NOT MEASUREMENT SENSITIVE

MIL-C-22750E
31 July 1989
SUPERSEDING
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3 November 1980

MILITARY SPECIFICATION

COATING, EPOXY, VOC - COMPLIANT

This specification is approved for use by all Departments and Agencies of the Department of Defense.

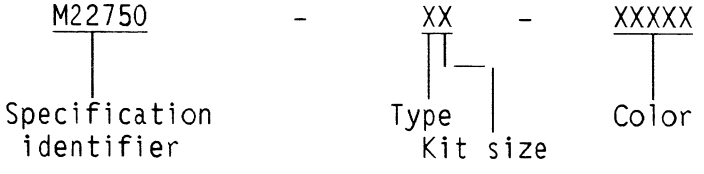
1. SCOPE

1.1 Scope. This specification covers the requirements for a two-component, epoxy coating with a maximum volatile organic compounds (VOC) content of 340 grams/liter as applied. The coating shall be furnished as a kit.

1.2 Classification. The coating shall be furnished in the following types as specified:

Type I	High-solids
Type II	Exempt-solvent (1,1,1-trichloroethane)

1.2.1 Part numbers. Part numbers for cataloging purposes under this specification are coded as follows:



1.2.2 Colors. The coating shall be furnished in any color and gloss specified by the procuring activity. The part number designation is the FED-STD-595 color number. The following colors are required most frequently:

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Naval Air Engineering Center, Systems Engineering and Standardization Department (Code 53), Lakehurst, NJ 08733-5100, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A FSC 8010

	FED-STD-595 Color	Name
Gloss colors:	11136	Red
	12197	Red-orange
	13538	Orange-yellow
	14187	Green
	15044	Dark blue
	15180	Blue
	16440	Light gray
	17038	Black
	17925	Untinted white
	-----	Clear
Semi-gloss colors:	24410	Green
	24533	Seafoam green
	25200	Blue
	26231	Dark gray
	26307	Gray
Camouflage colors:	34095	Field green
	34097	Green
	35237	Blue-gray
	36231	Dark Gray
	36320	Compass ghost gray
	36375	Compass ghost gray
	36440	Light gray
	36495	Aircraft gray
	37038	Black

1.2.3 Kit size. The coating covered by this specification should be purchased by volume as a kit. Each kit shall consist of Component A (base) and Component B (activator) packaged in seperate containers to produce admixed coatings (see 3.4) of the kit size stated below.

Kit Size	Part Number Designation
1 pint (0.473L)	5
1 quart (0.945L)	6
2 quart (1.89L)	1
2 gallon (7.57L)	2
10 gallon (37.85L)	3

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications and standards. The following specifications and standards form a part of this specification to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation (see 6.2).

SPECIFICATIONS

FEDERAL

QQ-A-250/4	Aluminum Alloy 2024, Plate and Sheet
PPP-P-1892	Paint: Varnish, Lacquer, and Related Materials, Packaging, Packing and Marking of

MILITARY

MIL-C-5541	Chemical Conversion Coatings on Aluminum and Aluminum Alloys
MIL-A-8625	Anodic Coatings, for Aluminum and Aluminum Alloys
MIL-P-23377	Primer Coatings, Epoxy Polyamide, Chemical and Solvent Resistant
MIL-L-23699	Lubricating Oil, Aircraft Turbine Engine, Synthetic Base
MIL-R-81294	Remover, Paint, Epoxy, Polysulfide, and Polyurethane Systems
MIL-C-81706	Chemical Conversion Materials for Coating Aluminum and Aluminum Alloys
MIL-T-81772	Thinner, Aircraft Coating
MIL-H-83282	Hydraulic Fluid, Fire Resistant, Synthetic Hydrocarbon Base, Aircraft
MIL-P-85582	Primer Coatings, Epoxy, VOC Compliant, Chemical and Solvent Resistant

STANDARDS

FEDERAL

FED-STD-141	Paint, Varnish, Lacquer and Related Materials, Methods of Inspection, Sampling and Testing
FED-STD-313	Material Safety Data Sheets; Preparation and Submission of
FED-STD-595	Colors

(Unless otherwise indicated, copies of federal and military specifications and standards are available from the Naval Publications and Forms Center, (ATTN:NPODS), 5801 Tabor Avenue, Philadelphia, PA 19120-5099.)

