

AD 718791

23 December 1970

Materiel Test Procedure 9-2-285(K)
General Equipment Test Activity

U. S. ARMY TEST AND EVALUATION COMMAND
COMMODITY ENGINEERING TEST PROCEDURE

DUST CONTROL MATERIAL

1. OBJECTIVE

This document provides test methodology and testing techniques to determine the technical performance and safety characteristics of dust control material and associated tools and equipment as described in Qualitative Materiel Requirements (QMR's), Small Development Requirements (SDR's), and Technical Characteristics (TC's), and to determine the item's suitability for service tests.

2. BACKGROUND

Dust control agents are required for use around airfields, helicopter landing areas, operational bases, cantonment areas and auxiliary roads. The presence of dust creates the following problems:

- a. Drastic reduction in "usage expectancy" of machinery and equipment, such as helicopter rotor blades and engines.
- b. Dust impairs visibility, creating a safety hazard and limits the intensity with which a particular area can be used.
- c. Dust clouds make the areas of operations visible from afar.
- d. Dust impairs the health and morale of personnel in the area.

The various types of palliatives to accomplish the above are:

- a. Asphaltic cutbacks.
- b. Asphalt emulsions.
- c. Light grades of road tar.
- d. Latex emulsions.
- e. Polyester resin.
- f. Prefabricated membranes.
- g. Nonasphaltic petroleum oil.
- h. Calcium chloride.
- i. Bituminous penetration material.

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The successful control of dust depends on several factors, the most important being climate, soil type, and the basic cause of the dust formation. The palliative selected should be one that will not damage equipment and that will be durable under anticipated traffic.

3. REQUIRED EQUIPMENT

In general the following should be available for use in accomplishing testing as indicated by this document:

- a. Steel measuring tapes (100 feet and 12 feet long).
- b. Stop watch.
- c. Still camera and film.
- d. Motion picture camera and film.
- e. Suitable scales for weighing the test item and its shipping container.
- f. Thermometers, pressure gages, and fluid flow meters.
- g. Adequate source of water.
- h. Appropriate material handling equipment (MHE).
- i. Climatic test chamber.
- j. Rain test chamber and or necessary capabilities.
- k. Appropriate transportation capabilities and facilities.
- l. Appropriate application equipment.
- m. Test set, soil.
- n. Soil testing set #12 (asphalt).

4. REFERENCES

- A. Army Regulation 70-38, Research and Development: Research, Development, Test, and Evaluation of Materiel for Extreme Climatic Conditions.
- B. AMCP 706-134, Engineering Design Handbook, Maintainability Guide for Design.
- C. USATECOM Regulation 70-23, Research and Development: Equipment Performance Reports (EPRs).
- D. USATECOM Regulation 385-6, Safety: Verification of Safety of Materiel During Testing.
- E. USATECOM Regulation 700-1, Quality Assurance: Value Engineering.
- F. MIL-STD-101, Preservation, Packaging, and Packing Materials, Test Procedures.
- G. MIL-STD-129, Marking for Shipment and Storage.
- H. MIL-STD-130, Identification Marking for U.S. Military Property.
- I. MIL-STD-209, Slings, Eyes and Attachments for Lifting and Tying Down Military Equipment.
- J. MIL-STD-810B, Environment Test Methods.
- K. MIL-STD-1186, Cushioning, Anchoring, Bracing, Blocking, and Waterproofing, and Appropriate Test Methods.
- L. Federal Test Method Std. No. 141, Paint, Varnish, Lacquer, and Related Materials, Methods of Inspection, Sampling and Testing.

