[METRIC]
A-A-3161
May 11, 1998
Superseding
TT-P-620C
October 11, 1968

**COMMERCIAL ITEM DESCRIPTION**

# PRIMER COATING, CONDITIONER FOR CHALKING EXTERIOR SURFACES

The General Services Administration has authorized the use of this commercial item description by all federal agencies.

1. **SCOPE.** This commercial item description describes a one component, ready-mixed, penetrating primer for use on previously painted chalked porous substrates. This primer provides good intercoat adhesion between the chalked substrate and topcoat.

2. **CLASSIFICATION.** The primer coating described by this commercial item description shall be of one type.

3 **SALIENT CHARACTERISTICS.**

3.1 **General requirements.**

3.1.1 **Prohibited materials.** The manufacturer shall ensure that no mercury, cadmium, hexavalent chromium compounds, compounds containing pyrophosphates, hazardous air pollutants (HAPs), know or suspected human carcinogens, (as defined by the National Toxicology Program's Annual Report on Carcinogens), toxic pollutants, or ozone depleting substances (ODS) are used in the formulation. If any of these substances is present as an impurity, its concentration shall be less than 1.0 percent by weight, except carcinogens whose concentration shall be less than 0.1 percent by weight. The lead content of the nonvolatile portion of the coating shall not exceed 0.06 percent.

3.1.2 **Condition in container.** The coating shall be free from skins, livering, seeds, and hard settled pigment and shall be readily dispersible to a uniform condition by five minutes of hand stirring. A closed, three-quarter filled container shall not skin within 48 hours, when stored at room temperature.

3.2 **Special requirements.** Unless otherwise stated in the test method, all routine and referee testing shall be done at the conditions specified in ASTM D 3924.

3.2.1 **Quantitative requirements.** The primer coating shall meet the requirements listed in table I.

**Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: General Services Administration, Paints and Chemicals Center, Supply and Environmental Management Division (10FTE), 400 15th St. SW, Auburn, WA. 98001-6599.**

## TABLE I

## REQUIREMENTS

| PROPERTY | REQUIREMENT | ASTM TEST METHOD |
|---|---|---|
| Prohibited materials | | |
| Lead content, wt. percent of nonvolatile, max | 0.06 | See note 4/ |
| Other prohibited materials listed in 3.1., wt. Percent | <1.0 | See note 4/ |
| Carcinogenic materials, wt. percent | <0.10 | ---- |
| Volatile Organic Compound (VOC) content (less water and exempt solvents), g/L (lb/gal), max. | 350 | D 3960 2/ |
| Percent solids, volume, min. | 55 | D 2697 |
| Viscosity, K.U. | 77 – 89 | D 562 |
| Coarse particles and skins (retained on No. 325 sieve), percent by weight of paint, max. | 0.5 | D 185 section 6 |
| Drying time, hours, max. | | |
| Set to touch | 6 | D 1640 1/ |
| Dry to recoat | 24 | D 1640 1/ |
| Flexibility, 3.18 mm (0.125 in) diameter cylindrical mandrel | No cracking or flaking | D 522 3/ |
| Water resistance, after 7 days immersion and 2 hour recovery | No film irregularities. Slight dulling permitted | D 1308 5/ |
| Alkali resistance | No cracking, softening, or loss of adhesion. | See note 6/ |
| Color | Visual match | D 1729 |
| Penetration, mm (inch) | 6.4 - 19.1 (1/4 - 3/4) | 4421 7/ |
| Package stability of primer | | |
| Viscosity after storage | 99 | D 1849 and D 562 |
| Rigidity after storage, max. | 10 | D 1849 and D 869 |

1/ The primer shall be applied, by brush, to a steel panel. The total dry film thickness (dft) shall be 25 µm ± 4µm (0.001 inch ± 0.0002 inch). For referee purposes, the steel panel shall be prepared in accordance with FED-STD-141 method 2011 procedure A and the topcoat shall meet the requirements of TT-E-489.

2/ The VOC shall be determined on the primer coating as applied in accordance with the manufacturer's instructions for use.

3/ Use method B. The test panels used shall be in accordance with FED-STD-141 method 2012. The primer shall be applied by brush and have a dry film thick of dry film thickness shall be 25 µm ± 2µm (1 mil ± 0.1 mils). The coating shall air dry for 24 hours at room temperature. After air drying, heat the panels at 105 °C ± 2 °C (221 °F ± 4 °F) for three hours, and cool 1/2 hour at room temperature. Then, bend the panels as specified in D 522. The time for the panel bending shall be 0.5 to one second.

4/ For referee purposes only. Lead content shall be measured using X-Ray fluorescence, cadmium content by ASTM D 3335, chromium content by ASTM D 3718, and mercury content by ASTM D 3624. Organic solvents shall be identified using FED-STD-141 methods 7356 and 7375.

5/ Immerse a solvent-clean, dry test tube in a 400 mL beaker containing 102 mm (4 inches) of well-mixed primer, for five seconds. Withdraw and suspend the tube in the same position as withdrawn and allow to dry at room temperature for 72 hours. For the water resistance requirement, allow to dry for 48 hours.

6/ Prepare a painted test tube as described in note 5/. Immerse the coated portion of the test tube for 10 minutes in a 250 mL beaker containing 125 mL of one percent sodium hydroxide solution maintained at 20 °C. Remove the test tube, allow to dry for 1/2 hour, and examine the coating.

7/ FED-STD-141 method 4421.

