

Coating Materials, Fluorocarbon (FKM) Elastomeric

RATIONALE

Revision C was issued in 1999 and a review was needed. There was a desire to incorporate the slash sheets into the basic document.

1. SCOPE

1.1 Form

This specification covers fluorocarbon (FKM) elastomeric coating materials for fiber-reinforced-resin composite structures in the form of two-component brushable or sprayable liquids.

1.2 Application

These products have typically been used for protection of aircraft and missile radomes and other components from rain erosion, aerodynamic heating, precipitation static build-up, thermal flash exposure, and weathering, but usage is not limited to such applications.

1.3 Classification

Coating materials covered by this specification are classified as follows (see 8.5):

Type I Base coating
Type II Antistatic topcoating

Class 1 Black
Class 2 White (with thermal-flash resistance)
Class 3 Color-matched

1.4 Safety - Hazardous Materials

While the materials, methods, applications, and processes described or referenced in this specification may involve the use of hazardous materials, this specification does not address the hazards which may be involved in such use. It is the sole responsibility of the user to ensure familiarity with the safe and proper use of any hazardous materials and to take necessary precautionary measures to ensure the health and safety of all personnel involved.

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2. APPLICABLE DOCUMENTS

The issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been cancelled and no superseding document has been specified, the last published issue of that document shall apply.

2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

AMS 2825	Material Safety Data Sheets
AMS 3609	Plastic Sheet, Methyl Methacrylate, Heat-Resistant
AMS 3831	Cloth, Type "E" Glass, "B" Stage Epoxy-Resin-Impregnated, 7781 Style Fabric, Flame Resistant, Improved Strength
AMS 3844	Cloth, Type E-Glass, Style 7781 Fabric, Hot-Melt, Addition-Type, Polyimide Resin Impregnated
AMS 3849	Cloth, Quartz, Style 581 Fabric, Hot-Melt, Addition-Type, Polyimide Resin Impregnated

2.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org.

ASTM D 471	Rubber Property - Effects of Liquids
ASTM D 1193	Reagent Water
ASTM D 1296	Odor of Volatile Solvents and Diluents
ASTM D 1475	Density of Paint, Varnish, Lacquer, and Related Products
ASTM D 1644	Nonvolatile Content of Varnishes
ASTM D 1824	Apparent Viscosity of Plastisols and Organosols at Low Shear Rates by Brookfield Viscometer
ASTM D 3960	Volatile Organic Compound (VOC) Content of Paint and Related Coatings

2.3 U. S. Government Publications

Available from DODSSP, Subscription Services Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, or www.assistdocs.com.

FED-STD-595	Color
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3. TECHNICAL REQUIREMENTS

3.1 Material

Coating material shall be pigmented, chemically room-temperature-curing fluoroelastomeric compositions with appropriate curing agents, in kit form, formulated to meet the requirements of 3.2.

3.1.1 Toxicity and Air Quality Compliance

Coating material shall have no adverse effect on the health of personnel when used for its intended purposes and applied in approved facilities with the use of approved safety equipment. Coating material shall also meet the requirements of the cognizant Air Quality Authority for the locality in which the coating material is applied.

3.1.2 Accelerated Storage Stability

Coating material components, stored uncatalyzed for 4 days \pm 0.1 at 50 °C \pm 1 (122 °F \pm 2) in an unopened original container, shall be free from lumps, skins, and gels, and shall disperse readily to smooth, homogeneous mixtures.

3.1.3 Long-Term Storage Stability

Coating material components shall meet the requirements of this specification after being stored for one year at 20 to 38 °C (68 to 100 °F) in an unopened original container.

3.1.4 Color

Shall be per the applicable Class, and of sufficient intensity to hide completely the surface of the substrate when applied at the specified coating thickness. Class 3 coatings shall be color-matched to the purchaser-specified FED-STD-595 color standard or purchaser supplied color standard, as applicable.

3.1.5 Primer

A primer (for promoting adhesion) shall be used prior to application of the Type I coatings when recommended by the manufacturer. Coating material and primer shall meet requirements of this specification when used according to manufacturer's instructions.

3.2 Properties

The product shall conform to the following requirements:

3.2.1 Mixed, Uncured Coating Materials

Shall meet the following requirements after mixing as in 4.5.1:

3.2.1.1 Nonvolatile Content

Shall be greater than or equal to 10% by weight, determined in accordance with ASTM D 1644, Method A.

