

INCH-POUND

MIL-P-38336A(USAF)
16 September 1994
SUPERSEDING
MIL-P-38336(USAF)
27 November 1964

MILITARY SPECIFICATION

PRIMER COATING, INORGANIC, ZINC DUST PIGMENTED, SELF-CURING, FOR STEEL SURFACES

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

1. SCOPE

1.1 Scope. This specification covers a ready-to-mix, two component, self-curing, inorganic zinc rich primer for use on steel surfaces.

2. applicable documents

2.1 Government documents

2.1.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document 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-S-698	Steel, Sheet and Strip, Low Carbon
TT-P-143	Paint, Varnish, Lacquer, and Related Materials; Packaging, Packing, and Marking of
TT-P-460	Pigment, Zinc-Dust (Metallic-Zinc-Powder) Dry
TT-S-735	Standard Test Fluids; Hydrocarbon
UU-T-106	Tape, Pressure-Sensitive Adhesive, Masking, Paper

Military

MIL-A-6091	Alcohol, Ethyl, Specially Denatured, Aircraft
MIL-L-7808	Lubricating Oil, Aircraft Turbine Engine, Synthetic Base

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: ASD/ENOS, Building 125, 2335 Seventh Street, Suite 6, Wright-Patterson AFB OH 45433-7809 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter

AMSC/NA

FSC 8010

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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STANDARDS**Federal**

FED-STD-595 Colors

Military

MIL-STD-105 Sampling Procedures and Tables for Inspection by Attributes
 MIL-STD-129 Marking for Shipment and Storage

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, phone (215) 697-2667.)

2.2 Non-Government publications. The following document(s) 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 specified in the solicitation. Unless otherwise specified, the issues of documents not listed in the DODISS are the issues of the documents cited in the solicitation (see 6.2).

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM B117	Salt Spray (Fog) Testing (DoD adopted)
ASTM D56	Tester, Closed, Flash Point, Standard Test Method by Tag (DoD adopted)
ASTM D185	Coarse Particles in Pigmented, Pastes, and Paints (DoD adopted)
ASTM D522	Mandrel Bend Test of Attached Organic Coatings (DoD adopted)
ASTM D1296	Solvents and Diluents, Volatile, Standard Test Method for Odor (DoD adopted)
ASTM D1308	Effect of Household Chemicals on Clear & Pigmented Organic Finished (DoD adopted)
ASTM D1640	Organic Coating, Drying, Curing or Film Formation of at Room Temperature (DoD adopted)
ASTM D2197	Adhesion of Organic Coatings, by Scrape Adhesion Standard Test Method for (DoD adopted)
ASTM D2244	Color Coordinates, Calculation of Color Differences from Instrumentally Measured Standard Test Method for (DoD adopted)
ASTM D2247	Testing Water Resistance of Coatings in 100% Relative Humidity (DoD adopted)
ASTM D2369	Volatile Content of Coatings Standard Test Method (DoD adopted)
ASTM G26	Operating Light Exposure Apparatus (Xenon Arc Type) With & Without Water for Exposure of Nonmetallic Materials (DoD adopted)

(Application for copies should be addressed to the Society of Automotive Engineers Inc., 400 Commonwealth Drive, Warrendale PA 15096; phone (412) 776-4841.)

(Non-Government standards and other publications are normally available from the organizations that prepare or distribute the documents. These documents also may be available in or through libraries or other information services.)

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.

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3. REQUIREMENTS

3.1 Components. The inorganic zinc rich primer shall be a ready-to-mix, two component material. The two component material shall be furnished in separate companion containers; the dry zinc dust shall be in one container and the liquid inorganic vehicle in the other container. The container size, where specified, shall refer to the liquid vehicle container which shall hold enough of the vehicle to provide the specified volume of the mixed primer. For example, a one gallon container shall be of the standard one gallon size and shall contain adequate amount of liquid vehicle to provide a minimum of 231 cubic inches of the mixed primer. The primer must be furnished in pint, quart, half gallon, one gallon or larger containers as specified by the procuring activity.

3.2 Material. Except where otherwise specified, the manufacturer is given latitude in the selection of raw materials and processes of manufacture but shall be restricted by the requirements of this specification. The materials used shall be of high quality and entirely suitable for the purpose intended.

