

SSPC: The Society for Protective Coatings

Paint Specification No. 104

White or Tinted Alkyd Paint

1. Scope

1.1 This specification covers a white or tinted low gloss alkyd paint for steel. It has good weathering in rural, industrial, and marine atmospheres. It is also an excellent general purpose paint for use in interior locations.

1.2 This paint is suitable for exposures in Environmental Zones 1A (interior, normally dry) and 1B (exterior, normally dry) and is intended for brush or spray application over rust inhibitive priming paints, over itself, or over other oleoresinous paints. This paint is suitable as an intermediate or topcoat and is to be applied in accordance with SSPC-PA 1, "Shop, Field, and Maintenance Painting of Steel."

1.3 Four types are available under this specification. Type I covers White Paint; Type II covers Medium to Light Gray to Tan Paint; Type III covers Light Green Paint; and Type IV covers a Dark or Forest Green Paint. The shades are variable and are to be agreed upon between the purchaser and the supplier.

2. Description

2.1 The good weathering ability of this paint is the result of its alkyd vehicle. Details of the composition are given in Table 1.

2.2 This primer contains approximately 48% by volume of nonvolatile film-forming solids (pigment and binder). The theoretical spreading rate for a 1.5 mil (38 micrometers) dry film thickness is 510 square feet/U.S. gallon (12.6 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.

**TABLE 1
COMPOSITION**

INGREDIENTS	TYPICAL COMPOSITION				INGREDIENT STANDARDS	
	Type I	Type II	Type III	Type IV	ASTM	FEDERAL
PIGMENT: (± 2.5 wt. %)	(47.5)	(42.4)	(44.8)	(21.5)	—	—
Titanium Dioxide (Min.)	67.0	30.0	30.0	—	D 476	—
Reinforcing and Tinting Pigments (Max.)	33.0	70.0	70.0	10.0	D 602 D 605	—
Chrome Green	—	—	—	90.0	D 212	—
TOTALS	100.0	100.0	100.0	100.0		
VEHICLE: (± 2.5 wt. %)	(52.5)	(57.6)	(55.2)	(78.5)		
Alkyd Resin Solids	46.8	50.1	50.9	56.0	—	TT-R-266
Mineral Spirit Thinner	53.2	49.9	49.1	44.0	D 235	—
Driers	—	—	—	—	D 600, Class B	—
TOTALS	100.0	100.0	100.0	100.0		

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

3.4 AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARDS:

D 185	Test Methods for Coarse Particles in Pigments, Pastes, and Paints
D 212	(Withdrawn) Specification for Chrome Green Pigment
D 235	Specification for Mineral Spirits (Petroleum Spirits) (Hydrocarbon Dry Cleaning Solvent)
D 476	Classification for Dry Pigmentary Titanium Dioxide Products
D 523	Test Method for Specular Gloss
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 602	Specification for Barium Sulfate Pigments
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 by Hegman-type Gage
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 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

3.5 FEDERAL STANDARDS:

TT-E-489	Enamel, Alkyd, Gloss (Low VOC Content)
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	(Canceled) Skinning (Partially Filled Container)

Method 4021	(Canceled) Pigment Content (Ordinary Centrifuge)
Method 4053	Nonvolatile Vehicle Content
Method 4061	Drying Time
Method 4203	Reducibility and Dilution Stability
Method 4321	Brushing Properties
Method 4331	Spraying Properties
Method 4494.1	(Canceled) Sag Test (Multinotch Blade)
Method 4541	(Canceled) Working Properties and Appearance of Dried Film
Method 6221	(Canceled) Flexibility

3.6 AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI) STANDARD:

Z129.1	Hazardous Industrial Chemicals—Precautionary Labeling
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4. Composition

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

4.2 The paint 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 Sections 5.2 through 5.10.

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

5.3 COLOR: The color shall be agreed upon by the parties concerned.

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