3.2.1.2 Weight Per Unit Volume

Shall be greater than or equal to 7.6 pounds per gallon (0.91 kg/L), determined in accordance with ASTM D 1475.

3.2.1.3 Viscosity

Shall be 20 to 1000 centipoise (0.02 to 1.00 Pa·s) at 23 °C ± 0.5 (73 °F ± 1) but shall not vary from the preproduction value by more than ± 150 centipoise (±0.15 Pa·s), determined in accordance with ASTM D 1824 using a Model LVF Viscometer and No. 2 spindle. Preproduction value shall be recorded for future test verification.

3.2.1.4 Odor

The odor of the wet coatings shall not be obnoxious when tested in accordance with ASTM D 1296.

3.2.1.5 Pot Life

When mixed in accordance with manufacturer's instructions, coating materials stored at 20 to 30 °C (68 to 86 °F) shall have a minimum pot life of 4 hours. At the end of 4 hours, the coating materials shall show no evidence of lumping, seeding, or separation, shall meet the viscosity requirements of this specification, and shall dilute readily to a viscosity suitable for application by spraying.

3.2.1.6 Volatile Organic Compound (VOC) Content

Shall be no greater than 850 g/l when mixed and thinned to spraying consistency. Testing shall be in accordance with ASTM D 3960.

3.2.2 Application Properties

Coating materials, mixed as in 4.5.1 and applied in accordance with manufacturer's instructions, shall meet the following requirements:

3.2.2.1 Recoat Time

Rate of cure or drying of the coating shall be such that recoat time, after which a subsequent coat may be applied without solvent softening or damage to undercoats, shall be 30 minutes or less.

3.2.2.2 Tack-Free Time

Shall be 4 hours or less, as shown by no evidence of removal of the film, determined in accordance with 4.5.3.

3.2.2.3 Final Cure Time

Shall be no greater than 240 hours at $24\text{ }^{\circ}\text{C} \pm 2$ ($75\text{ }^{\circ}\text{F} \pm 4$).

3.2.3 Cured Coating Properties

Coating materials, mixed as in 4.5.1, applied in accordance with manufacturer's instructions, and cured for 7 to 10 days at $24\text{ }^{\circ}\text{C} \pm 2$ ($75\text{ }^{\circ}\text{F} \pm 4$), shall meet the following requirements. Application of antistatic topcoating material over not-fully-cured base material shall not retard or inhibit curing of either the base coating or the antistatic topcoating.

3.2.3.1 Peel Strength

Shall be greater than or equal to 5 pounds force per inch width (876 N/m), determined in accordance with 4.5.4.

3.2.3.2 Fluid Resistance

Coatings shall show no leaching of pigment, loss of adhesion, blistering, or discoloration and shall meet the peel strength requirements of 3.2.3.1 after being immersed as in 3.2.3.2.1 and 3.2.3.2.2, determined in accordance with 4.5.5. Peel testing shall be performed in accordance with 4.5.4 within 1 hour after removal from fluid.

3.2.3.2.1 Immerse in ASTM D 1193, Type IV, water at $38\text{ }^{\circ}\text{C} \pm 1$ ($100\text{ }^{\circ}\text{F} \pm 2$) for 4 days ± 0.1 .

3.2.3.2.2 Immerse in ASTM Reference Fuel B (ASTM D 471) at $24\text{ }^{\circ}\text{C} \pm 2$ ($75\text{ }^{\circ}\text{F} \pm 4$) for 24 hours ± 1 .

3.2.3.3 Heat Resistance

Coatings shall show no evidence of melting, erosion, cracking, crazing, or other film deterioration, determined in accordance with 4.5.9.

3.2.3.4 Weather and Rain-Erosion Resistance

Coatings produced on specimens and exposed six months in accordance with 4.5.11 shall exhibit no peeling or blistering, or loss of rain erosion resistance when tested in accordance with 4.5.6. The average time to erode through the full thickness of this material shall be greater than 80 minutes for each specified condition.

3.2.3.5 Electrical Transmission

Shall be determined in accordance with 4.5.7. The electrical transmission shall be greater than 90% of the uncoated panel for each specified condition.

3.2.3.6 Surface Resistivity

Shall be determined in accordance with 4.5.8 for Type II coatings only. The surface resistivity of panels coated with this material shall be not less than 0.5 nor more than 15 megohms per square.

3.2.3.7 Thermal Flash Resistance

Shall be determined in accordance with 4.5.10 for Class 2 coatings only. The coating shall not burn or char. Discoloration of the coating is acceptable.