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- M. Federal Test Method Std. No. 406, Plastics, Methods of Testing.
- N. MTP 2-2-550, Environmental Factors.
- O. MTP 4-2-818, Testing for Fungus Resistance.
- P. MTP 9-2-503, Durability.
- Q. MTP 9-4-001, Desert Environmental Test of Constuction, Support and Service Equipment.
- R. MTP 9-4-003, Tropic Environmental Test of Construct, Support and Service Equipment.
- S. MTP 10-2-500, Physical Characteristics.
- T. MTP 10-2-501, Operator Training and Familiarization.
- U. MTP 10-2-503, Surface Transportability (General Supplies and Equipment).
- V. MTP 10-2-505, Human Factors Evaluation.
- W. MTP 10-2-508, Safety.
- X. MTP 10-2-511, Quality Assurance.
- Y. TM 5-330, Planning and Design of Roads, Airbases and Heliports in the Theater of Operations.
- Z. TM 5-337, Paving and Surfacing Operations.
- AA. TM 5-530, Materials Testing.
- AB. TM 5-813-2, Water Supply, Water Resources.
- AC. TM 5-823-2, Army Airfields and Pavements: Airfield-Heliport Flexible Pavement Design.
- AD. TM 5-824-3, Rigid Pavements for Airfields Other than Army.
- AE. TM 5-886-7, Soils, Drainage and Planting for Emergency Construction, Dust Control, Emergency Constructions.

5. SCOPE

5.1 SUMMARY

This procedure describes the preparation for and methods to be used in evaluating the technical performance and safety characteristics of dust control material. To assess the degree of conformance with required standards and established criteria, the test item should be subjected to the following:

a. Preparation for Test - A pretest inspection to determine the condition of the test item and its associated maintenance test package, upon arrival at the test site. A determination of the test item's physical characteristics, an operator training and familiarization program, a post arrival assembly and inspection, and an operational check and functional verification.

b. Performance - An evaluation of the test items ability to function satisfactorily under operational conditions.

c. Kits - An evaluation to determine the adequacy and usability of all kits as furnished with the test item. (As required).

d. Environmental Effects - An evaluation to determine the ability of the test item and its components and accessories to resist the effects of accelerated climatic and environmental conditions.

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e. Durability - An evaluation of the test item's ability to retain original physical and performance characteristics after periods of extended operation.

f. Transportability - An evaluation to determine the ability of the test item and its shipping container to withstand the forces which it will experience during normal handling and transporting.

g. Maintenance - An evaluation to determine and appraise the test item's maintenance characteristics and requirements, an evaluation of the test item's associated publications and other common and special support elements. An evaluation of system durability and reliability, and the calculation of indicators which express the effects of appropriate preceding aspects.

h. Safety - An evaluation to determine the safety characteristics and possible hazards of the test item.

i. Human Factors - An evaluation to determine the adequacy of the design and performance characteristics of the test item and associated equipment in terms of conformance to accepted human factors engineering design criteria.

j. Value Analysis - An evaluation directed at analyzing the primary function of the test item for the purpose of cost reduction without compromising reliability, quality, maintainability or safety.

k. Quality Assurance - A review for the purpose of determining and evaluating defects in material and workmanship.

5.2 LIMITATIONS

a. Although concrete bituminous paving, vegetation and reusable landing mats may be considered dust palliative agents, they are not addressed in this material test procedure.

b. Materials described in this document will not withstand tracked vehicle traffic.

6. PROCEDURES

6.1 PREPARATION FOR TEST

NOTE: Prepare an Equipment Performance Report (EPR) in accordance with applicable procedures in USATECOM Regulation 70-23 for any items that are missing, damaged or considered inadequate when completing the following procedures.

6.1.1 Initial Inspection

Upon receipt of the test item at the test site, perform the following:

a. Visually inspect the packed test item. Record and photograph the following:

1) Evidence of damage incurred during transport or storage.

b. After the test item has been offloaded, remove all items from the shipping container and proceed as follows:

1) Visually inspect the shipment; evaluate with regard to and record any deviations from the applicable portions of the following military standards:

a) MIL-STD-101, Preservation, Packaging, and Packing Materials, Test Procedures.

b) MIL-STD-129, Marking for Shipment and Storage.

c) MIL-STD-130, Identification Marking for U.S. Military Property.

d) MIL-STD-1186, Cushioning, Anchoring, Bracing, Blocking, and Waterproofing, and Appropriate Test Methods.

2) Record any damage or deterioration resulting from handling, improper packaging, and/or inadequate preservation.

3) Observe and record the extent of depreservation required.

NOTE: Care should be taken to ensure that all applicable protective materials have been removed.

4) Record and bring to the attention of the test officer any observed defect or condition which is considered to be a potential hazard to the safety of test personnel or facilities.

5) Photograph the test item, accessories, and special equipment in the received condition.

