

SSPC: The Society for Protective Coatings

PAINT SPECIFICATION NO. 26

Slow Drying Linseed Oil Black Maintenance Primer (Without Lead and Chromate Pigments)

1. Scope

1.1 This specification covers a very slow drying black, one-coat, raw linseed oil maintenance primer for steel. It has fair rust inhibitive characteristics, good wetting ability, a drying time of about one week, and good resistance to weathering without field coating.

1.2 This primer is suitable for exposures in Environmental Zones 1A (interior, normally dry) and 1B (exterior, normally dry), and is intended for brush and spray application over steel surfaces prepared in accordance with SSPC- SP 2, "Hand Tool Cleaning." The performance will be improved by a better degree of surface preparation. It is suitable as a maintenance primer and is to be applied in accordance with SSPC-PA 1, "Shop, Field, and Maintenance Painting of Steel." It is not ever used as a shopcoat for steel because of its very long drying time. It is unsuitable for use where the uncured, slippery paint film would be dangerous to workmen when walking or climbing on painted surfaces.

1.3 This specification is based on Patent No. 2,858,285 which was assigned to the DuPont Company in 1959.

2. Description

2.1 The good wetting ability of this primer is the result of its high proportion of raw linseed oil. Details of the composition are given in Table 1.

2.2 This primer contains approximately 87% by volume of nonvolatile film-forming solids (pigment and binder). The theoretical spreading rate for a 4.0 mil (102 micrometers) dry film thickness is 350 square feet/U.S. gallon (8.6 square meters/liter). Actual spreading rates can be significantly lower.

3. Referenced Standards

3.1 The latest issue, revision, or amendment of the referenced standards in effect on the date of invitation to bid shall govern, unless otherwise specified.

3.2 If there is a conflict between the requirements of any of the cited referenced standards and this specification, the requirements of this specification shall prevail.

3.3 SSPC STANDARDS:

SSPC Guide 13	Guide for the Identification and Use of Industrial Coating Material in Computerized Product Databases
PA 1	Shop, Field, and Maintenance Painting of Steel
SP 2	Hand Tool Cleaning

3.4 ASTM INTERNATIONAL STANDARDS:

D 79	Specification for Zinc Oxide Pigments
D 185	Test Methods for Coarse Particles in Pigments, Pastes, and Paints
D 209	Specification for Lampblack Pigment
D 234	Specification for Raw Linseed Oil
D 235	Specification for Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Solvent)
D 562	Test Method for Consistency of Paints Measuring Krebs Unit (KU) Viscosity Using a Stormer-type Viscometer
D 600	Specification for Liquid Paint Driers
D 605	Specification for Magnesium Silicate Pigment (Talc)
D 1208	Test Methods for Common Properties of Certain Pigments
D 1210	Test Methods for Fineness of Dispersion of Pigment-Vehicle Systems
D 1296	Test Method for Odor of Volatile Solvents and Diluents
D 1475	Test Method for Density of Liquid Coatings, Inks, and Related Products
D 1542	(Withdrawn) Test Method for Qualitative Detection of Rosin in Varnishes
D 2369	Test Method for Volatile Content of Coatings
D 2371	Test Method for Pigment Content of Solvent-Reducible Paints
D 2801	(Canceled) Test Method for Leveling Characteristics of Paints by Draw-Down Method (Refer to ASTM D 4400)
D 3278	Test Methods for Flash Point of Liquids by Small-Scale Closed-Cup Apparatus
D 3925	Practice for Sampling Liquid Paints and Related Pigmented Coatings
D 4400	Test Method for Sag Resistance of Paints Using a Multinotch Applicator

**TABLE 1
COMPOSITION**

INGREDIENTS	REQUIRED		TYPICAL COMPOSITION		INGREDIENT STANDARDS	
	Min. Wt. %	Max. Wt. %	Wt. %	Vol. %	ASTM	FEDERAL
PIGMENT: (54 ± 2 wt. %)						
Zinc Oxide, French Process	15	17	8.0	—	D 79, Type I	—
Barium Lanolate	3	5	2.7	—	—	—
Magnesium Silicate	—	75	40.5	—	D 605	—
Lampblack	—	5	2.6	—	D 209	—
VEHICLE: (46 ± 2 wt. %)						
Raw Linseed Oil	64	—	29.3	—	D 234	—
Alkyd Resin Solids	16	—	7.4	—	—	TT-R-266, Type II
Mineral Spirit Thinner	—	20	9.5	—	D 235	—
Driers	—	—	—	—	D 600, Class B	—
TOTALS			100.0			

3.5 FEDERAL STANDARDS:

3.6.1 Standard Specifications for Ingredients:

TT-R-266 Resin, Alkyd: Solutions

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

Method 3011 Condition in Container
Method 3021.1 (Canceled) Skinning (Partially Filled Container)
Method 4021 (Canceled) Pigment Content (Ordinary Centrifuge) (Use ASTM D 2371)
Method 4053 Nonvolatile Vehicle Content
Method 4061 Drying Time
Method 4203 Reducibility and Dilution Stability
Method 4321 Brushing Properties
Method 4331 Spraying Properties
Method 4541 (Canceled) Working Properties and Appearance of Dried Film

3.6 AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) STANDARD:

Z129.1 Hazardous Industrial Chemicals—Precautionary Labeling

4. Composition

4.1 Ingredients and proportions shall be as specified in Table 1.

4.2 The primer based on the specified ingredients shall be uniform, stable in storage, and free from grit and coarse particles. No rosin or rosin derivatives may be used. Beneficial additives such as anti-skinning agents, suspending agents, or wetting aids may be added.

4.3 The paint shall conform to the composition (analysis) requirements of Table 2.

5. Properties

5.1 The paint shall meet the requirements of Table 3 and Sections 5.2 through 5.7.

5.2 ODOR: Shall be normal for the materials permitted (ASTM D 1296).

5.3 COLOR: The color shall be typical of the specific mixture of zinc oxide and carbon black.

5.4 COMPATIBILITY: There shall be no evidence of incompatibility of any of the ingredients of the paint when two volumes of the paint are slowly mixed with one volume of mineral spirits (FED-STD-141, Method 4203).

5.5 WORKING PROPERTIES: The paint shall be easily applied by all three methods when tested in accordance with FED-STD-141, Methods 4321, 4331, and 4541. The paint shall show no streaking, running, or sagging after drying.

5.6 CONDITION IN CONTAINER: The paint shall show no thickening, curdling, gelling, or hard caking when tested as specified in FED-STD-141, Method 3011, after storage for