3.3 Quality

3.3.1 The coating components shall be uniform in quality and condition, homogeneous, and free from foreign material that would alter their use or function.

3.3.2 The applied coatings shall be smooth, continuous, uniform in thickness, and free from pinholes, cracks, bubbles, and other film imperfections.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for Inspection

The manufacturer of the coating material shall supply all samples and shall be responsible for the performance of all required tests. Purchaser reserves the right to sample and to perform any confirmatory testing deemed necessary to ensure that the coating material conforms to specified requirements.

4.2 Classification of Tests

4.2.1 Preproduction Tests

Tests for all technical requirements are preproduction tests and shall be performed prior to or on the initial shipment of a product to a purchaser, when a change in ingredients and/or processing requires reapproval as in 4.4.2, and when purchaser deems confirmatory testing to be required. See Table 1 for the list of requirements.

4.2.2 Acceptance Tests

Acceptance tests shall be performed on each lot of material. See Table 1 for the list of requirements.

TABLE 1

Requirement	Paragraph Reference	Preproduction	Acceptance
Accelerated Storage Stability	3.1.2	X	X
Nonvolatile Content	3.2.1.1	X	X
Weight per Unit Volume	3.2.1.2	X	X
Viscosity	3.2.1.3	X	X
Odor	3.2.1.4	X	X
Pot Life	3.2.1.5	X	X
Recoat Time	3.2.2.1	X	
Tack Free Time	3.2.2.2	X	X
Peel Strength	3.2.3.1	X	X
Fluid Resistance	3.2.3.2	X	
Heat Resistance	3.2.3.3	X	
Rain Erosion Resistance	3.2.3.4	X	
Electrical Transmission	3.2.3.5	X	
Surface Resistivity (Type II)	3.2.3.6	X	X
Thermal Flash Resistance (Class 2)	3.2.3.7	X	

4.3 Sampling and Testing

Shall be as follows:

4.3.1 For Acceptance Tests

A sufficient quantity of each coating material component shall be selected at random from each lot to perform all required tests. The number of determinations for each requirement shall be as specified in the applicable test procedure or, if not specified therein, shall be three or more.

4.3.1.1 A lot shall be all coating material produced in a single production run from the same batches of raw materials under the same fixed conditions, or all material subjected to the same unit chemical and physical process intended to make the final product homogeneous, and presented for vendor's inspection at one time. A lot shall not exceed 500 gallons (1893 L) and may be packaged in smaller quantities and delivered under the basic lot approval provided lot identification is maintained.

4.3.1.2 When a statistical sampling plan has been agreed upon by purchaser and supplier, sampling shall be in accordance with such plan in lieu of sampling as in 4.3.1 and the report of 4.6 shall state that such plan was used.

4.3.2 For Preproduction Tests

As agreed upon by purchaser and supplier.

4.4 Approval

4.4.1 Sample coating material shall be approved by purchaser before coating material for production use is supplied, unless such approval be waived by purchaser. Results of tests on production coating material shall be essentially equivalent to those on the approved sample.

4.4.2 Manufacturer shall use ingredients, manufacturing procedures, processes, and methods of inspection on production coating material which are the same as those used on the approved sample coating material. If necessary to make any change in ingredients, in type of equipment for processing, or in manufacturing procedures, manufacturer shall submit for reapproval a statement of the proposed changes in ingredients and/or processing and, when requested, sample coating material. Production coating material made by the revised procedures shall not be shipped prior to receipt of reapproval.

4.5 Test Methods

Shall be as follows:

4.5.1 Coating Material Preparation

Each container of coating material components to be used for tests of the uncured coating material, or for preparation of coated specimens for testing of the cured coating, shall be conditioned for not less than 24 hours at $24\text{ }^{\circ}\text{C} \pm 2$ ($75\text{ }^{\circ}\text{F} \pm 4$). Components of product supplied in kit form shall be thoroughly mixed in the proportions recommended by the manufacturer before sampling.

