

SSPC: The Society for Protective Coatings

PAINTING SYSTEM NO. 1.09

Three-Coat Oil Base Zinc Oxide Painting System (Without Lead or Chromate Pigment)

1. Scope

1.1 This specification covers an oil base, lead- and chromate-free painting system for steel cleaned with hand or power tools.

1.2 This system is suitable for use on parts or structures exposed in Environmental Zone 1A (interior, normally dry) and Zone 1 B (exterior, normally dry).

1.3 The finish paint allows for a choice of durable, fade-resistant colors.

2. Description

2.1 This painting system consists of surface preparation by solvent cleaning and hand or power tool cleaning, one coat of zinc oxide linseed oil/alkyd primer, and two coats of alkyd white or tinted finish coat.

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. Standards marked with an asterisk (*) are referenced only in the Notes, which are not requirements of this specification.

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.

3.4 SSPC STANDARDS AND JOINT STANDARDS:

PA 1	Shop, Field, and Maintenance Painting of Steel
PA 2	Measurement of Dry Coating Thickness With Magnetic Gages
PA Guide 4	Guide to Maintenance Repainting with Oil Base or Alkyd Painting Systems
Paint 25	Red Iron Oxide, Zinc Oxide, Raw Linseed Oil, and Alkyd Primer
Paint 101	Aluminum Alkyd Paint
Paint 104	White or Tinted Alkyd Paint
Paint 108	High-Build Thixotropic Leafing Aluminum Paint

SP 2	Hand Tool Cleaning
SP 3	Power Tool Cleaning
SP 5/NACE No. 1	White Metal Blast Cleaning
SP 6/NACE No. 3	Commercial Blast Cleaning
SP 7/NACE No. 4	Brush-Off Blast Cleaning
SP 8	Pickling
SP 10/NACE No. 2	Near-White Blast Cleaning

3.5 AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM) STANDARD:

D 3925 Standard Practice for Sampling Liquid Paints and Related Pigmented Coatings

4. Surface Preparation

4.1 SSPC-SP 2, "Hand Tool Cleaning," or SSPC-SP 3, "Power Tool Cleaning." If specified in the procurement documents, blast cleaning or pickling shall be substituted (SSPC-SP 5, 6, 7, 8, or 10).

5. Paints

5.1 PRIMER: SSPC-Paint 25, "Red Iron Oxide, Zinc Oxide, Raw Linseed Oil and Alkyd Primer."

5.2 INTERMEDIATE (SECOND COAT): SSPC-Paint 104, "White or Tinted Alkyd Paint," tinted with carbon black or lampblack dispersion to a color contrasting with that of the finish paint.

5.3 FINISH COAT: SSPC-Paint 104, "White or Tinted Alkyd Paint." The color must be specified.

5.4 ALTERNATIVE FINISH COAT: If specified in the procurement documents, a finish coat complying with specification SSPC-Paint 101, "Aluminum Alkyd Paint, Leafing (Type I)," shall be applied in place of the standard finish coat. If this alternative finish coat is used, then the intermediate coat shall consist of one coat of SSPC-Paint 101, "Alkyd Aluminum Paint, Non-Leafing (Type II)."

5.5 ALTERNATIVE FINISH COAT: If specified in the procurement documents, a finish coat complying with specification SSPC-Paint 108, "High-Build Thixotropic Leafing Aluminum Paint," shall be applied in place of the standard finish coat. If this alternative finish coat is used, then no intermediate coat

shall be required, but the dry film thickness shall not be less than 50 micrometers (2.0 mils) for the finish coat and 114 micrometers (4.5 mils) for the painting system.

6. Paint Application

6.1 PAINT APPLICATION: Follow requirements of SSPC-PA 1, "Shop, Field, and Maintenance Painting of Steel."

6.2 TOUCH-UP PAINTING: In accordance with specification SSPC-PA 1, "Shop, Field, and Maintenance Painting of Steel," and in particular with the section thereof entitled "Field Painting."

6.3 MAINTENANCE PAINTING: The provisions of SSPC-PA Guide 4, "Guide to Maintenance Repainting with Oil Base or Alkyd Painting Systems," should be followed.

6.4 NUMBER OF COATS: Minimum of three.

6.5 DRY FILM THICKNESS OF PAINT SYSTEM: Not less than the following as measured in accordance with SSPC-PA 2, "Measurement of Dry Coating Thickness with Magnetic Gages": primer 50 micrometers (2.0 mils); intermediate coat 38 micrometers (1.5 mils); finish coat 25 micrometers (1.0 mil); for the three-coat painting system 114 micrometers (4.5 mils). If an alternative finish coat is used as indicated in Section 5.5, see that section for dry film thickness requirements.

7. Inspection

7.1 Unless otherwise specified in the procurement documents, the contractor or material supplier is responsible for quality control to assure that the requirements of this document are met. Work and materials supplied under this standard are also subject to inspection by the purchaser or an authorized representative. Materials and work areas shall be accessible to the inspector

7.2 Conditions not complying with this standard shall be corrected. In the case of a dispute, an arbitration or settlement procedure established in the procurement documents (project specification) shall be followed. If no arbitration or settlement procedure is established, then a procedure mutually agreeable to purchaser and material supplier (or contractor) shall be used.

8. Disclaimer

While every precaution is taken to ensure that all information furnished in SSPC standards and specifications is as accurate, complete, and useful as possible, SSPC cannot assume responsibility nor incur any obligation resulting from the use of any materials, coatings, or methods specified herein,

or of the specification or standard itself.

8.2 This specification does not attempt to address problems concerning safety associated with its use. The user of this specification, as well as the user of all products or practices described herein, is responsible for instituting appropriate health and safety practices and for ensuring compliance with all governmental regulations.

9. Note

Notes are not a requirement of this specification.

9.1 The procurement documents should establish the responsibility for samples, testing, and any required affidavit certifying full compliance with the specification.