3.2.1 Toxic products and formulations. The material shall have no adverse effect on the health of personnel when used according to provided instructions and for its intended purpose. Questions pertinent to this effect shall be referred by the procuring activity to the appropriate department medical service who will act as an advisor to the procuring activity.

3.2.2 Zinc dust pigment. The zinc dust pigment shall conform to the requirements of TT-P-460, type II.

3.2.3 Liquid vehicle. When the liquid inorganic vehicle portion of the primer cannot be thinned with water, dilute with organic solvents as specified herein.

3.2.3.1 Thinner. Denatured ethyl alcohol conforming to MIL-S-6091 shall be used as required for thinning the primer.

3.2.3.1.1. Denatured ethyl alcohol. Denatured ethyl alcohol shall be used only when applying the organic solvent dilutable primer to structures located in outside environments. The application procedure is necessary because of the potential fire hazard created by the low flash point of ethyl alcohol.

3.3 Quantitative requirements. The primer shall meet the quantitative requirements as specified in table I.

TABLE I. QUANTITATIVE REQUIREMENTS OF PRIMER

Characteristic	Minimum Requirements
Nonvolatile (solids) content, percent by weight, of vehicle	32
Zinc content, percent by weight, total zinc solids of zinc dust pigmented primer	80
Flash point °F, of ethyl alcohol diluted primer	65
Weight per gallon in pounds	18

3.4 Quantitative requirements

3.4.1 Mixing. When tested as specified in 4.6.4, the zinc dust pigment shall be easily mixed, by hand, into the inorganic vehicle to form a smooth, homogeneous material free from lumps, or other objectionable characteristics.

3.4.2 Odor. When tested as specified in 4.6.1, the odor of the wet primer and the dry film shall not be obnoxious.

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3.4.3 Coarse particles and skins. When tested in accordance with 4.6.1, the percentage of coarse particles and skins retained on the sieve shall not exceed by more than 0.5 percent the total amount of residue retained when the dry zinc pigment is subjected to the sieve test.

3.4.4 Primer stability. When tested in accordance with 4.6.5, after standing undistributed for eight hours, the primer shall not have aged or settled to the extent that it cannot be easily redispersed into a smooth, homogeneous mixture by hand mixing.

3.4.5 Storage stability. At the time of submission of bid, the manufacturer shall certify that after one year's storage at a temperature of 90°F \pm 10°F the primer shall meet all the requirements of this specification.

3.5 Coating

3.5.1 Film properties. The coating shall be at least 3.5 \pm 0.5 mils in dry film thickness and shall be smooth, even and free of runs, sags, streaks, or other imperfections.

3.5.2 Application methods. The primer shall be applied by spraying or brushing over solvent cleaned, phosphoric acid treated, or sand blasted steel.

3.5.2.1 Dry surfaces. When tested in accordance with 4.6.6, the coating shall be applied without "mud-cracking" or loss of adhesion.

3.5.2.2 Wet surfaces. When tested in accordance with 4.6.6, the coating shall cure on wet steel surfaces, and on surfaces located in environments of 90°F and 95 percent relative humidity.

3.5.3 Drying time

3.5.3.1 Dry surfaces. A film of the primer, prepared and tested in accordance with 4.6.7, shall dry dust free in not more than 30 minutes, and shall be dry through in not more than four hours.

3.5.3.2 Wet surfaces. A film of the primer, prepared and tested in accordance with 4.6.7, shall cure dust free in not more than one hour, and cure through in not more than six hours.

3.5.4 Flexibility. When tested in accordance with 4.6.8, a film of the primer shall show no cracking, or loss of adhesion in the bend areas.

3.5.5 Adhesion. When tested in accordance with 4.6.9, coatings of the primer shall show no lifting, flaking, or other signs of damage.

3.5.6 Fluid resistance properties

3.5.6.1 Water resistance. When tested as specified in 4.6.10.1, the primer shall show no wrinkling, blistering, loss of adhesion, or other visible defects.

3.5.6.2 Hydrocarbon resistance. When tested as specified in 4.6.10.2, a film of the primer shall show no wrinkling, blistering, loss of adhesion, or other visible defects.