2.1.2 Other Government documents. The following other Government documents and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

Code of Federal Regulations (CFR)

29 CFR 1910.1200	Material Safety Data Sheet; Preparation and Submission of
49 CFR 171-178	Department of Transportation (DOT) Regulations for the Transportation of Explosives and Other Dangerous Articles by Land and Water

(Application for copies of the Code of Federal Regulations (CFR) should be addressed to the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.)

2.2 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of the documents which are DoD adopted are those listed in the issue of the DODISS cited in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issue of the documents cited in the solicitation (see 6.2).

AMERICAN NATIONAL STANDARD INSTITUTE

ANSI Z 129.1	American National Standard for the Precautionary Labeling of Hazardous Industrial Chemicals

(Application for copies should be addressed to the American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018.)

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 185	Coarse Particles in Pigments, Pastes and Paints
ASTM D 523	Specular Gloss
ASTM D 1200	Viscosity of Paints, Varnishes and Lacquers by Ford Viscosity Cup
ASTM D 1210	Fineness of Dispersion of Pigment-Vehicle Systems
ASTM D 1640	Drying, Curing or Film Formation of Organic Coatings at Room Temperature
ASTM D 1729	Visual Evaluation of Color Differences of Opaque Materials
ASTM D 1737	Elongation of Attached Organic Coatings With Cylindrical Mandrel Apparatus

ASTM D 2197	Adhesion of Organic Coatings
ASTM D 2244	Color Differences of Opaque Materials
ASTM D 2805	Hiding Power of Paints
ASTM D 3335	Low Concentrations of Lead, Cadmium, and Cobalt in Paint by Atomic Absorption Spectroscopy
ASTM D 3960	Volatile Organic Content (VOC) of Paints and Related Coatings
ASTM G 26	Light-and-Water-Exposure Apparatus (Xenon-Arc Type) for Exposure of Nonmetallic Materials, Recommended Practice for Operating

(Application for copies should be addressed to the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

2.3 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Qualification. The coatings furnished under this specification shall be products which are authorized by the qualifying activity for listing on the applicable qualified products list at the time set for opening of bids (see 4.3 and 6.3). Any change in the formulation of a qualified product will necessitate its requalification. The material supplied under contract shall be identical, within manufacturing tolerances, to the product receiving qualification.

3.2 Materials. The specified materials shall be of sufficient quality to produce coatings conforming to specification requirements.

3.3 Toxicity. The manufacturer shall certify that the materials shall have no adverse effect on the health of personnel when used for its intended purpose and under the precautions of 5.2.1. A Material Safety Data Sheet shall be prepared and submitted in accordance with FED-STD-313 and shall meet the requirements of 29 CFR 1910.1200. One copy shall accompany the samples being submitted to the qualifying activity for testing (see 4.3.2). Questions pertinent to this effect shall be referred by the contracting activity to the appropriate departmental medical service who will act as an advisor to the contracting agency (see 4.1.1 and 6.5). The formulation of this coating shall preclude the use of lead.

3.4 Composition. The coating shall consist of two components. Component A shall contain the epoxy resin and solvents. Component B shall contain the polyamide and/or amine resin and solvents and shall act as the curing agent for Component A. These shall be packaged separately and furnished in kit form. Pigments may be included with either component.

3.4.1 Pigments. The pigments shall have proven outdoor durability. They shall be sufficiently insoluble to prevent leaching during immersion. Only lead-free pigments shall be used. Trace amounts of lead, below 0.06% shall be permitted.