6.1.2 Inventory Check

a. Conduct an inventory against the Basic Issue Items List (BIIL), if appropriate. Record evidence of the following:

1) Missing maintenance literature or draft technical manual(s).

2) Shortages in accessories, or tools.

3) Missing kits (as required).

b. Submit an Equipment Performance Report (EPR) for each noted shortage or discrepancy in accordance with applicable procedures in USATECOM Regulation 70-23.

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6.1.3 Physical Characteristics

Perform the applicable procedures of MTP 10-2-500. Record appropriate data as required.

6.1.4 Operator Training and Familiarization

Members of the test team shall be oriented in accordance with MTP 10-2-501.

a. Record the rank, MOS, past experience, and extent of additional training required for each test team member.

b. Test personnel shall receive a review of all safety precautions and hazards associated with the appropriate test facilities and the test item. This review shall include but not be limited to the following:

- 1) General test facility hazards and safety precautions.
- 2) Fire hazards, fighting, and prevention.
- 3) Hazards and precautions associated with manual lifting.

c. Test personnel shall be instructed in the capabilities, operational characteristics, and limitations of the test item. Training, instruction, and familiarization shall include but not be limited to the following:

- 1) Applicable terminology.
- 2) Operation and use of test facilities.
- 3) The team members shall be furnished information concerning the test item as follows:
 - a) Physical characteristics and description.
 - b) Limitations.
 - c) Maintenance and service requirements.
 - d) Accessories.
 - e) Kits.
 - f) Other information as appropriate.
- 4) Test team members shall receive instructions pertaining to test objectives and detailed procedures for subtests.
- 5) Record the adequacy and completeness of the draft technical manual(s) and/or other instructional material.

6.1.5 Pre-Operational Inspection, and Functional Check

Procedures as outlined in this section are intended to accomplish the following:

a. Detect prior to accomplishment of testing procedures any condition of the test item, or its accessories, which constitutes a potential hazard to personnel, the test item, or the test facilities.

b. In general, to determine that the test item is safe, operable and otherwise ready for further testing.

6.1.5.1 Selection of Test Site

Select an appropriate test site. Adequate sources of water must be available. Refer to TM 5-813-2 for information concerning water sources.

6.1.5.2 Inspection and Assembly

a. Ensure that all support equipment is in proper operating condition.

b. Record the presence of warning notices.

6.1.5.3 Operational Check and Functional Verification

Ensure that the test item is operational. Proceed as follows:

a. Refer to the draft technical manual(s) and accomplish all appropriate pre-operational maintenance and service.

b. Record the following:

- 1) Adequacy of draft technical manual(s) and other instructional material.
- 2) Any faults, failures, malfunction or discrepancies noted.
- 3) Test item suitability for continued testing.

6.2 TEST CONDUCT

The testing program shall be arranged so as to determine by controlled, measured, documented testing, the technical performance and safety characteristics of the test item.

- NOTE:
1. All equipment malfunctions occurring during the testing procedures shall be reported in accordance with USATECOM Regulation 70-23.
 2. Prior to initiating test procedures the test officer will review and implement all safety considerations contained in section 6.2.6.

6.2.1 Performance

Determine the operational and performance characteristics of the test item by subjecting it to the procedures listed below.

6.2.1.1 Surface Treatment

a. Latex emulsion and polyester resin.

