SSPC-PA 14-2021
Approved December 22, 2021

Application of Thick Film Polyurea and Polyurethane Coatings to Concrete, Steel, and Non-Ferrous Metals Using Plural-Component Equipment

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Document History
2021-12-22: Revised by SSPC C.1.9, Polyurea Coatings
2012-09-25: Developed by SSPC C.1.9, Polyurea Coatings

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1: Scope

This standard provides requirements for the field application of polyurea, polyurethane, or polyurea/polyurethane hybrid thick film coatings to concrete, steel, and non-ferrous metal surfaces using plural component spray equipment. In this standard, thick film coatings are defined as coatings specified to have greater than 500 micrometers [µm] (20 mils) dry film thickness. Surface preparation, pretreatments, machinery requirements and parameters are addressed in this standard.

UNITS OF MEASURE: This standard makes use of both the IEEE/ASTM SI10, International Standards (SI) units and U.S. Customary units. The measurements are not exact equivalents; therefore, each system must be used independently of the other without combining in any way.

2: Referenced Documents

2.1 The latest issue, revision, or amendment of the referenced documents in effect on the date of invitation to bid shall govern unless otherwise specified. Those documents marked with an asterisk (*) are referenced only in the Notes, which are not requirements of this standard.

2.2 If there is a conflict between the requirements of any of the cited referenced documents and this standard, the requirements of this standard shall prevail, unless otherwise specified by the procurement documents.

2.3 AMPP DOCUMENTS, www.ampp.org

NACE SP0188	Discontinuity (Holiday) Testing of New Protective Coatings on Conductive Sur-faces
NACE/ASTM G193	Standard Terminology and Acronyms Relating to Corrosion
*SSPC-QP 1	Standard Procedure for Evaluating the Qualifications of Industrial/Marine Paint-ing Contractors
*SSPC-QP 3/AISC 420	Certification Standard for Shop Application of Complex Protective Coating Sys-tems
*SSPC-QP 8	Standard Procedure for Evaluating the Qualifications of Contracting Firms that Install Polymer Coatings and Surfacings on Concrete and Other Cementitious Substrates
SSPC-TU 8	Safe Use and Handling of Isocyanate-Containing Polyurethane and Polyurea Coat-ings for Industrial Maintenance Applications
SSPC-Paint 45	Two-Component, Thick-Film Polyurea and Polyurea/Polyurethane Hybrid Coat-ings, Performance-Based
SSPC-PA 2	Procedure for Determining Conformance to Dry Coating Thickness Require-ments
SSPC-PA 17	Procedure for Determining Conformance to Steel Profile/Surface Rough-ness/Peak Count Requirements

2.4 ASTM INTERNATIONAL STANDARDS, www.astm.org

ASTM C805	Standard Test Method for Rebound Number of Hardened Concrete
ASTM D4138	Standard Practices for Measurement of Dry Film Thickness of Protective Coating Systems by Destructive, Cross-Sectioning Means
*ASTM D4263	Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Meth-od
ASTM D4417	Standard Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel
ASTM D4787	Standard Practice for Continuity Verification of Liquid or Sheet Linings Applied to Concrete Substrates
ASTM D6132	Standard Test Method for Nondestructive Measurement of Dry Film Thickness of Applied Organic Coatings Using an Ultrasonic Gage
ASTM D7091	Standard Practice for Nondestructive Measurement of Dry Film Thickness of Non-magnetic Coatings Applied to Ferrous Metals and Nonmagnetic, Nonconductive Coatings Applied to Non-Ferrous Metals
*ASTM E1907	Standard Practices for Determining Moisture-Related Acceptability of Concrete Floors to Receive Moisture-Sensitive Finishes