3.4.2 Volatile content. The maximum volatile organic compounds (VOC) content shall be 340 grams/liter as applied (see 4.6). The resistivity of the solvents shall be suitable for electrostatic spray application. The Type II coating shall contain an inhibited grade of 1,1,1-trichloroethane such as Dow Chemical's CHLOROTHENE SM or equivalent.

3.4.3 Thinner. The admixed Type I coating shall be compatible with any thinner meeting MIL-T-81772, Type II. Caution must be taken when reducing the admixed coating not to exceed the maximum VOC content of 340 grams/liter in areas where air pollution regulations are enforced. The admixed Type II coating shall be compatible with 1,1,1-trichloroethane.

3.5 Component properties.

3.5.1 Condition in container. Component A, which has been allowed to stand without agitation for at least 14 days in a closed container, shall be capable of being easily mixed by hand with a paddle to a smooth, homogeneous, pourable condition. The material shall be free from grit, seeds, lumps, abnormal thickening or livering and shall not show pigment floatation or excessive settling which cannot be easily reincorporated to a smooth, homogeneous state. Component B shall be homogeneous, free from gelation or detectable particulate matter, either suspended in the solution or settled on the inner surface of the container. The container shall not show deformation as evidence of excessive internal pressure.

3.5.2 Storage stability. The previously unopened packaged product shall meet all the requirements specified herein for a period of one year. The daily temperature of the ambient air at the storage locations shall fall within the range of 1.7°-46°C (35°-115°F).

3.5.3 Accelerated storage stability. After storage at 125°F for 14 days in sealed containers, Components A and B shall exhibit no sign of skinning, increased pressure or spoilage. There shall be no grains, lumps or streaks in the applied film (see 4.6).

3.6 Physical properties - liquid.

3.6.1 Fineness of grind. The fineness of grind on the Hegman scale shall be a minimum of 7 for gloss colors, 6 for semi-gloss colors and 5 for camouflage colors when tested 1 hour after mixing (see 4.6).

3.6.2 Coarse particles. Coarse particles retained on a No. 325 sieve shall be no more than 0.5 percent by weight of the admixed material (see 4.6).

3.6.3 Odor. The odor of the admixed coating, wet or dry, shall not be obnoxious. An air-dried film shall retain no residual odor 48 hours after application.

3.6.4 Viscosity. The viscosity of the admixed coating, after thinning to a maximum VOC content of 340 grams/liter, shall not exceed 60 seconds through a No. 4 Ford cup (see 4.6).

3.6.5 Pot life. The viscosity of the admixed and thinned coating from 3.6.4 shall not exceed 80 seconds through a No. 4 Ford cup after 4 hours in a closed container. It shall not gel within 8 hours after mixing (see 4.6).

3.7 Physical properties - film.

3.7.1 Drying time. The film, after application to a panel, shall be set-to-touch within four hours and dry hard within eight hours (see 4.6).

3.7.2 Surface appearance. The paint film shall dry to a uniform smooth surface free from runs, sags, bubbling, streaking, hazing, seeding, dusting, floating, mottling, orange-peel or other film defects.

3.7.3 Color. The color of the paint film after drying 24 hours shall be a good visual match with the specified color chip in FED-STD-595 (see 4.6).

3.7.4 Infrared reflectance. The infrared reflectance of FED-STD-595 Color 34095 shall conform to the following limits when tested relative to barium sulfate (see 4.6.1):

Wavelength (nanometers)	Maximum Reflectance (percent)
450-500	8
500-600	10
600-2700	8

3.7.5 Gloss. The specular gloss of the coating at a 60° angle of incidence shall be as follows (see 4.6):

	Minimum	Maximum
Gloss colors	90	--
Semi-gloss colors	15	30
Camouflage colors	--	5

The 85° specular gloss of camouflage colors shall not exceed 9.

3.7.6 Hiding power. The contrast ratio of the coating on a black and white hiding-power chart shall be a minimum of 0.9 (see 4.6).