4.5.2 Specimen Preparation

4.5.2.1 Specimen Material

Shall be laminates of epoxy-resin-impregnated glass cloth, any fabric type, conforming to any high-quality laminate material specification, such as AMS 3831, except that specimens for heat resistance (4.5.9) and thermal flash resistance (4.5.10) shall be laminates of AMS 3844 polyimide-resin-impregnated glass cloth or AMS 3849 polyimide-resin-impregnated quartz cloth of the size specified in the applicable test procedure. Specimens shall be of low void content and representative of high quality laminates. Specimens, except those for peel strength, shall be sanded with 180 grit (80 μm) abrasive paper to remove the gloss from the surfaces to be coated, detergent washed, and dried before being coated; specimens for peel strength tests shall be sanded on only one-half of the surface to be coated. When use of a primer is recommended by the coating material manufacturer, specimens shall be primed after washing and drying; peel strength specimens shall be primed on the sanded half.

4.5.2.2 Coating of Specimens

Specimens shall be coated with base coating to a cured film thickness of 12 to 14 mils (0.30 to 0.36 mm) or, when top coating with antistatic coating is specified, to a base coating thickness of not less than 10 mils (0.25 mm) and topcoated to a total cured film thickness of 12 to 14 mils (0.30 to 0.36 mm). Coatings shall be cured for not less than 10 days at $24\text{ }^{\circ}\text{C} \pm 2$ ($75\text{ }^{\circ}\text{F} \pm 4$).

4.5.3 Tack-Free Time

Shall be determined on flat panels $1/8 \times 3 \times 8$ inches (3.2 x 76 x 203 mm) prepared as in 4.5.2. A strip of polyethylene film 0.004 inch \pm 0.002 (0.10 mm \pm 0.05) thick by 1 x 6 inches (25 x 152 mm) shall be pressed on the surface of the coating with a 1 ounce (28 gram) weight (approximately 2 square inches (13 cm^2)) in area. The film shall be withdrawn at right angles to the surface of the coating. Tack-free time may be determined on the panels on which peel strength is to be determined, the film being applied to the sanded, or sanded and primed, end of the panel.

4.5.4 Peel Strength

Shall be determined on flat panels $1/8 \times 3 \times 8$ inches (3.2 x 76 x 203 mm) prepared as in 4.5.2. Two parallel cuts, 1 inch (25 mm) apart, shall be made through the coating to the substrate the full length of the panel. The 1 inch (25 mm) wide coating strip shall be peeled from the unsanded or unprimed end, dusted on both faces with talc, and heated in a circulating-air oven for at least 3 hours at $150\text{ }^{\circ}\text{C} \pm 2$ ($302\text{ }^{\circ}\text{F} \pm 4$). After cooling to room temperature, the specimens shall be clamped in a tensile testing machine arranged to provide a 180 degree pull at a jaw separation rate of 2 inches (51 mm) per minute. Peel strength shall be reported as the average of the peak loads for all specimens. If the coating fails cohesively and does not separate from the panel surface, peel strength shall be reported as greater than the observed peak load.

4.5.5 Fluid Resistance

Shall be determined on flat panels $1/8 \times 3 \times 8$ inches (3.2 x 76 x 203 mm) prepared as in 4.5.2, three panels being immersed in each test fluid. After exposure, the panels shall be removed from the test fluid, wiped clean with lint-free paper towels or lint-free cloth, examined visually for deterioration of the coating, and the peel strength determined as in 4.5.4.

4.5.6 Rain-Erosion Resistance

Shall be determined as in 4.5.6.4 on airfoil-shaped specimens conforming to Figure 1 prepared as in 4.5.2; six specimens shall be tested after exposure under each of the following conditions:

4.5.6.1 As cured.

4.5.6.2 Aged in a circulating-air oven for 24 hours \pm 0.25 at $205\text{ }^{\circ}\text{C} \pm 2$ ($401\text{ }^{\circ}\text{F} \pm 4$).

4.5.6.3 After weathering as in 4.5.11.

4.5.6.4 Procedure

One specimen shall be mounted near the tip of each 0 degree pitch blade of a suitable diameter 2-blade propeller, driven horizontally by a variable speed motor designed to permit testing the specimens at a speed of 500 miles per hour ± 5 (805 km/h ± 8) at the test area of each panel. A suitable water ring, mounted above the rotating blade, shall be used to simulate a natural rainfall of 1.00 inch ± 0.01 (25.4 mm ± 0.3) per hour and an approximately 2-mm droplet size impinging on the center section of the panel. The propeller shall be rotated and the time for each specimen to be eroded through the coating shall be recorded. Report the average of the six erode-through times for each test condition.