- 1) Select and prepare soil sample selection.
 - a) Uniformly sized sand (uncompacted).
 - b) Clayey silt (uncompacted and compacted).
 - c) Potters flint (uncompacted and compacted).
- 2) Place at least 4 specimens of each soil sample in steel pans 6" x 6" x 3" high (total of 20 specimens).
- 3) Apply latex emulsion and polymer films on soil samples by conventional spraying techniques.
- 4) Each batch processed shall be assigned a batch number. Record the following for each batch:
 - a) Mix proportion ratio (gallons per square yard).
 - b) Tensile strength and elongation.
 - c) Heat aging.
 - d) Ozone resistance.
 - e) Ultraviolet (U.V.) resistance.
- 5) Apply a film of dust control agent on various soil plots as established in item 1 above by conventional spraying techniques. Soil plots to be 10ft x 15ft x 1ft deep. After a suitable drying period subject the soil plots to a traffic pattern equivalent to one month normal traffic for ground vehicle or aircraft. Conduct tests per environmental conditions of paragraph 6.2.3.
 - a) Traffic.
 - a. Pedestrian.
 - b. Ground vehicles including personnel cars, jeeps, 3/4 ton personnel carrier, 2 1/2 ton trucks and trailers.
 - c. Helicopter down wash (10 psf disc loading).
 - d. Aircraft propwash (100 mph air velocity).
 - b) Record the following:
 - a. Mix proportion ratio (gallons per square yard).
 - b. Surface cracks.
 - c. Coating lifting.
 - d. Deformation.
 - e. Bearing capacity.
 - f. Traction capacity.
 - g. Cone index.
 - h. Remolding index.
 - i. Rating cone index.
 - j. Vehicle cone index.
 - k. Stickiness.
 - l. Slipperiness (wet and dry).

b. Oils, chemicals, lime, calcium chloride, and bituminous penetration.

- 1) Select and prepare soil sample selections.
- 2) Apply dust control agent on various soil plots 10ft x 15ft x 1ft deep by conventional spraying techniques. After

a suitable drying period subject the soil plots to a traffic pattern based on lightly trafficked areas. Conduct tests per environmental conditions of paragraph 6.2.3.

- a) Mix proportion ratio (gallons per square yard).
- b) Bearing capacity.
- c) Traction capacity.
- d) Cone index.
- e) Remolding index.
- f) Rating cone index.
- g) Vehicle cone index.
- h) Stickiness.
- i) Slipperiness (wet and dry).

6.2.1.2 Prefabricated Membrane

Membranes consist mainly of coated fabrics.

a. Select and prepare soil sample selection in accordance with the draft technical manual(s).

b. Install membrane test panels in accordance with draft technical manual(s).

c. After installation subject the soil plot and membrane to a traffic pattern equivalent to one month normal traffic for ground vehicle or aircraft. Conduct tests per environmental conditions of paragraph 6.2.3.

- 1) Bearing capacity.
- 2) Traction capacity.
- 3) Stickiness.
- 4) Slipperiness (wet and dry).
- 5) Helicopter downwash (10 psf disc loading).
- 6) Aircraft propwash (100 mph) air velocity.

6.2.2 Kits

a. All kits as furnished with the test item shall be tested for usability and satisfactory results by using them in accordance with the draft technical manual(s) and appropriate instructions.

b. Record appropriate data as applicable including the following:

- 1) Time required to accomplish the operation.
- 2) Adequacy of furnished material and associated tools.
- 3) Adequacy of instructional material.
- 4) Adequacy of completed product.
- 5) Any faults or difficulties experienced.

6.2.3 Environmental Effects Evaluation

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The purpose of these tests is to determine the ability of the test item to resist physical damage and/or deterioration when subjected to accelerated climatic and environmental conditions. Testing should be conducted as necessary to ensure that the test item is capable of operating satisfactorily under conditions existing within the operating areas and/or environments as specified by the applicable QMR's and as defined by AR 70-38. In the preparation for conduct of appropriate testing, test personnel should consult the applicable portions of MIL-STD-810B and/or other appropriate documents as specified below.

6.2.3.1 Desert Environment Evaluation

Accomplish the applicable procedures of MTP 9-4-001.

- a. Safety.
- b. Exposure.
- c. Performance.

6.2.3.2 Tropic Environment Evaluation

Accomplish the applicable procedures of MTP 9-4-003.

- a. Safety.
- b. Exposure.
- c. Performance.

6.2.3.3 Climatic Tests

Subject the test item to appropriate climatic conditions as defined by AR 70-38 and as specified by the applicable QMR's. Use the following procedures and applicable tests as contained in MIL-STD-810B. Record the appropriate data.

6.2.3.3.1 Rain Test

Subject the test item to a rain test in accordance with the applicable procedures of MIL-STD-810B, method 506, (section 3, paragraph 3.2.1 and 3.2.4).

- a. Rain erosion.
- b. Deterioration.