3.7.7 Adhesion. After immersion in water, the coating shall not peel away from the primer during the tape test. In addition, the coating shall resist removal from the primer by a 3 kg weight when subjected to the scrape test (see 4.6).

3.7.8 Flexibility. The coating shall exhibit no cracking, peeling, or loss of adhesion when bent, coated side away, over a 1/4 inch mandrel (see 4.6.2).

3.8 Resistance properties.

3.8.1 Fluid resistance. The coating shall withstand immersion for 24 hours in the following fluids and temperatures: MIL-L-23699 lubricating oil at 121 ± 3°C (250 ± 5°F) and MIL-H-83282 hydraulic fluid at 66 ± 3°C (150 ± 5°F). Four hours after removal, the film shall not exhibit any blistering, softening, dark staining, or other film defects (see 4.6.3).

3.8.2 Weather resistance. After 500 hours of exposure to a 6000 watt xenon-arc weatherometer, the color of the coating shall remain unchanged with a Delta E value of 2.0 or less (see 4.6.4).

3.8.3 Heat resistance. After 1 hour at 250°F, the color of the coating shall remain unchanged with a Delta E value of 2.0 or less (see 4.6).

3.8.4 Solvent resistance (cure). The coating shall withstand repeated rubbing by a cloth rag soaked in methyl ethyl ketone solvent (see 4.6.5).

3.8.5 Tape resistance. There shall be no evidence of permanent marring caused by masking tape applied to the coating after eight hours air-dry (see 4.6.6).

3.8.6 DS2 resistance. The coating shall exhibit no blistering, wrinkling, or film softening when examined immediately after washing with water (see 4.6.7).

3.9 Working properties.

3.9.1 Mixing. Component B shall mix readily with the pigmented component A to a smooth homogeneous product.

3.9.2 Application. When Components A and B are mixed and reduced for spraying with thinner conforming to MIL-T-81722, Type II (for Type I coating) or 1,1,1-trichloroethane (for Type II coating), the material shall be homogeneous and, when sprayed, shall yield a smooth, uniform film. Caution must be taken when reducing the admixed coating not to exceed the maximum VOC content of 340 grams/liter in areas where air pollution regulations are enforced.

3.10 Strippability. At least 90 percent of the coating shall be stripped in 60 minutes with the use of MIL-R-81294, Type I, Class 1 paint remover (see 4.6.8).

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements specified herein, unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to ensure supplies and services conform to prescribed requirements.

4.1.1 Responsibility for compliance. All items shall meet all requirements of sections 3 and 5. The inspection set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations, is an acceptable practice to ascertain conformance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material.

4.2 Classification of inspections. The inspection requirements specified herein are classified as follows:

a. Qualification inspection (see 4.3).

b. Quality conformance inspection (see 4.4).

4.3 Qualification inspection. Qualification inspection shall consist of all the tests specified in Section 3.

4.3.1 Qualification samples. The test samples shall consist of at least one quart of each component of the coating material in FED-STD-595 colors 17925, 34095 and 36375. The material shall be furnished in containers of the type to be used in filling contract orders. Samples shall be identified as follows and forwarded to the laboratory designated in the letter of authorization (see 6.3).

. Qualification test samples.
. Specification MIL-C-22750E, Color _____.
. Coating, Epoxy, VOC Compliant.
. Manufacturer's name and product number.
. Submitted by (name and date) for qualification testing in accordance with authorization (reference authorizing letter).

4.3.2 Test report. In addition to the qualification test samples, the manufacturer shall furnish a test report showing that the material satisfactorily conforms to the requirements of this specification. Material Safety Data Sheets shall be prepared and submitted in accordance with FED-STD-313 and 29 CFR 1910.1200.

4.3.3 Retention of qualification. In order to retain qualification of products approved for listing on the Qualified Products List (QPL), the manufacturer shall verify by certification to the qualifying activity that his product(s) comply with the requirements of this specification. Unless otherwise specified by the qualifying activity, the time of periodic verification by certification shall be in two-year intervals from the date of original qualification and shall be initiated by the qualifying activity.

