.3, 7.3	250
Rad. on film	1.1, 2.10, 3.1, 3.13, 3.18, 5.2, 5.3	257
Rad. on polyurethane	1.1, 2.4, 3.1, 3.2, 3.7	16
Seals	2.0, 3.1, 3.18, 5.10, 6.6	263
UV on polyethylene	1.1, 2.9, 3.1, 3.4, 3.9, 3.18, 3.21	258
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Aryl and fluoro siloxanes	3.1, 3.5, 3.9, 3.18, 5.11, 7.3, 7.6	415
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Polyethylene	2.9, 3.1, 3.5, 3.9	397
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Radome		
Elec. prop.	2.3, 2.5, 2.16, 3.5, 3.6, 5.5	273
500-feet diameter	1.8, 1.10, 4.4, 4.7, 7.2	347
Rotodome	1.3, 1.8, 3.1, 4.4, 4.7	325
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Lique Freeze Container	1.3, 1.13, 4.4, 6.7	357
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Glass fibers	7.6	374D
Glass filaments	1.1, 2.3, 2.5, 3.1, 7.2	316
Glass finish	3.1, 5.5, 7.8	151
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Paper reinforcement polyurethane	1.1, 2.4, 3.1, 3.9	15
Pre-preg glass roving	1.1, 2.3, 2.5, 3.1	301
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Subject	Code designation	Ref. No.
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Coordinated polymer	1.2, 7.3, 7.6, 7.8	391
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Department of Defense Materials Policy	7.0	375
Elastomer	1.1, 1.3, 3.1, 3.2, 7.2, 7.5	377
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Fatty oil-polystyrene copolymer	1.1, 2.5, 2.14, 3.1, 7.1	29
Fluorinated nitroso elastomer	1.2, 3.4, 3.5, 3.9, 7.1, 7.3, 7.6, 7.8	419
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Isobutylene copolymers	2.11, 3.1, 5.11, 7.1	27
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Mooney viscometer	1.1, 2.16, 3.2	431
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Subject	Code designation	Ref. No.
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Rocket motor		
Nozzle	1.1, 1.2, 2.1, 2.20, 6.4	342
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Filament wound spec.	1.1, 3.1, 5.5	195
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Shock mounting, scale models	1.8, 2.0, 3.1, 3.17, 5.6, 6.5	270
Shock resistance, thermoplastic sheet	1.1, 2.9, 2.11, 2.14, 3.1, 3.26, 5.2	275
Shrinkage, molding	2.14, 3.5, 4.3, 7.2	269
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Aryl and Fluoro modified	2.1, 3.4, 3.9, 3.10, 3.18, 7.4, 7.6	415
Cyanosilicone polymer	1.2, 3.1, 3.10, 3.14, 3.18, 4.12, 7.6	413
Encapsulating	1.1, 2.16, 2.20, 3.6, 3.9, 6.3	141
New crosslinked material	1.2, 2.16, 3.9, 3.27	52
Rubber	3.6, 3.9, 4.0, 6.3	100
Si-N polymer	1.2, 7.0	390
Smokes	2.1, 2.4, 5.6, 6.0	230
Space		
Coatings	1.8, 2.16, 3.4, 3.13, 3.18, 3.28, 6.12	472
Coatings	2.4, 2.5, 2.11, 2.16, 3.5, 3.11, 3.13, 3.28, 6.12	475
Flexible vehicle coating	1.8, 2.16, 3.4, 3.13, 3.18, 3.28, 6.12	486
Reflective coatings	2.3, 2.4, 2.16, 3.4, 3.24, 6.12	476
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Polyamide	2.8, 3.1, 3.9, 3.23	249
Polymers to gamma radiation	2.5, 2.6, 2.8, 2.9, 3.4, 3.7, 3.13, 3.18, 5.3, 7.3	250
Seals	2.0, 3.1, 3.18, 6.6	263
UV absorbers	2.2, 2.5, 2.12, 3.4, 3.9, 3.13, 3.18	488