3.5.6.3 Synthetic fluid resistance. When tested as specified in 4.6.10.3, a film of the primer shall show no wrinkling, blistering, loss of adhesion, or other visible defects.

3.5.7 Weathering properties

3.5.7.1 Accelerated weathering. When tested as specified in 4.6.11, the primer shall not be adversely affected by 30 days accelerated weathering.

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3.5.7.2 Weather exposure. At the time of submission of bid, the manufacturer shall certify that a single coat of the primer, 3.5 ± 0.5 mils in dry film thickness, shall provide adequate protection for steel surfaces for a minimum of two years without loss of adhesion, blistering, or rust pitting when exposed in the vicinity of coastal, salt water atmospheres.

3.5.8 Humidity resistance. When tested in accordance with 4.6.12, a coating of the primer shall show no blistering, wrinkling, or loss of adhesion.

3.5.9 Salt spray resistance. When tested in accordance with 4.6.13, a coating of the primer shall show no blistering, wrinkling, or loss of adhesion. There shall be no general surface corrosion, pitting, or other visual evidence of panel corrosion.

3.5.10 Inhibitive properties. When tested in accordance with 4.6.14, a primer coated panel shall inhibit the spread of corrosion beyond a maximum of 1/32 inch on either side of the score line (a total width of 1/16 inch).

3.5.11 Topcoating properties. When tested in accordance with 4.6.15, the primer shall provide a suitable base for topcoating with additional coats of primer of like material.

3.5.12 Heat resistance. When tested in accordance with 4.6.16, the primer shall not be adversely affected by a 24 hour bake at 75°F.

3.5.13 Color. The preferred color of the cured primer is the characteristic metallic color of the zinc pigment which approximates color No. 36231 of FED-STD-595. However, other colors resulting from the use of additional inhibitive pigments shall not be cause for rejection, provided the primer meets all other requirements of this specification.

3.6 Workmanship. The ingredient materials shall be intimately assembled and processed as required in accordance with the best practice for the manufacture of a high quality primer.

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 must 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 inspection. The inspection requirements specified herein are classified as quality conformance inspection (see 4.3).

4.3 Quality conformance inspection. Quality conformance inspection shall consist of sampling plan A.

4.3.1 Sampling plan A. Sampling, inspection, and testing shall be conducted in accordance with MIL-STD-105, and as specified herein.

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4.4. Test panels

4.4.1 Materials. Test panels shall be prepared from sheet steel conforming to QQ-S-698, cold-rolled, and may be of any convenient size and thickness subject to the following limitations:

- a. Unless otherwise specified, panels shall be at least 4 inches wide by 6 inches long.
- b. Panels for the flexibility tests shall be 22 ± 2 mils thick.
- c. Other test panels shall be not less than 30 nor more than 60 mils thick.

4.4.2 Surface preparation

4.4.2.1 Solvent cleaned panels. Test panels shall be selected from smooth steel free from rust. The panels shall be scoured with steel wool, washed in an environmentally acceptable cleaner. After the panels have air dried, they shall be wiped clean with a clean lint-free cloth.

4.4.2.2 Phosphoric acid cleaned panels. The test panels selected shall be free from other than light rusting. They shall be scoured with steel wool to remove rust or other adhering contamination, washed as in 4.4.2.1, rinsed and air dried. The panels shall then be treated as follows:

- a. Immerse for two hours in an acid cleaner of the following composition maintained at a temperature of $75^{\circ}\text{F} \pm 2^{\circ}\text{F}$:
 - 3150 ml of water
 - 650 ml of technical grade, 85 percent phosphoric acid
 - 3.8 grams of diethyl 1,3, thiourea
 - 1.4 grams of alkylarylsulfonate wetting agent
- b. Rinse in water and immerse for 15 minutes in the following dichromate solution maintained at a temperature of $75^{\circ}\text{F} \pm 2^{\circ}\text{F}$:
 - 3785 ml of water
 - 114 grams of potassium dichromate
- c. Force dry the panels at a temperature of 190°F to 212°F

4.4.2.3 Sand blasted panels. The panels shall be washed as specified in 4.4.2.1, rinsed and dried. The entire panel shall be blasted using any suitable equipment and blasting material. The blasting material shall be free from oil, grease, dirt, water, or other contaminants that would impair the coatability of the panel surface. The panels shall be blast cleaned to a white metal. After blasting, the panels shall be cleaned by using clean, dry compressed air or a vacuum.

