

# Field-Applied Underground Wax Coating Systems for Underground Metallic Pipes: Application, Performance, and Quality Control

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## Foreword

This standard covers surface preparation, material requirements, application, and handling of hot- and cold-applied wax and component wrappers and wax-based tape coating systems for the protection of underground pipelines, and valves. This standard is intended for use by corrosion control personnel, design engineers, project managers, purchasers, application contractors, and construction engineers and managers. The use of this standard in coordination with the manufacturer of the referenced materials herein will reduce the chance of their misapplication and will maximize their potential to provide long-term corrosion protection. This standard is also referenced by NACE SP0169, "Control of External Corrosion on Underground or Submerged Metallic Piping Systems."

## Scope

This standard describes the proper application and material characteristics of wax coatings for underground pipeline external corrosion protection. The scope of this standard is to establish minimum requirements to ensure proper application, inspection, and performance of field-applied wax coating systems for field repair, rehabilitation, or girth weld joints on buried, external steel substrates.

Included are guidelines for proper application and inspection to ensure the long-term performance of wax coating systems. The coating systems in the standard can be applied to girth weld joints during the construction of buried pipelines and their appurtenances that are used for conveying liquids or gases.

## Rationale

Changes were made within the document to increase its clarity and specificity where necessary. The technical changes made in this revision include the addition of profiling mastic to the standard, the addition of a definitions section, and the inclusion of requirements for an application procedure specification to be prepared by the application contractor.

## Referenced Standards and Other Consensus Documents

Unless specifically dated, the latest edition, revision, or amendment of the documents listed in the table below shall apply.

### **AMPP/NACE/SSPC, [www.ampp.org](http://www.ampp.org):**

NACE SP0169	Control of External Corrosion on Underground or Submerged Metallic Piping Systems
NACE SP0274	High Voltage Electrical Inspection of Pipeline Coatings
NACE TM0115	Cathodic Disbondment Test for Coated Steel Structures Under Cathodic Protection
SSPC-SP 1	Solvent Cleaning
SSPC-SP 2	Hand Tool Cleaning

### **ASTM International, [www.astm.org](http://www.astm.org):**

ASTM D70	Standard Test Method for Density of Semi-Solid Bituminous Materials
ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
ASTM D127	Standard Test Method for Drop Melting Point of Petroleum Wax Including Petrolatum
ASTM D149	Standard Test Method for Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Power Frequencies
ASTM D937	Standard Test Method for Cone Penetration of Petrolatum
ASTM D938	Standard Test Method for Congealing Point of Petroleum Waxes, Including Petrolatum
ASTM D1000	Standard Test Method for Pressure-Sensitive Adhesive-Coated Tapes Used for Electrical and Electronic Applications
ASTM D1321	Standard Test Method for Needle Penetration of Petroleum Waxes
ASTM D2369	Standard Test Method for Volatile Content of Coatings
ASTM G8	Standard Test Methods for Cathodic Disbonding of Pipeline Coatings