

COMMERCIAL ITEM DESCRIPTION

COATING, POLYURETHANE, SINGLE COMPONENT MOISTURE CURE, ALIPHATIC

The General Services Administration has authorized the use of this commercial item description, for all Federal Agencies.

1. SCOPE

This description covers a moisture cured one component aliphatic polyurethane coating that is abrasion and chemical resistant with excellent durability. It meets a Volatile Organic Content (VOC) level of less than 340 grams per liter.

2. SALIENT CHARACTERISTICS

2.1 Quantitative Requirements. See Table I

TABLE I

Manufacturers may use tests shown in this table or an equivalent test to verify compliance with the requirement. The tests listed below will be used in case of dispute.

Characteristic	Minimum	Maximum	Test
Volatile Organic Content	—	340 g/L	ASTM D 3960
Abrasion Resistance	—	55 mg	ASTM D4060 (note 1)
Hardness	H	—	ASTM D 3363
Solids (volume) %	60	—	ASTM D 2697
Chemical resistance	no change	—	ASTM D 1308 (note 2)
Resistance to hot water	no change	—	ASTM D 1308 (note 3)
Adhesion	5B	—	ASTM D 3359 (note 4)
Contrast ratio, pigmented, Red, Yellow, Orange All other colors	0.90 0.95	—	ASTM D 2806 (note 5)
Dry through time	—	24 hours	ASTM D 1640
Dry to Recoat time	—	6 hours	ASTM D 1640
Flexibility	—	6 mm	ASTM D 522

Except where otherwise specified in the method, all tests shall be done on a blasted steel panel with one coat at 35-40 microns (1.4-1.6 mils) dry film thickness (DFT), cured 7 days at 25°C (77°F) and 50% relative humidity.

Note 1: CS 17 wheel, 1000 cycles, 1000 grams

Note 2: Spot test, covered, 24 hour recovery time, 2 coats, (35-40 µm DFT each), cured as above. Use 5 drops of the following reagents: 5%(v/v) hydrochloric acid, skydrol, 30 W motor oil and JP-5 jef fuel.

Note 3: Immersion test method, boiling distilled water for 1 hour, 2 hour recovery time.

Note 4: Method B, blasted steel panel, 2 coats at 35-40 µm DFT.

Note 5: Use formula for contrast ratio given in Descriptions of Terms section.

Beneficial comments, recommendations, additions, deletions, clarifications, etc. and any data which may improve this document should be sent to: General Services Administration, Engineering and Commodity Management Division (9FTE-10), 400 15th St. SW, Auburn, WA 98001

FSC 8010

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2.1 Rapid Immersion Test. Apply 35-40 μm DFT to a blasted steel panel. Air dry 1 hour at 23°C (73°F), then immerse half the panel in distilled water for 24 hours. Remove from water and air dry for 2 hours. Both immersed and non-immersed sides shall meet the hardness requirement of Table I. The 60° gloss level of the immersed end shall be the same as the gloss level of the non-immersed end when tested in accordance with ASTM D 523.

2.2 Application properties. The coating shall be capable of being easily applied by brush, roller or spray to produce a smooth, uniform film free from running, sagging, streaking, brush or lap marks, dimpling, seeds, webbing, curtaining or orange peel.

2.3 Color. The coating shall match the Fed. Std. 595 color chip specified in the contract or purchase order when applied to a black and white hiding chart until complete hiding is obtained and tested in accordance with ASTM D 1729.

2.4 Prohibited material. The manufacturer shall certify that the product does not contain mercury, toluene, methyl ethyl ketone, chlorinated solvents, hydrolyzable chlorine derivatives, any EPA Class I or II ozone depleting compounds, ethylene based glycol ethers and their acetates, chromium or lead.

3. QUALITY ASSURANCE PROVISIONS

3.1 Contractor Certification. The contractor shall certify and 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 drawings, specifications, standards, and quality assurance practices. 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.

3.2 Test report. When specified in the solicitation, the offeror shall submit a third party test report verifying compliance to specification requirements from a laboratory approved by the Government.

4. PACKAGING

The packaging and packing shall be as specified in the contract or order.

5. NOTES

5.1 Intended use and surface preparation. The intended use of this product is as a topcoat for metal equipment. In order to obtain the full potential, it must be firmly anchored to the substrate. Careful attention must be given to cleaning and preparation of the substrate and to priming or conditioning where necessary. The manufacturer's instructions and the use of auxiliary materials where indicated should be explicitly carried out.

5.2 Referenced documents.

Federal Publications:

Fed. Std. 595 - Colors Used in Government Procurement

Federal specifications and standards may be obtained from Federal Supply Service Bureau (3FBP-W), Suite 8100, 470 East L'Enfant Plaza SW, Washington, DC 20407.

ASTM methods:

ASTM D 522 - Mandrel Bend Test of Attached Organic Coatings

ASTM D 523 - Specular Gloss

ASTM D 1308 - Effect of Household Chemicals on Clear and Pigmented Organic Finishes

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 2697 - Volume Nonvolatile Matter in Clear or Pigmented Coatings

ASTM D 2805 - Hiding Power of Paints by Reflectometry

ASTM D 3359 - Measuring Adhesion by Tape Test

ASTM D 3363 - Film Hardness by Pencil Test

ASTM D 3960 - Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings

ASTM D 4060 - Abrasion Resistance of Organic Coatings by the Taber Abraser

ASTM standards are available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959. The issue of the ASTM test methods in effect on the date of the solicitation shall be used to determine compliance with these requirements.

**PREPARING ACTIVITY
GSA-FSS**