Subject	Code designation	Ref. No.
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Environmental stress rupture	1.1, 2.9, 3.1, 3.14, 7.2	234
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Polyethylene pipe rupture life	1.8, 2.9, 3.1, 3.14	293
Polyethylene stress cracking	2.9, 3.0	425
Stress crack resistance	1.1, 2.9	271
Stress distribution	1.1, 3.1, 5.5	371
Stress relaxation		
Oxiron	2.3, 3.1, 3.6, 3.11	296
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Rubber	1.1, 2.18, 7.2	377
Thermoplastics	1.1, 2.0, 3.1, 3.17	59
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Dielectrics	2.0, 3.0, 7.3	135
Dielectrics	2.0, 3.0, 7.3	136
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Fluorine containing monomers	7.2, 7.3, 7.6	417
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Corona effect	1.1, 3.6, 5.13, 7.2	456
Insulation	2.3, 2.20, 3.1, 3.6, 3.14, 6.3	87
Thermal classification	1.1, 2.20, 3.1, 3.6, 3.14, 6.3	109
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Terpolymer, vinyl ether	3.1, 3.14, 5.3, 7.0	30
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Adherometer	1.1, 2.0, 3.16, 5.8	10
Adhesives, short time high temperature	1.1, 3.1, 3.11, 4.0, 5.5	264
Blister adherometer	1.1, 2.0, 3.16, 5.8	2
Capillary rheometer	1.1, 2.9, 2.12, 2.15, 3.2, 7.2	261
Class F measurement	4.0	76
Dielectric absorption	1.1, 3.6	114
Dielectric measurement	2.0, 3.6, 5.5, 7.2	449
Dielectric measurement	2.13, 4.0, 7.2	445
Dielectric measurement	4.0, 7.2	446
Dielectric measurement	2.6, 2.9, 2.10, 3.6, 3.9, 4.0, 7.2	447
Dielectric measurement	2.14, 5.6, 7.2	448
Double-piston rheometer	1.1, 2.9, 2.14, 3.2, 7.2	262
Electrical	1.10, 1.12, 1.13	132
Electrical, tracking	1.1, 2.0, 3.6, 5.5, 7.2	457
Electrical, tracking	2.0, 3.6, 5.5, 7.2	459
Electro-thermal analysis	1.1, 2.1, 2.3, 2.5, 2.16, 3.1, 3.5, 3.6	248
Enameled wire	1.4, 2.0, 3.6, 6.3	97
Environmental stress rupture	1.1, 2.9, 3.1, 3.14, 7.2	234
Filament wound composites	1.1, 1.8, 2.3, 2.5, 3.1, 7.2	148A
Fire hazards classification	1.1, 2.5, 5.5, 6.2	322
Flow through capillaries	1.1, 2.9, 3.2, 4.17, 7.2	260
Gas chromotography	1.1, 5.8	49
G Adopter for Q Meter	1.1, 2.9, 3.6, 7.2	428
Glass-resin interface	1.1, 3.3, 5.5, 7.2	327