4.5.7 Electrical Transmission

Shall be determined, using flat panels 0.050 to 0.055 inch (1.27 to 1.40 mm) thick by 24 inches (610 mm) square prepared as in 4.5.2, on equipment meeting the transmission efficiency test as follows; uncoated panels shall be used as controls:

4.5.7.1 Panels shall be subjected to one-way microwave power measurements at incidence angles of -30 to +30 degrees, using parallel and perpendicular polarization of the incident energy, at a frequency of 9.375 Gigahertz, after exposure to each of the following conditions:

4.5.7.1.1 One panel as cured and one uncoated panel.

4.5.7.1.2 The panels of 4.5.7.1.1 after exposure for 7 days at 38 °C ± 2 (100 °F ± 4) and relative humidity of 95% ± 5 .

4.5.7.1.3 One panel as cured and one control panel after weathering as in 4.5.11.

4.5.7.1.4 One panel after heating for 24 hours ± 0.5 at 250 °C ± 2 (401 °F ± 4).

4.5.7.2 The panel shall be clamped perpendicular to, and at the approximate midpoint between, the horns with the center of the panel coincident with the centerline of the horns. The clamp shall be of wood, shall extend the full length of the bottom edge of the panel, and shall cover 1 inch (25 mm) or less of the edge. If the clamp causes interference, it shall be covered with absorbing material.

4.5.7.3 The panel, in the clamp, shall be mounted on a turntable with provisions for moving the panel through 0 to 70 degrees and for lateral movement of 1 inch (25 mm) or more. Readings shall be taken in maximum increments of 10 degrees and each 0.1 inch (2.5 mm) setting for angles up to 30 degrees. Test data shall be converted to, and reported as, percent transmission by the equation:

$$\% \text{Transmission} = \frac{T_s}{T_b} \times 100 \quad (\text{Eq. 1})$$

where,

T_s = Power transmission of coated panel at 20 degrees parallel polarization.

T_b = Power transmission of uncoated panel at 20 degrees parallel polarization.

4.5.8 Surface Resistivity

Shall be determined on the applicable coated panels of 4.5.7, after each conditioning of 4.5.7.1, as follows:

4.5.8.1 Equipment shall be a 500-VDC megohmmeter having a range of 1 to 1000 mL, suitable brass or steel wool faced, spring loaded electrodes, and an AMS 3609 acrylic plastic sheet 1/4 x 24 x 24 inches (6.4 x 610 x 610 mm) as shown in Figure 2.

4.5.8.2 Procedure

The template shall be placed over the panel to be tested. The two electrodes, with their leads connected to the megohmmeter, shall be placed to coincide, in turn, with each pair of holes in the template. A total of 17 readings, taken with uniform pressure of 3 to 5 pounds force (13 to 22 N) on the electrodes, shall be taken on each panel and the average of the readings reported.

4.5.9 Heat Resistance

Shall be determined on flat panels 1/8 x 3 x 8 inches (3.2 x 76 x 203 mm) prepared as in 4.5.2. Panels shall be heated in a circulating-air oven for 24 hours \pm 0.25 at 260 °C \pm 5 (500 °F \pm 9), cooled to room temperature, and examined.

4.5.10 Thermal Flash Resistance

Shall be determined on flat panels 1/8 x 4 x 4-1/2 inches (3.2 x 102 x 114 mm) prepared as in 4.5.2. The coating shall be exposed to a quartz lamp radiation source with spectral quality representative of 2200°K (3468°F) black body radiation with one thermal flash pulse of 80 fluence at 55 cal/cm² · second, and with multiple thermal flash pulses (not less than 3) of 120 fluence at 32 cal/cm² · second. Operational characteristics of the apparatus shall include a pre-set irradiance level and precise regulation of overheating and of contamination by pyrolysis gases.

4.5.11 Weather Resistance

Shall be determined on the airfoil-shaped specimens of 4.5.6 and on flat panels as in 4.5.7. The specimens shall be exposed for six months, beginning in March and ending in September, in southern Florida with the specimens mounted facing due south at an angle of 45 degrees and so positioned as to provide unobstructed exposure to sunlight throughout the day. Airfoil-shaped specimens shall have the leading edge of the specimens positioned as specified herein.

4.6 Reports

The supplier of the product shall furnish with each shipment a report showing the results of tests to determine conformance to the acceptance test requirements and stating that the product conforms to the other technical requirements. This report shall include the purchase order number, lot number, AMS 3138D, vendor's product designation, date of manufacture, and quantity of base coating and component materials.

