

[METRIC]  
A-A-3126  
May 8, 1998  
Superseding  
TT-C-535B  
August 2, 1972

## COMMERCIAL ITEM DESCRIPTION

### COATING SYSTEM: TILE-LIKE HIGH PERFORMANCE ARCHITECTURAL

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

1. **SCOPE.** This commercial item description covers the requirements for two types of interior high performance, architectural coating system with a tile-like finish. The coating system is intended for use in institutional applications including commercial kitchens, lavatories, showers, locker rooms, and laboratories. It can be used on most surfaces including wood, plaster, concrete, brick, and gypsum wallboard that are subjected to repeated exposures to moisture, condensation, and frequent heavy abrasion.

2. **CLASSIFICATION.** The coating system shall be of the following types.

Type I - Semi-gloss  
Type II - Gloss

### 3. SALIENT CHARACTERISTICS.

3.1 **General characteristics.** The chemistry of the finish coat is not limited to a specific resin type. Typical examples are epoxy, polyurethane, and polyester modified epoxy and polyurethane coatings.

3.1.1 **Prohibited materials.** The manufacturer shall ensure that no mercury, cadmium, hexavalent chromium compounds, antimony or its compounds, compounds containing pyrophosphates, known or suspected human carcinogens, (as defined by the National Toxicology Program's Annual Report on Carcinogens), or Ozone Depleting Substances (ODS) are used in the formulation. If any of these substances is present as an impurity in the paint or primer, 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 system, as received, shall be ready-to-use and shall show no evidence of biological growth, livering, skinning, putrefaction, corrosion of the container, or hard settling of the pigment. Any settled pigment shall be dispersible by hand stirring to a smooth uniform condition (FED-STD-141, Method 3011).

3.2 **Specific requirements.** When tested using the manufacturer's recommended film thickness, the coating system shall comply with the requirements in 3.2.1, through 3.8 and table I.

3.2.1 **Primer.** The coating system shall be applied as a system using only the manufacturer's recommended primer. Different primers are generally required depending on the substrate material. For example a

**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.**

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polyvinyl acetate latex primer may be recommended as the first coat on new gypsum wallboard or a single component polyester block filler might be recommended for priming porous masonry.

Table I Quantitative requirements

Property	Requirement	ASTM Reference
Prohibited materials, wt. Percent, max.	1.0	<u>2/</u>
Lead Content, wt. percent of dry film coating, max.	0.06	<u>2/</u>
Other prohibited materials listed in 3.1.1, wt. Percent	0.1	<u>2/</u>
Adhesion, kg/cm <sup>2</sup> , min	750	D 3730, D 4541
Dry Time, hours		
Set-to-touch	12 max.	D 1640
To-recoat	24 max.	D 1640
60 <sup>0</sup> Specular Gloss		
Type I	15-60	D 523
Type II	80 min.	D 523
Directional Reflectance	84 min. (white only)	E 1347
Impact Resistance, kg-m (in-lb)	0.30 (26) min.	D 3730, D 2794
Flash Point, °C	26 min.	D 56
Volatile Organics, g/L	450 max.	D 3960 <u>3/</u>
Scrub Resistance, cycles	4000 min.	D 3730, D 2486
Leveling	6 min.	D 4062
Sag Resistance	7 min.	D 4400
Contrast Ratio <sup>1/</sup>		
White only	0.96 min.	D 2805
Perspiration resistance	No stain remaining	D 3730
Total free diisocyanate content, weight percent, max.	0.5	D 3432
Heat and cold resistance	No film defects	D 3730

**1/** Apply finish coat to a dry film thickness of 50 microns (0.002 in).

**2/** 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.

**3/** The VOC shall be determined on the primer and paint as applied in accordance with the manufacturer's instructions for use.

**3.2.2 Application.** The coating system shall be easily applied by brush, roller, or spray and shall dry to a smooth uniform film, free from pinholes, craters, dusting, sagging, streaking, shiners, flashing, separation of the components, or excessive brush marks.

**3.3 Mildew resistance.** Samples shall show no biological growth when tested as specified using Pullularia pollutants as the test organism (ASTM D 3273).

**3.4 Pot life.** The mixed paint shall not gel and its viscosity shall not increase by more than 10 KU in four hours from the time the components are fully mixed (ASTM D 562).