Subject	Code designation	Ref. No.
Test methods — Continued		
Glass roving properties	1.1, 3.4	366
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Heat distortion	1.1, 2.0, 3.1, 3.5, 4.7	176
High potential	4.0, 6.3, 7.2	99
High shear viscometer	1.1, 2.9, 3.2, 7.2	259
Hoop winding	1.1, 3.1, 3.3, 5.5, 7.2	331
Impact, thermoplastic sheet	1.1, 2.9, 2.11, 2.14, 2.16, 3.1, 3.26, 7.6	275
Mooney viscometer	1.1, 2.16, 3.2	431
Nondestructive	1.1, 2.0, 3.1, 5.5, 7.2	308
Photoelastic stress analysis	1.1, 3.1, 7.2	370
Photoelastic stress analysis	1.1, 3.1, 7.2	371
Plastisol gelation	1.1, 2.11, 3.1, 7.2	245
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Radiation heating	1.1, 3.1, 3.11, 5.5, 5.9, 6.4	264
Resin-glass laminates	1.1, 2.3, 2.5, 3.1, 7.2	316
Rocket motor insulation	1.1, 1.8, 2.0, 3.5, 3.11, 6.4	266
Shear	1.1, 3.1, 5.5	195
Spiral cavity mold flow test	1.1, 2.13, 2.14, 3.2	226
Stress orientation	1.1, 2.14, 7.2	212
Torsional	1.1, 2.9, 2.11, 2.15, 3.1, 3.5	176
Torsional pendulum	1.1, 2.8, 2.11, 2.12, 2.13, 2.14, 2.18, 3.1, 3.17	59
Thermal degradation		
Phenolics	1.1, 2.1, 3.4, 3.9, 3.11, 3.17, 7.3	57
Polyacrylonitrile	2.13, 7.3	26
Thermal insulation, rocket motor	1.1, 1.8, 2.0, 3.5, 3.11, 4.0, 6.4	266
Thermal life		
Aromatic fluorocarbons	2.0, 3.5, 3.16	387
Elastomers	3.1, 3.5, 3.9, 3.11	395
Magnet wire	1.1, 2.0, 3.6	111
Magnet wire	2.0, 3.11	75
Mica laminates	2.0, 6.3	95
Varnishes	1.1, 2.0, 3.6, 6.3	96
Thermal stability (see also Aging)		
Adhesives	3.1, 5.5, 5.9, 7.3	223
Aromatic fluorocarbons	2.10, 7.2	387
Aryl and fluoro siloxanes	3.1, 3.5, 3.9, 3.11, 3.16	415
Elastomers	2.0, 3.5, 5.11, 7.6	394
Epoxy resins	1.2, 2.3, 3.6, 6.3	91
Elastomers	1.1, 3.1, 3.5, 3.11	395
Laminates	1.1, 2.3, 2.5, 5.5, 6.3	112
Magnet wire	1.1, 2.0, 6.3	111
Mol. structure	2.0, 7.2	225
Phenolics	1.1, 2.1, 3.1, 3.5, 3.6, 3.9	209
Polyamides	1.1, 2.8, 3.1, 3.8, 4.2	249
Polyaromatics	1.2, 2.20, 3.5, 3.9, 3.11	388
Polymers	1.1, 2.3, 2.5, 2.16, 6.3	184
Thermosetting polymers	1.1, 2.1, 2.3, 2.14, 2.16, 3.1, 3.6	248
Titanates, organic	4.2, 4.13, 5.9	71
Tooling (plastic)		
Heat resistant	2.3, 4.0, 6.0	307
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Subject	Code designation	Ref. No.
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Plastic faced plaster	1.9, 4.7	305
Plastic master models	1.8, 4.7	303
Plastic mold and dies	2.3, 3.1, 3.5, 3.11, 5.7	206
Resins	2.3, 3.9, 4.9, 6.7	304
Toxicology, aliphatic amine	1.7, 2.3, 3.15	219
Tracking, electrical	1.1, 2.0, 3.6, 7.2	459
Electrical	1.1, 3.6, 4.0	93
Electrical	1.1, 2.0, 4.0. 7.2	94
Electrical	1.1, 2.0, 7.2	460
Electrical	1.1, 2.0, 3.6, 5.5	457
Transformer		
Corona free	1.1, 1.3, 2.0, 3.6	105
Insulation	1.8, 2.0, 7.2	120
Insulation	1.8, 1.9	103
Insulation	1.8, 1.9	104
Transparents, acrylic window	1.2, 3.1, 3.4, 3.5	63
Transportation		
Reinf. plastics application	1.13, 6.0, 6.7	363
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Tubing, paper-base	2.1, 3.1, 5.8, 7.3	210
Turbine, compressor housing	1.1, 1.3, 1.8, 3.1, 3.5, 3.20, 4.4, 5.5	190
Ultraviolet, absorbers	3.4, 3.5, 3.9, 3.13, 3.18	339
Ultraviolet absorption	2.9, 3.1, 3.4. 3.18, 3.21	258
Urethane, cast	2.4, 3.1, 3.14, 4.9	407
Urethane, foam	2.4, 4.0	142
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Vacuum metallizing	1.8, 4.8, 4.17, 7.2	243
Vacuum metallizing	2.0, 4.8, 5.3	24
Varnish, tube laminating	2.1, 3.1, 4.12, 7.3	210
Varnishes, electrical insulating	1.1, 2.0, 3.6, 3.9, 4.14	96
Wax phenols	1.2, 3.1, 4.0	34
Weathering		
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Conference: November 1960
Sponsored by: Materials Central, Wright Air Development Division, Dayton, Ohio
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473 Theoretical and Experimental Evaluation of Polymeric Materials For Use in the Space Environment, by C. E. Snyder and W. B. Cross (Goodyear Aircraft), p. 23

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7. AUTHOR AFFILIATIONS — LIMITED DIRECTORY

This limited directory lists the affiliations of the authors, or of one author in the cases of multiple affiliations, when such were available from the published proceedings of the conference. These listings complete the identifications given in abbreviated form in the BIBLIOGRAPHY.