4.6.1 A material safety data sheet conforming to AMS 2825, or equivalent, shall be supplied to each purchaser prior to, or concurrent with, the report of preproduction test results or, if preproduction testing be waived by purchaser, concurrent with the first shipment of coating material for production use. Each request for modification of product formulation shall be accompanied by a revised data sheet for the proposed formulation.

4.7 Resampling and Retesting

If any specimen used in the above tests fails to meet the specified requirements, disposition of the product may be based on the results of testing three additional specimens from the same lot for each original nonconforming specimen. Failure of any retest specimen to meet the specified requirements shall be cause for rejection of the product represented and no additional testing shall be permitted. Results of all tests shall be reported.

5. PREPARATION FOR DELIVERY

5.1 Packaging and Identification

5.1.1 The base coating material and the antistatic coating material shall be packaged in suitable airtight 1 quart (1 L) or 1 gallon (3.8 L) containers, as ordered. Each container of base coating material and each container of antistatic coating material shall be packaged as a kit with the appropriate amount of catalyst for each container of coating material packaged in a suitable airtight container and attached to the coating material container. When specified, if thinner is required to prepare the coating materials for spraying, sufficient thinner shall be included in a suitable airtight container with each kit-type package. Mixing and application instructions shall be included in each package along with appropriate warnings, precautionary notices, and antidote or emergency medical procedures.

5.1.2 When the manufacturer requires a primer to be applied prior to coating application, the manufacturer shall recommend a suitable primer and provide recommended sources for procurement. Instructions for use of the primer shall be included on the fluoroelastomer application instructions provided with the coating material.

5.1.3 Identification

Each individual container within a kit shall be legibly identified with a durable label containing not less than the following information, using characters which will not be obliterated by normal handling:

*COATING, FLUOROCARBON ELASTOMERIC

AMS 3138D

MANUFACTURER'S IDENTIFICATION _____

DATE OF MANUFACTURE _____

DATE OF EXPIRATION _____

LOT NUMBER _____

PERISHABLE - STORE BELOW 38 °C (100 °F)

APPROPRIATE WARNINGS OR PRECAUTIONARY NOTICES

VOLATILE ORGANIC CONTENT (VOC), (kg/L) _____

*Add appropriate word(s) or code for individual components, such as BASE, BASE CATALYST, ANTISTATIC, ANTISTATIC CATALYST, THINNER.

5.1.4 The individual kit-type containers shall be packed in an exterior shipping container to protect the product during shipment and storage. The container shall be labeled with the same information as in 5.1.3. The quantity of kits in the container shall also be indicated on the label.

5.1.5 Each exterior shipping container shall be legibly marked with not less than the information specified in 5.1.3 and, in addition, the purchase order number, in such a manner that the markings will not smear or be obliterated during normal handling or use.

5.1.6 Containers of coating materials shall be prepared for shipment in accordance with commercial practice and in compliance with applicable rules and regulations pertaining to the handling, packaging, and transportation of the coating material to ensure carrier acceptance and safe delivery.

6. ACKNOWLEDGMENT

A supplier shall mention this specification number and its revision letter, if any, in all quotations and when acknowledging purchase orders.

7. REJECTIONS

Coating material not conforming to this specification, or to modifications authorized by purchaser, will be subject to rejection.

8. NOTES

8.1 A change bar (|) located in the left margin is for the convenience of the user in locating areas where technical revisions, not editorial changes, have been made to the previous issue of a specification. An (R) symbol to the left of the document title indicates a complete revision of the specification, including technical revision. Change bars and (R) are not used in original publications, nor in specifications that contain editorial changes only.

8.2 Terms used in AMS are clarified in ARP1917.

8.3 Dimensions and properties in inch/pound units and the Celsius temperatures are primary; dimensions and properties in SI units and the Fahrenheit temperatures are shown as the approximate equivalents of the primary units and are presented only for information.

8.4 Purchase documents should specify not less than the following:

AMS 3138D

Coating system components desired (See 3.1)

Size of coating material containers desired

Quantity of coating material desired

Special packaging, if required.

8.5 The D revision incorporates the detail specifications into the base specification. Reclassification of the detail specifications is as follows:

AMS 3138/1B is equivalent to AMS 3138D Type I Class 1

AMS 3138/2B is equivalent to AMS 3138D Type I Class 2

AMS 3138/3B is equivalent to AMS 3138D Type I Class 3

AMS 3138/4B is equivalent to AMS 3138D Type II Class 1

AMS 3138/5B is equivalent to AMS 3138D Type II Class 2

AMS 3138/6B is equivalent to AMS 3138D Type II Class 3

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