4.4 Quality conformance inspection.

4.4.1 Lot formation. A lot shall consist of all epoxy coating of the same color, manufactured at one time from one batch, forming part of one contract, and submitted for acceptance. A batch shall consist of all coating material manufactured during one continuous operation and forming part of one contract or order for delivery.

4.4.2 Retention sample. At least one quart of each component of the coating material shall be selected at random from each batch by an authorized government representative and forwarded to the laboratory designated by the purchasing activity.

4.4.2.1 Batch data. With each sample, the manufacturer shall furnish a certified test report showing that the material satisfactorily meets the quality conformance requirements (4.4). In addition, the manufacturers shall certify that there has been no formulation or process change from that which resulted in the production of the qualification inspection sample.

4.4.3 Examinations.

4.4.3.1 Tests. The examination shall consist of all the tests specified in 3.5, 3.6, 3.7, and 3.9 with the exception of storage stability (3.5.2). There shall be no failures. Samples for tests shall consist of one complete unopened kit selected at random from each batch. Containers shall only be opened when being tested.

4.4.3.2 Visual inspection of filled containers. Samples selected at random for examination in accordance with 4.4.3.3 shall be examined for proper filling and weight.

4.4.3.3 Examination of packaging and marking. An examination shall be made to determine that packaging, packing and marking comply with the requirements of Section 5 of this specification. Defects shall be scored in accordance with the list below. The sample unit for this examination shall be one shipping container fully prepared for delivery except that it shall not be palletized and need not be sealed. Shipping containers fully prepared for delivery that have not been palletized shall be examined for defects of closure. The lot size shall be the number of shipping containers in the end item inspection lot. For suggested sample selection, inspection levels and acceptable quality levels see 6.5.

Examine	Defect
Packaging	Container not as specified, closures not accomplished by specified or required methods or materials. Leakage or seepage of contents. Non-conforming component, component missing, damaged or otherwise defective. Bulged or distorted container.
Markings	Data, including directions for use, omitted, illegible, incorrect, incomplete, or not in accordance with contract requirements.

4.4.3.4 Examination for palletization. An examination shall be made to determine that palletization complies with the requirements of Section 5 of this specification. Defects shall be scored in accordance with the list below. The sample unit shall be one palletized unit load fully prepared for delivery. The lot size shall be the number of palletized unit loads in the end item inspection lot. For suggested sample selection, inspection levels and acceptable quality levels see 6.6.

Examine	Defect
Finished dimension	Length, width or height exceeds specified maximum requirement.
Palletization	Not as specified. Pallet pattern not as specified. Interlocking of loads not as specified. Load not bonded with required straps as specified.
Weight	Exceeds maximum load limits.
Marking	Omitted, incorrect, illegible, of improper size, location, sequence or method of application.

4.4.4 Rejection and retest. Failure in any quality conformance test shall result in rejection of that batch and shall constitute sufficient justification for removal from the qualified products list. Rejected material shall not be resubmitted for acceptance without written approval from the Naval Air Development Center, Code 6062, Warminster, PA 18974. The application for resubmission shall contain full particulars concerning previous rejections and measures taken to correct these deficiencies. Samples for retest shall be randomly selected as in 4.4.2 and forwarded to the testing activity.

4.5 Test panels. Panels shall be prepared under laboratory testing conditions. All panels used for test purposes shall be aluminum alloy conforming to QQ-A-250/4 (T3 temper) and shall be 0.020 by 3 by 6 inches in size.

4.5.1 Panel preparation. With the exception of the flexibility (4.6.2) and weather resistance (4.6.4) tests, the panels shall be treated with materials conforming to Form I, Method C (Immersion), Class 1A of MIL-C-81706 to produce coatings conforming to MIL-C-5541.