6.2.3.3.2 Low Temperature Test

Evaluate the test item under conditions of low temperature not to exceed appropriate limits as established by the applicable QMR's and as defined by AR 70-38. Accomplish low temperature testing in accordance with MIL-STD-810B, method 502 (section 3, paragraph 3.2.1 and 3.2.4).

- a. Congealing of liquids.
- b. Loss of resiliency.

6.2.3.3.3 High Temperature Test

Evaluate the test item under conditions of high temperature not to exceed appropriate limits as established by the applicable QMR's and as defined by AR 70-38. Accomplish high temperature testing in accordance with MIL-STD-810B, method 501 (section 3, paragraph 3.2.1 and 3.2.4).

- a. Expansion of liquids.
- b. Discoloration.

6.2.4 Durability

The test item's durability shall be verified by performing the applicable procedures of MTP 9-2-503 and the following:

a. During accomplishment of testing as described by this document, the durability characteristics of the test item shall be observed. In the event of equipment failure during testing, the appropriate maintenance and repair procedures shall be accomplished and the testing shall be continued.

b. Upon completion of all testing as described in this document, the test item shall be inspected for signs of excessive or accelerated wear and potential equipment failure.

c. Record appropriate data as required by MTP 9-2-503 and any indication of the following:

- 1) Excessive wear.
- 2) Leakage.
- 3) Distortion, punctures, etc.

6.2.5 Surface Transportability

Evaluate the transportability characteristics of the test item.

NOTE: Personnel should be familiar with the applicable portions of the following documents.

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- (a) MIL-STD-101, Preservation, Packaging, and Packing Materials, Test Procedures.
- (b) MIL-STD-129, Marking for Shipment and Storage.
- (c) MIL-STD-209, Slings, Eyes and Attachments for Lifting and Tying Down Military Equipment if appropriate.
- (d) MIL-STD-1186, Cushioning, Anchoring, Bracing, Blocking, and Waterproofing, Appropriate Test Methods.

a. The draft technical manual shall be reviewed or consulted for proper procedures for tying down, and lifting, and transporting the item by various media. Any inadequacy of instructions should be reported by EPR.

b. Evaluate the transportability characteristics of the test item by accomplishing the applicable procedures of MTP 10-2-503. Record the appropriate data.

c. Evaluate the effectiveness of tie down/securing devices and lifting attachments using MIL-STD-209 as a basis for the evaluation, if appropriate.

6.2.6 Safety

Evaluate the safety characteristics and features of the test item in accordance with the applicable procedure in MTP 10-2-508.

- NOTE:
- 1. Provide a safety recommendation in accordance with USATECOM Regulation 385-6, and the test directive, as applicable.
 - 2. During the conduct of all tests, test personnel shall observe the proper safety precautions and, in particular, shall adhere closely to the draft technical manual for the handling and use of the test item.
 - 3. The procedures for all tests shall be examined and any condition which might constitute a safety hazard shall be recorded and also reported to the testing officer.

Perform the following:

a. Examine the safety characteristics of the test item including the procedures for its operation and its design to ensure that maximum safety has been provided consistent with military requirements. Hazards shall be classified as safe, marginal, critical, and catastrophic. Consider the following:

- 1) Examine operating procedures in the light that improperly executed or misinterpreted instructions could result in bodily harm.
- 2) Where unsafe conditions cannot be avoided, ensure that the test item is properly and conspicuously marked for the condition.
- 3) Are environment limitations explicitly denoted.

b. Prepare a listing of all warning notices, instructions, and markings. Record the location and adequacy of each item listed.

c. Test personnel shall record any comments or suggestions relative to improvement of safety features, safety measures, and/or precautions.

6.2.7 Human Factors Evaluation

Accomplish the applicable procedures of MTP 10-2-505.

6.2.8 Value Analysis

a. During the conduct of all tests, test personnel shall evaluate the test item from a value versus cost standpoint. Record all pertinent comments concerning features which can be eliminated or modified to accomplish cost reduction without impairment of performance, reliability, quality, maintainability, or safety. The applicable portions of USATECOM Regulation 700-1 shall be used for this evaluation.

b. Consideration shall be given to the topics listed below. Record appropriate comments for each topic.

1) Mission Capacity

The test item should be capable of accomplishing the specified task with only a reasonable margin of excess capability. Excess capacity and unused capability normally results in unnecessary bulk, excessive weight and unwarranted costs.