4.4.3 Application methods

4.4.3.1 Dry surfaces. After preparing the panels as specified in 4.4.2, the panels shall be kept clean and free from fingerprints, rust, or other surface contamination. Application of the primer shall be accomplished within a maximum of one hour after cleaning, or the cleaned panels may be stored in a desiccator for not more than 72

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hours prior to coating. The primer shall be thoroughly mixed in accordance with the manufacturers instructions. Unless specified a single coat of the primer shall be applied by spray or brush using a wet cross-coat, to a dry film thickness as specified in 3.5.1. The panel shall be in a nearly vertical position during spraying and for a least two minutes after completion of spraying. Panels that are to be used for salt spray, humidity, or other tests where corrosion or rusting of the panel is a factor shall be coated on both sides and, in addition, shall be dipcoated around the edges to a distance of approximately 1/8 inch. The coated panels shall be air dried for a minimum of two hours and not more than four hours prior to testing (see 4.6).

4.4.3.2. Wet surfaces. The panels shall be prepared and coated as specified in 4.4.3.1, except the panel surfaces shall be wet prior to primer application. The test panels shall be dipped in tap water, removed, and with a damp fine-pore sponge, smoothed to a bright, even coat of water. The panels shall then be immediately spray or brush coated with the primer and placed in a humidity cabinet at 90°F and 95 percent relative humidity. Test panels shall cure dust free in one hour and cure through in not more than six hours. After curing, the panels shall be removed from the humidity cabinet and tested as specified in 4.6.

4.5. Test conditions. Unless otherwise specified, all testing, conditioning, and curing, shall be conducted under standard laboratory conditions of 75°F ±2°F and 50 ± 5 percent relative humidity.

4.6 Test methods

4.6.1 Methods of test. The test methods of this specification shall be conducted in accordance with the applicable methods of ASTMs as listed in table II, and other methods as described in 4.6.2 through 4.6.18.

TABLE II. TEST METHODS

Test	Requirements Reference	ASTM
Nonvolatile (solids) content	Table I	D2369
Flash point	Table I	D56
Odor	3.4.2	D1296
Coarse particles and skins	3.4.3	D185
Weight per gallon	Table I	Best commercial practices
Color	3.5.13	D2244

4.6.2 Zinc dust pigment. The dry zinc dust pigment shall be tested according to the requirement of TT-P-460.

4.6.3 Zinc content. The percentage of zinc dust in the dry film shall be determined as follows: Using one unopened unit of primer (one container of liquid vehicle and the companion container of dry zinc dust) accurately determine the total weight of each component by comparing the weight of the full containers to that of identical, empty, clean containers. Determine the nonvolatile content of the liquid vehicle according to the method listed in table II. Calculate the percent of zinc dust in the dry film as follows:

$$\frac{A \times 100}{A + (B \times C)} = D$$

A = Weight of zinc dust

B = Percentage of nonvolatile in the vehicle

C = Weight of vehicle

D = Percentage of zinc in the dry film

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4.6.4 Mixing. A one quart sample of the primer shall be mixed according to the manufacturer's instructions. The material shall be briskly stirred, by hand, during the mixing. The complete mixing shall be accomplished in not more than five minutes. After the mixture appears homogeneous or at the end of the five minute period, whichever occurs first, the material shall be allowed to stand for one minute. It shall then be poured slowly into another container. The primer shall be observed during pouring and the residue remaining in the mixing container observed for any evidence of lumps or pigment that has not been wetted by the liquid vehicle.

4.6.5 Primer stability. A one quart container shall be filled to within approximately 1/2 inch from the top with well mixed primer. The container shall be sealed and stored at 75°F ±2°F undistributed for six hours. At the end of this period the container shall be opened and the primer handmixed for not more than three minutes. There shall be no evidence of undispersed lumps of pigment remaining after completion of the stirring. (Small amount of pigment clinging to the stirrer shall not be cause for rejection.)

4.6.6 Coating. Panels shall be prepared, cleaned, and coated in accordance with 4.4.1, 4.4.2, and 4.4.3, respectively. The coated panels shall be examined for conformance with 3.5.1.