3.2.2 **Adhesion.** Draw down a 38 µm (0.0015 inch) film of synthetic chalk on a plane plate glass, using a suitable doctor blade. Bake for 1/2 hour at 100 °C ± 5 °C (212 °F ± 10 °F). The synthetic chalk shall be made by mixing 100 grams of rutile titanium dioxide mixed with 55 mL of water and 1 mL of Tamol 731. Cool the plate glass to room temperature and draw a 72 µm (0.003 inch) film of the primer over the synthetic chalk with a suitable doctor blade. Allow to air dry for 72 hours. Place masking tape, over the center of the painted portion, using light pressure on a roller to secure the tape. Allow the tape to remain on the surface for 1/2 hour. Gently remove the tape and examine the adhesive side. There shall be no signs of primer film removal.

3.3 **MSDS.** The manufacturer shall comply with requirements set forth by the Hazardous Communication Standard 29 CFR 1910.1200 (d) through (g). All Material Safety Data Sheets (MSDSs) submitted shall comply with provisions of FED-STD-313.

## 4. REGULATORY REQUIREMENTS.

4.1 **Federal Acquisition Regulations (FAR).** The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with paragraph 23.403 of the FAR.

4.2 **Code of Federal Regulations (CFR).** The paint shall not contain any substance listed in the following Code of Federal Regulations as a hazardous air pollutant, or ozone depleting substance:

a. 40 CFR part 61.
b. 40 CFR part 401
c. 40 CFR part 82

## 5. QUALITY ASSURANCE PROVISIONS.

5.1 **Contractor quality assurance.** The contractor shall maintain substantiating evidence that the product offered meets the salient characteristics of this Commercial Item Description and that the product conforms to the producer's own drawing, specifications, standards, and quality assurance practices, and is the same product offered for sale in the commercial marketplace.

The contractor shall provide the required information in a tabulated format and with enough clarity so that the formulation of the tested product can be traced compared to the offered product(s). The contractor shall also provide a summary of performance data, consisting of test reports, substantiating that the product to be

supplied under this CID meets the ASTM documents cited under 3.1 and 3.2.2 and is the same product offered for sale in the commercial marketplace.

The government reserves the right to require proof of such conformance prior to first delivery and thereafter as may be otherwise provided for under the provisions of the contract.

6. **PACKAGING.**

Preservation, Packing, and marking shall be as specified in the contract or order.

7. **NOTES.**

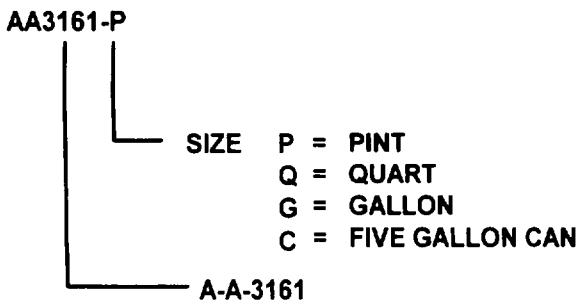
**7.1 Intended Use.** This primer coating is intended primarily for repainting over old weathered free chalking masonry surfaces. The surface conditioner is not intended as a finish coat.

**7.1.1 Surface preparation.** The entire surface should be vigorously wire-brushed by hand or by use of a power too. The surface should be dusted to remove all loose particles and chalk residue. The primer coating must be flowed on freely to assure effective penetration.

7.2 **Ordering Data.** Purchasers should include the following information in the contract or purchase order.

(a) Title, number, and date of this commercial item description.
(b) Color required.
(b) Quantity and size of the container required.
(d) Address to whom MSDSs should be sent.
(e) Packaging, packing, and marking required.

7.3 **Part Identification Number (PIN).** The following part identification numbering procedure is for government purposes and does not constitute a requirement for the contractor.




7.4 **Referenced documents.**

**Federal Specifications:**

TT-E-489 - Enamel, Alkyd, Gloss, Low VOC Content.

**Federal Standards**

FED-STD-141 - Paint, Varnish, Lacquer and Related Materials: Methods of Inspection, Sampling and Testing.

FED-STD-313 - Material Safety Data, Transportation Data and Disposal Data for Hazardous Materials Furnished to Government Activities.

**National Toxicology Program**

Annual Report on Carcinogens.

**ASTM Standards:**

D 185 - Coarse Particles in Pigments, Pastes, and Paints.
D 522 - Mandrel Bend Test of Attached Organic Coatings.
D 562 - Consistency of Paints Using the Stormer Viscometer.
D 869 - Evaluating Degree of Settling of Paint.
D 1308 - Effect of Household Chemicals on Clear and Pigmented Organic Finishes.
D 1640 - Drying, Curing, or Film Formation of Organic Coatings at Room Temperature.
D 1729 - Visual Evaluation of Color Difference of Opaque Materials.
D 1849 - Package Stability of Paint.
D 2697 - Volume Nonvolatile matter in Clear or Pigmented Coatings.
D 3335 - Low Concentrations of Lead, Cadmium, and Cobalt in Paint by Atomic Absorption Spectroscopy.
D 3624 - Low Concentrations of Mercury in Paint by Atomic Absorption Spectroscopy.
D 3718 - Low Concentrations of Chromium in Paint by Atomic Absorption Spectroscopy.
D 3924 - Standard Environment for Conditioning and Testing Paint, Varnish, Lacquers, and Related Materials.
D 3960 - Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings.

7.5 **Source of Documents.**

7.5.1 Contact the contracting officer for a copy of paragraph 23.403 of the FAR, and the appropriate paragraphs in 29 and 40 CFR.

7.5.2 Copies of ASTM specifications and standards may be obtained from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.

7.5.3 Copies of Federal Specifications and standards may be obtained from the Federal Supply Service Bureau, Specification Section, Suite 8100, 470 East L'Enfant Plaza, SW, Washington, DC 20407.

**MILITARY INTERESTS:**
**Custodian**

Army - CE
Navy - YD1
Air Force - 99

**Reviewer**

Air Force - 84

**Preparing Activity:**

GSA-FSS