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8. ADDENDUM — SUPPLEMENTARY BIBLIOGRAPHY

Herein are listed the papers presented at three conferences which came to the knowledge of the writer subsequent to the preparation of the subject index. These are given bibliographical treatment only. They are separate and distinct from the coding and cross-reference which comprise the body of this report.

Proceedings: BEHAVIOR OF PLASTICS IN ADVANCED FLIGHT VEHICLE ENVIRONMENTS
Conference: February 1960
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Proceedings: HIGH MODULUS GLASS FIBERS FOR STRUCTURAL PLASTICS
Conference: 12 October 1960
Sponsored by: Plastics Branch, Non Metallic Materials Laboratory, Materials Central, Wright Air Development Division, Dayton, Ohio.
Preprint published as: WADD TR 60-735

Proceedings: SEMICONDUCTION IN MOLECULAR SOLIDS
Conference: 16-17 February 1960
Sponsored by: Plastics Laboratory, School of Engineering, Princeton University, Princeton, N. J.
Proceedings privately published

Plastics Technical Evaluation Center (PLASTEC) Picatinny Arsenal, Dover, New Jersey
SUBJECT INDEX, BIBLIOGRAPHY, AND CODE DESCRIPTION OF TECHNICAL CONFERENCE PAPERS ON PLASTICS: MARCH 1960 — FEBRUARY 1961
by Arnold E. Molzon

PLASTEC REPORT 8, July 1961, 65 pp. incl. code description sheets, subject index and bibliography (500 items).
Unclassified Report

The papers presented at the technical conferences on plastic materials and related technology, within a 1-year period ending on 15 February 1961, have been listed and indexed by subject. Papers (500) from 14 conferences are covered. This report serves as a guide to the subjects presented and by means of a code system, it tells the reader what type of information each article contains. Included are a bibliography, and identification of the company affiliations of the authors.

The conferences were: Spring and Fall meetings, American Chemical Society (Division of Paint, Plastics, and Printing Ink Chemistry); 3d Annual Conference on the Application of Electrical Insulation; 15th Annual Meeting of the American Rocket Society; Industrial

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UNCLASSIFIED

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SUBJECT INDEX, BIBLIOGRAPHY, AND CODE DESCRIPTION OF TECHNICAL CONFERENCE PAPERS ON PLASTICS: MARCH 1960 — FEBRUARY 1961
by Arnold E. Molzon

PLASTEC REPORT 8, July 1961, 65 pp. incl. code description sheets, subject index and bibliography (500 items).
Unclassified Report

The papers presented at the technical conferences on plastic materials and related technology, within a 1-year period ending on 15 February 1961, have been listed and indexed by subject. Papers (500) from 14 conferences are covered. This report serves as a guide to the subjects presented and by means of a code system, it tells the reader what type of information each article contains. Included are a bibliography, and identification of the company affiliations of the authors.

The conferences were: Spring and Fall meetings, American Chemical Society (Division of Paint, Plastics, and Printing Ink Chemistry); 3d Annual Conference on the Application of Electrical Insulation; 15th Annual Meeting of the American Rocket Society; Industrial

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II. Title

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Glass Fabric Design Engineering Symposium; Symposium on Processing Materials for Re-entry Structures; 17th Annual Technical Conference of the Society of Plastics Engineers; Conference on Plastics in Business Machines; Conference on Plastics vs. Corrosion, 16th Annual Technical and Management Conference of the Reinforced Plastics Division of the Society of the Plastics Industry, 6th JANAF Conference on Elastomer Research and Development; 9th Annual Conference on Technical Progress in Communication Wire and Cable; National Academy of Science Conference on Electrical Insulation; and Conference on Coatings for the Aerospace Environment.

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