4.6.7 Drying time. The drying time of the primer shall be determined in accordance with ASTM D1640, except that the primer shall be sprayed on a cleaned steel panel, as specified in 4.4.2.1, to a dry film thickness as specified in 3.5.1. The drying time shall be in accordance with 3.5.3.

4.6.8 Flexibility. Solvent cleaned panels coated with primer as specified in 4.4.3, and cured as applicable, shall be bent 180 degrees over a 1 inch mandrel in accordance with ASTM D522, method B. Similar panels shall be conditioned for one hour at 0°F and while still at that temperature, bent around a 4 inch diameter mandrel. The panels shall be visually examined immediately for evidence of failure, and then after conditioning to room temperature, shall be re-examined to determine compliance with 3.5.4.

4.6.9 Adhesion tests of primer coated panels

4.6.9.1 Unexposed and exposed to aqueous media. Test panels cleaned by each of the three methods in 4.4.2, shall be coated with the primer and cured as specified in 4.4.3. Two parallel scratches down to metal, using a stylus, shall be made 1 inch apart. A 1 inch wide strip of masking tape conforming to UU-T-106 shall be applied, adhesive side down, across the scratches. The tape shall be pressed down using two passes of a 4-1/2 pound rubber-covered roller approximately 3-1/2 inches in diameter by 1-3/4 inches in width, the surface of which has a durometer hardness value within the range of 70 to 80. The roller shall be moved at the rate of approximately 1 inch per second. The tape shall be removed in one abrupt motion with the pull exerted at approximately a 90 degree angle to the panel, and the panel examined for removal of primer from the metal. Stripping of the tape shall be accomplished immediately after application.

4.6.9.2 Exposed to nonaqueous media. Test shall be accordance with ASTM D2197.

4.6.10 Fluid resistance properties. Test panels prepared, coated, and cured as specified in 4.4, shall be half immersed in the fluids (see 3.5.6) and tested in accordance with ASTM D1308, method 6.4. Resistance properties shall conform to the requirements of 3.5.6.

4.6.10.1 Water resistance. Immersion in distilled water shall be 14 days at 75°F. Twenty four hours after removal from water, the immersed portion of the film shall be equal in hardness and adhesion to the unimmersed portion as determined in 4.6.9.1.

4.6.10.2 Hydrocarbon resistance. Immersion in fluid conforming to TT-S-735, type III, shall be 24 hours at 75°F. Twenty four hours after removal, the immersed portion of the film shall be equal in hardness and color to the unimmersed portion as determined in 4.6.9.2.

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4.6.10.3 Synthetic fluid resistance. Immersion in fluid conforming to MIL-L-7808, shall be 168 hours at 160°F. Twenty four hours after removal, the immersed portion of the film shall be equal in hardness and color to the unimmersed portion as determined in 4.6.9.2.

4.6.11 Accelerated weathering. Test panels prepared, cleaned, and coated with primer as specified in 4.4, shall be subjected to 300 hours exposure to accelerated weathering in accordance with ASTM G26. Following this exposure, the panels shall be inspected for loss of flexibility, blistering, loss of either intercoat or metal adhesion, or any other apparent defects. (Slight whitening of the film shall be disregarded.)

4.6.12 Humidity resistance. Panels prepared by each of the three cleaning methods as specified in 4.4.2, shall be coated with primer and cured as specified in 4.4.3. The panels shall be in accordance with ASTM D2247 and operated at 120°F \pm 2°F and 100 percent humidity. The primer shall be exposed for 30 days. After exposure the panels shall be examined for conformance to 3.5.8.

4.6.13 Salt spray. Panels shall be prepared, cleaned, coated with primer, and cured as specified in 4.4. They shall then be exposed to salt spray in accordance with ASTM B117, except they shall not be scored. Exposure time shall be 30 days.

4.6.14 Inhibitive properties. Panels shall be prepared, cleaned, coated, cured, and exposed as specified in 4.6.13, except that they shall be scored and the time of exposure shall be 30 days. After the exposure period, the panels shall be removed, washed in water without scrubbing, allowed to dry, and examined for conformance to 3.5.10.