**3.5 Resistance to chemicals and cleaning agents.** The coating shall show no evidence of discoloration, blistering, loss of adhesion, or softening, when tested in accordance with section 10.4 of ASTM D 3730 for resistance to:

- (1) 5% sodium hydroxide solution,
- (2) 5% sodium hypochlorite solution,
- (3) 5% solution of heavy duty liquid detergent (A-A-39 or equal),
- (4) 5% solution of hydrochloric acid,
- (5) 5% solution of sodium phosphate, and
- (6) 5% solution of sulfuric acid.

**3.6 Heat and humidity resistance.** When tested in accordance with section 10.9 of ASTM D 3730, the gloss shall not change by more than 5 percent and the color difference shall not be greater than  $3\Delta E$ . The tested coating shall show no evidence of cracking, checking, or other deterioration.

**3.7 Curing time.** When tested in accordance with section 8.3.1 of ASTM D 3730 using a xylene saturated cloth and 25 double rubs, the coating shall not be effected. The coating shall cure for 21 days, prior to testing.

**3.8 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 practical, in accordance with paragraph 23.403 of the FAR.

**4.2 Code of Federal Regulations (CFR).** The coating system shall not contain any substance listed in 40 CFR part 82, Protection of Stratospheric Ozone, as an ozone depleting substance:

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## 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 salient characteristics cited under 3 to 3.8 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.

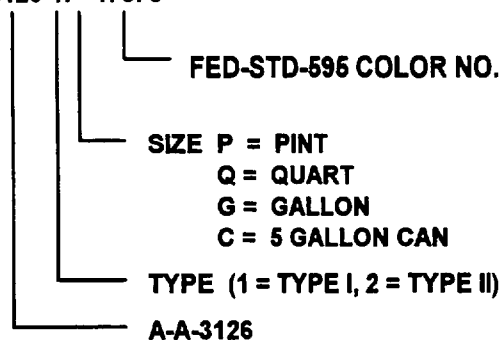
**7.1 Intended Use.** These coatings are intended for use on interior metal, wood, concrete, masonry surfaces, and painted surfaces. They provide a glaze type finish where extreme washability and resistance to abrasion and stains is desired. They are useful in hallways, kitchens, bathrooms, laundries, and hospitals, where the maintenance of sanitary conditions is important.

**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) Type and color required
- (c) 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.

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#### 7.4 Referenced documents.

##### Commercial Item Description:

A-A-39 - Detergent, General Purpose (Hard Surface Cleaner; Liquid; Concentrated).

##### 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.
- FED-STD-595 - Colors Used in Government Procurement.

##### ASTM Standards:

- D 56 - Flash point by Tag Closed Tester.
- D 523 - Specular Gloss.
- D 562 - Consistency of Paints Using the Stormer Viscometer.
- D 1640 - Drying, Curing, or Film Formation of Organic Coatings at Room Temperature.
- D 2486 - Scrub resistance of Interior Latex Flat Wall Paints.
- D 2794 - Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
- D 2805 - Hiding Power of Paints by Reflectometry.
- D 3273 - Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
- D 3335 - Low Concentrations of Lead, Cadmium, and Cobalt in Paint by Atomic Absorption Spectroscopy.
- D 3432 - Free Toluene Diisocyanates in Urethane.
- 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 3730 - Testing of High-Performance Interior Architectural Wall Coatings.
- D 3960 - Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings.
- D 4062 - Leveling of Paints by Draw-Down Method.
- D 4400 - Sag Resistance of Paints Using a Multinotch Applicator.
- D 4541 - Testing Interior Latex semigloss and Gloss Paints.
- E 1347 - Color and Color Difference Measurement by Tristimulus (Filter) Colorimetry.

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**International Conference of Building Officials Standards:**

Uniform Building Code, Volume I.

**7.5 Source of Documents.**

7.5.1 Contact the contracting officer for a copies of methods 7356 and 7375 of FED-STD-141, 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.

**MILITARY INTERESTS:**

**Custodian**

Army - CE  
Navy - YD-1  
Air Force - 99

**Review Activities**

Army - CE  
Air Force - 84

**User Activities**

Army - CE

**CIVIL AGENCY  
COORDINATING ACTIVITY:**

**Preparing Activity:**

GSA-FSS