4.5.2 Application of finish scheme. The following finish scheme shall be applied: Spray panels with one cross-coat of MIL-P-23377 or MIL-P-85582 epoxy-polyamide primer and air-dry one hour. The dry film thickness of the primer shall be 0.6 to 0.9 mils. The admixed Type I topcoat may be reduced with MIL-T-81772, Type II thinner to spray viscosity. The Type II topcoat may be reduced with 1,1,1-trichloroethane. They shall be allowed to stand 30 minutes before using. Apply a mist coat of the reduced paint and air-dry for 15 minutes. Apply a second coat until the total dry film thickness of topcoat is 0.0017 to 0.0023 inches (1.7 to 2.3 mils). The panels shall be allowed at least seven days air-dry before testing. If desired, the cure time can be accelerated using 24 hours air-dry followed by 24 hours at 180°F.

4.6 Test methods. The tests of this specification shall be conducted in accordance with Table I and the subparagraphs of 4.6, and the panels used prepared as specified in 4.5 and subparagraphs of 4.6 as specified. The laboratory testing conditions shall be in accordance with the applicable test method described herein.

TABLE I. Test methods.

Requirements Paragraph	Test	FED-STD-141 Test Method No.	ASTM Method No.
3.4.1	Lead content		D 3335
3.4.2	Volatile organic compound (VOC) content		D 3960
3.5.3	Accelerated storage stability	3019	
3.6.1	Fineness of grind		D 1210
3.6.2	Coarse particles		D 185
3.6.4, 3.6.5	Viscosity, Pot life		D 1200
3.7.1	Drying time		D 1640
3.7.3	Color		D 1729
3.7.5	Gloss		D 523
3.7.6	Hiding power		D 2805
3.7.7	Adhesion, Tape test	6301	
3.7.7	Adhesion, Scrape test		D 2197 1/
3.8.3	Heat resistance		D 2244

1/ Method A

4.6.1 Infrared reflectance. The total reflectance (specular and diffuse) of the test panel prepared as directed in 4.5, when measured relative to barium sulfate using a Perkin-Elmer LAMBDA 9 spectrophotometer or equivalent, shall conform to the limits specified in 3.7.4.

4.6.2 Flexibility. Test panels shall be aluminum alloy conforming to QQ-A-250/4 (0 temper) and anodized in accordance with MIL-A-8625, Type I. Panels shall be 0.020 by 3 by 6 inches in size and prepared as specified in 4.5.2 without a primer. The panels shall be allowed at least seven days air-dry before testing in accordance with ASTM D 1737 (see 3.7.8).

4.6.3 Fluid resistance. Test panels, prepared as directed in 4.5, shall be separately immersed for 24 hours in MIL-L-23699 lubricating oil at a temperature of 121 ± 3°C (250 ± 5°F) and MIL-H-83282 hydraulic fluid at a temperature of 66 ± 3°C (150 ± 5°F). Four hours after removal, the various films shall be examined for conformity to the requirements of 3.8.1.

4.6.4 Weather resistance. Test panels, prepared as directed in 4.5, shall be exposed for 500 hours in a 6000 watt Xenon-arc weatherometer (Atlas Electric Devices Company or equivalent) that is cycling between 102 minutes of light only and 18 minutes of light and waterspray. The following conditions shall apply when tested according to ASTM G 26, Type BH.

Black body temperature in cabinet:	60 ± 3°C (140 ± 5°F)
Relative humidity in cabinet:	50 ± 5%
Intensity of xenon-arc:	0.3 to 0.4 watts/square meter at 340 nm wavelength

After exposure, the color of the specimens shall be compared to unexposed ones to determine the Delta E value (color difference) in accordance with ASTM D 2244. Examine for compliance with 3.8.2.

4.6.5 Solvent resistance (cure). Test panels shall be prepared as directed in 4.5. A cotton, terry-cloth rag shall be soaked in methyl ethyl ketone solvent and rubbed back and forth 25 times (50 passes) over the coating with firm finger pressure. Rubbing through to bare metal indicates failure due to improper cure.