4.6.15 Topcoating properties. A solvent cleaned panel shall be coated and cured in accordance with 4.4. After curing the panel shall be coated with an additional 1.0 \pm 0.5 mil dry film thickness of the primer. The additional coat of the primer shall also be cured as specified in 4.4. The panel shall then be tested in accordance with 4.6.9.1, and inspected for adhesion of the second coat to the initial coat of primer.

4.6.16 Heat resistance. Panels cleaned with solvent, coated with primer, and cured as specified in 4.4, shall be exposed in an oven to a temperature of 75°F \pm 5°F for 24 hours. The panels shall then be removed and conditioned to room temperature. The coating shall be tested for adverse effects by the flexibility test, 4.6.8, and the humidity test, 4.6.12. Performance of the oven-exposed coating shall be equal to or better than the unexposed coating.

4.6.17 Toxicological data and formulations. The supplier shall furnish the toxicological data and formulations required to evaluate the safety of the material for the proposed use.

4.6.18 Packaging, packing, and marking. Packaging shall be examined for conformance with section 5.

5. PACKAGING

5.1 Packaging. Packaging shall be level A or B, as specified (see 6.2).

5.1.1 Level A. The primer shall be packaged according to the requirements to TT-P-143. The dry zinc dust and the liquid vehicle shall be packaged in separate containers. Quantities in each of the containers shall be such that the entire contents of one container shall be mixed with the entire contents of the companion container to provide the correctly proportioned mixed primer. (For liquid vehicle containers larger than 5 gallons, the appropriate amount of zinc dust may be packaged in two or more containers.) In addition, the companion containers of dry zinc dust and liquid vehicle in pint, quart, half gallon and one gallon units shall be furnished in the same package. One container of liquid vehicle and the companion container of dry zinc dust shall be considered as one unit of primer.

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5.1.2 Level B. Packaging shall be in accordance with the manufacturer's commercial practice.

5.2 Packing. Packing shall be level A, B, or C as specified (see 6.2).

5.2.1 Level A. The primer shall be packed in overseas type shipping containers according to the requirements of TT-P-143.

5.2.2 Level B. The primer shall be packed in domestic type shipping containers according to the requirements of TT-P-143.

5.2.3 Level C. The primer shall be packed in a manner to insure carrier acceptance and safe delivery at destination. Containers shall be in accordance with Uniform Freight Classification Rules or regulations of other carriers applicable to the mode of transportation.

5.3 Marking. Interior and exterior containers shall be marked in accordance with the requirements of MIL-STD-129. In addition, individual containers shall be marked, either by stencil or durably attached labels, with mixing, thinning, application, and curing instructions, as applicable. Each dry zinc dust container shall bear the following information:

PRIMER COATING, INORGANIC, ZINC DUST PIGMENTED,
SELF-CURING, FOR STEEL SURFACES
Specification MIL-P-38336A(USAF)
Mix entire contents of this container
with *(amount) of formula No. * _____
liquid vehicle

*Manufacturer shall enter appropriate data.

5.3.1 Marking precautionary. Each container of liquid vehicle shall be marked with the following precautionary marking:

DO NOT STORE AT TEMPERATURES ABOVE 100°F.

5.3.2 Labeling. Labeling shall be required in accordance with the requirements of appropriate Federal Statutes and Regulations, e.g., Federal Hazardous Substance Labeling Act, etc., or as prescribed by the processing agency upon advice and recommendations of the departmental medical services.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory.)

6.1 Intended use. The inorganic zinc rich primer covered by this specification is for use on surfaces of steel structures that receive severe exposure to adverse weather, condensing moisture, corrosive atmospheres and marine environments. The primer may be applied under conditions of high humidity and condensing moisture.

6.2 Acquisition requirements. Acquisition documents should specify the following information:

- a. Title, number and date of this specification.
- b. That the unit of purchase and sale be the U.S. gallon of 231 cubic inches of mixed primer at 77°F.
- c. Applicable levels of packaging and packing (see 5.1 and 5.2).
- d. Required type and size of container.

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6.3 Subject term (key word) listing

Inorganic
Pigmented
Primer coatings

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

Custodian:
Air Force – 11

Preparing Activity:
Air Force – 11
(Project 8010-F783)

Review activities:

Air Force – 99, 69