2) Standardization

The use of identical materials currently in the military system will reduce the overall logistics burden.

3) Materials and Methods of Construction

The use of expensive materials will result in unnecessary costs if used inappropriately.

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6.2.9 Quality Assurance

Throughout all tests, examine the test item for compliance with the quality requirements of the applicable QMR, SDR or TC and the provisions of MTP 10-2-511.

6.3 TEST DATA

NOTE: In compiling the Test Data Section, test personnel should expound upon those data procedures which are other than quantitative in nature by recording narrative descriptions which will provide full details of conditions and/or events occurring during the conduct of the test.

6.3.1 Preparation for Test

6.3.1.1 Initial Inspection

6.3.1.1.1 Arrival Inspection

Record the following:

- a. Manufacturer, model, military specification, and other appropriate data.
- b. Method of transport used to deliver the test item.
- c. Any damage to the test item or its shipping container.
- d. Any damage or deterioration resulting from handling, improper packaging, and/or inadequate preservation.
- e. Any noncompliance with the standards for shipping marking, preservation and packaging.
- f. The extent of depreservation required.
- g. Any indication of defects in the following areas: (Describe in detail).
 - 1) Workmanship.
 - 2) Constuction.
 - 3) Materials.
- h. Any condition considered to be a potential hazard to the safety of test personnel or facilities.
- i. Equipment, time, and personnel required to unpack the test item and comments concerning the method and materials used in packing.

6.3.1.1.2 Inventory

List any materials missing from the Basic Issue Item List (BIIL).

6.3.1.2 Physical Characteristics

Record appropriate data as required by the applicable portions of MTP 10-2-500.

6.3.1.3 Operator Training and Familiarization

Record the data required by MTP 10-2-501 and the following:

a. Methods used and completion of test personnel training and evaluation of technical manuals.

b. Evidence that test personnel are sufficiently knowledgeable in objectives and procedures.

c. The personal data required for selected personnel.

6.3.1.4 Pre-Operational Inspection, and Functional Check

6.3.1.4.1 Selection of Test Site

Record appropriate data concerning test site selected.

6.3.1.4.2 Inspection and Assembly

Record the following:

a. Any damage or defects observed. (Describe in detail).

b. Adequacy and completeness of accessories.

c. Adequacy of instructional material, instructional notices, and warning notices.

d. Overall suitability of the test item for continued testing.

6.3.1.4.3 Operational Check and Functional Verification

Record the following:

a. Adequacy of draft technical manual(s) and other instructional material.

b. Any faults, failures, malfunctions, or discrepancies noted.

c. Test item suitability for continued testing.

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6.3.2 Test Conduct

6.3.2.1 Performance

6.3.2.1.1 Surface Treatments

Record the following:

- a. Material description.
- b. Quantity of material.
- c. Temperature setting.
- d. Spray nozzle setting.
- e. Any leakage and/or damage discovered.
- f. Proper operation of system feeders and/or dispensers.
- g. Time required for each system cycle.
- h. Adequacy of furnished material and associated tools.
- i. Adequacy of instructional material.
- j. Adequacy of completed product.
- k. Any faults, failures, or malfunctions noted.

6.3.2.1.2 Oils, Chemicals, Lime, Calcium Chloride and Bituminous Penetration

Record the following:

- a. Material description.
- b. Quantity of material.
- c. Temperature setting.
- d. Spray nozzle setting.
- e. Any leakage and/or damage discovered.
- f. Proper operation of system feeders and/or dispensers.
- g. Time required for each system cycle.

- h. Adequacy of furnished material and associated tools.
- i. Adequacy of instructional material.
- j. Adequacy of completed product.
- k. Any faults, failures, or malfunctions noted.

6.3.2.1.3 Prefabricated Membrane

Record the following:

- a. Material description.
- b. Quantity of material.
- c. Anchorage method.
- d. Time required for installation.
- e. Adequacy of furnished material and associated tools.
- f. Adequacy of instructional material.
- g. Adequacy of completed product.
- h. Any faults, failures, or malfunctions noted.