4.6.6 Tape resistance. Test panels, prepared as directed in 4.5, shall be air-dried for eight hours. A one-inch wide strip of masking tape (3M Company #250 or equivalent) shall be applied to each panel, adhesive side down, and pressed down with one pass of a 4-1/2 pound (2.04 kilogram) roller to adhere the tape to the panel. The tape shall remain in contact with the panel for one hour. Then remove the tape carefully and examine the test film for conformance with 3.8.5.

4.6.7 DS2 resistance. Test panels, prepared as directed in 4.5, shall be air-dried for four days and then baked for three days at 105°C. Allow the panels to return to room temperature. Place two spots of 1/2 ml each of DS2 agent on the coating surface. Allow to stand uncovered for 30 minutes and then thoroughly wash with water. Examine for compliance with 3.8.6.

4.6.8 Strippability. Test panels, prepared as directed in 4.5 and weathered for 500 hours as directed in 4.6.4, shall be placed on a rack at a 60° angle with the horizontal. Enough MIL-R-81294, Type I, Class I paint remover shall be poured along the upper edge of each panel to completely cover the coating surface. After 60 minutes exposure time, the loosened film shall be brushed off and the panels shall be rinsed while brushing under a stream of cool water. The amount of coating stripped in this manner is determined by the percentage of substrate surface area exposed. Examine for compliance with 3.10.

5. PREPARATION FOR DELIVERY

5.1 Packaging and packing. For direct purchases by or direct shipments to the Government, the packaging, packing and marking for shipment shall be in accordance with PPP-P-1892 and as specified in 5.2. Multi-friction sealed cans shall be used. The level of packaging shall be as specified (see 6.2). When specified, palletization is required for handling by mechanical equipment (see 6.2h). The epoxy coating shall be supplied in a kit, packaged as a unit consisting of the base marked "Component A" and the activator marked "Component B."

5.2 Marking and labeling. In addition to the marking specified in PPP-P-1892, individual cans and containers shall bear printed labels showing the following nomenclature and information as applicable:

Specification MIL-C-22750E
Component A or B
Color (name and number)
Manufacturer's name and product number
Date of manufacture by month and year
Batch number
VOC content in grams/liter
Maximum solvent addition allowed (without exceeding the 340 grams/liter limit)
Net contents

All unit and intermediate packs of toxic and hazardous chemicals and materials shall also be labeled in accordance with the applicable laws, statutes, regulations or ordnances, including Federal, state and municipal requirements. In addition, unit and intermediate containers, including unit containers that serve as shipping containers such as pails and drums, shall be marked with the applicable precautionary information detailed in American National Standard ANSI Z 129.1.

5.2.1 Precautionary markings.

5.2.1.1 Container. In addition to labeling as specified in the Department of Transportation Regulations 49 CFR 171-178, the following labeling shall appear on each component container in every kit and on each exterior shipping container:

CAUTION

THIS COATING MATERIAL IS COMBUSTIBLE AND SHALL NOT BE USED IN CONFINED AREAS WHERE THERE ARE OPEN FLAMES, ARCING EQUIPMENT, HOT SURFACES, OR WHERE SMOKING IS PERMITTED.

USE ONLY WITH ADEQUATE VENTILATION.

AVOID BREATHING OF VAPOR.

DO NOT GET IN EYES, ON SKIN, ON CLOTHING.

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES OR SKIN WITH PLENTY OF WATER. FOR EYES, GET MEDICAL ATTENTION.

Precautions: (To be included on a sheet with each kit).

1. The surface to be coated shall be absolutely clean (free of contamination).

2. All spray equipment shall be adequately grounded. Clean equipment thoroughly after use with methyl ethyl ketone or MIL-T-81772, Type II thinner.

3. Mix only the number of kits that can be used within four hours. Use only the specified thinner. Keep containers closed when not in use.

4. Coating from one vendor shall never be mixed with that of another, even if the color is the same. In addition, components from different kits are not interchangeable. For example, component A in white may not be used with component B in gray.