6.3.2.2 Kits (As Required)

Record the following:

- a. Kit under consideration (describe).
- b. Time required to accomplish use of the kit.
- c. Adequacy of furnished material and associated tools.
- d. Adequacy of instructional material.
- e. Adequacy of the completed product.
- f. Any faults or difficulties experienced.

6.3.2.3 Environmental Effects

6.3.2.3.1 Desert Environment Evaluation

Record appropriate data as required by the applicable procedures of
MTP 9-4-001.

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6.3.2.3.2 Tropic Environment Evaluation

Record appropriate data as required by the applicable procedures of MTP 9-4-003.

6.3.2.3.3 Fungus Resistance

Record appropriate data as required by MTP 4-2-818.

6.3.2.3.4 Rain Test

Record the following:

- a. Test conditions and parameters.
- b. Any damage resulting from the test.

6.3.2.3.5 High Temperature Test

Record the following:

- a. Test conditions and parameters.
- b. Any damage resulting from test.

6.3.2.3.6 Low Temperature Test

Record the following:

- a. Test conditions and parameters.
- b. Any damage resulting from test.

6.3.2.4 Durability

Record appropriate data as required by MTP 9-2-503 and any indication of the following:

- a. Excessive wear.
- b. Leakage.
- c. Distortion or punctures.

6.3.2.5 Surface Transportability

Record appropriate data as required by MTP 10-2-503 and as follows:

- a. Item under test (indicate manufacturer, model, etc.).

- b. Number of packages in the shipment.
- c. Type of container and packaging methods used.
- d. Dimension of each package.
- e. Weight of the complete package.
- f. Time required to accomplish preparations of shipment.
- g. MHE used.
- h. Number of personnel required (indicate rank and MOS).
- i. Method of transport utilized.
- j. Any damage to the test item or the shipping container(s).
- k. Any evidence of shifting of contents, loosening or breaking of holddowns, ties, stays, blocking, or bracing.
- l. Adequacy of tie down/securing devices and lifting attachments, if appropriate.

6.3.2.6 Safety

Record appropriate data as required by MTP 10-2-508 and as follows:

- a. Prepare a list of all warning notices, instructions, and markings. Record the location and adequacy of each item listed.
- b. Any condition that might present a safety hazard including the cause of the hazard, and the steps taken to alleviate the condition.
- c. Any suggestions relative to improvement of safety features, safety measures and/or precautions.
- d. Provide a safety recommendation in accordance with USATECOM Regulation 385-6.

6.3.2.7 Human Factors Evaluation

Record the data required by MTP 10-2-505.

6.3.2.8 Value Analysis

a. Record appropriate comments for each of the topics listed below:

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- 1) Mission Capacity.
- 2) Standardization.
- 3) Materials and Methods of Construction.

b. When making recommendations for changes in test item features or components, record the following:

- 1) The feature or component under consideration.
- 2) Recommended change(s).
- 3) Reason(s) for recommended change(s).

6.3.2.9 Quality Assurance

Record:

- a. Data required by MTP 10-2-511.
- b. Comments as to any design shortcomings in the area of required quality.

6.4 DATA REDUCTION AND PRESENTATION

Data obtained during the conduct of the test will be summarized making use of photographs and charts as appropriate. All photographs and charts will be properly identified and labeled. Test data will be obtained for each item tested. The data shall be summarized and evaluated as required.

Data obtained for each performance characteristics will be compared with established technical performance characteristics as specified in QMR's, SDR's, or other developmental criteria. Test data obtained from different types of equipment undergoing the same test will be compared. Where performance is repeated after a specific test or repair, the data obtained will be compared with the previously obtained data, and where definite differences occur, the conditions that caused the differences and the degree of difference will be summarized along with appropriate comments of the test personnel.

In addition to charts and photographs, the presentation shall include narrative reports of all phases of the test.

The presentation shall conclude with a summarization of the suitability of the test item for service testing.

Security Classification		
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13. ABSTRACT This Army Engineering Test Procedure describes test methodology and testing techniques to determine the technical performance and safety characteristics of dust control material and associated tools and equipment, as described in Qualitative Materiel Requirements (QMR's), Small Development Requirements (SDR's), and Technical Characteristics (TC's), and to determine the item's suitability for service tests.		

14 KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
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