6. NOTES

6.1 Intended use. This epoxy coating is intended for use on aircraft and ground support equipment. No additives other than the appropriate thinner to obtain the proper spray viscosity shall be added. The coating has been formulated to meet air pollution regulations requiring a maximum volatile organic compounds (VOC) content of 340 grams/liter as applied.

6.2 Ordering data.

6.2.1 Acquisition requirements. Acquisition documents should specify the following:

a. Title, number and date of this specification.

b. Kit desired, including the quantity and size of containers (see 1.2.3).

c. Color number and name (see 1.2).

d. Level of packaging and packing (see Section 5).

e. Special marking (see 5.2).

f. Toxicological data requirements (see 3.3 and 4.3.2).

g. FAR clauses 23.303 and 52.223-3.

h. Specify if palletization is required.

6.3 Qualification. With respect to products requiring qualification, awards will be made only for products which are, at the time set for opening of bids, qualified for inclusion in the applicable Qualified Products List, whether or not such products have actually been so listed by that date. The attention of the suppliers is called to this requirement and manufacturers are urged to arrange to have the products that they propose to offer to the Federal Government tested for qualification, in order that they may be eligible to be awarded contracts or orders for the products covered by this specification. The activity responsible for the Qualified Products List is the Naval Air Development Center, Attention: Code 6062, Warminster, PA 18974; and information pertaining to qualification of products may be obtained from that activity. It is understood that the material furnished under this specification subsequent to final approval shall be of the same originally granted. In the event that the coating furnished under contract is found to deviate from the composition of the approved product or that the product fails to perform satisfactorily, approval of such products will be subject to immediate withdrawal from the Qualified Products List.

6.4 Subject term (keyword)listing.

Coating, two component
Colors
Epoxy
Exempt solvent
Hazardous material
High solids
Kit
Low infrared reflectance
Solvent resistance
Spray application
Volatile organic content

6.5 Material Safety Data Sheets. Contracting officers will identify those activities requiring copies of completed Material Safety Data Sheets prepared in accordance with FED-STD-313 and meeting the requirements of 29 CFR 1910.1200. When FED-STD-313 is at variance with the CFR, 29 CFR 1910.1200 shall take precedence, modify and supplement FED-STD-313. The pertinent government mailing addresses for submission of data are listed in Appendix B of FED-STD-313.

6.6 Examination of packaging and marking. The samples for this examination should be selected at random in accordance with MIL-STD-105, inspection level S-2 and acceptable quality level (AQL) 4.0 defects per hundred units.

6.7 Examination for palletization. The samples for this examination should be selected at random in accordance with MIL-STD-105, inspection level S-1 and acceptable quality level (AQL) 6.5 defects per hundred units.

6.8 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

Custodians:
Army - ME
Navy - AS

Review activities:
Army - CR, MI, MR, AR, EA, AV
Navy - AS, OS, MC
DS

User activities:
Navy - EC, MC

Preparing Activity:
Navy - AS
(Project No. 8010-1260)

☆U.S. GOVERNMENT PRINTING OFFICE: 1989 - 604-033/14118

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions – Reverse Side)

1. DOCUMENT NUMBER	2. DOCUMENT TITLE
MIL-C-22750E	COATING, EPOXY, VOC - COMPLIANT

3a. NAME OF SUBMITTING ORGANIZATION	4. TYPE OF ORGANIZATION *(Mark one)*
	☐ VENDOR
b. ADDRESS *(Street, City, State, ZIP Code)*	☐ USER
	☐ MANUFACTURER
	☐ OTHER *(Specify)*:

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER *(Last, First, MI)* – Optional	b. WORK TELEPHONE NUMBER *(Include Area Code)* – Optional
c. MAILING ADDRESS *(Street, City, State, ZIP Code)* – Optional	8. DATE OF SUBMISSION *(YYMMDD)*

DD FORM 82 MAR 1426 PREVIOUS EDITION IS OBSOLETE.

(TO DETACH THIS FORM, CUT ALONG THIS LINE.)