

SELECTION & SPECIFICATION DATA

Generic Type	Elastomeric Polyurethane
Description	A hybrid two-component, elastomeric polyurethane coating designed for long-term corrosion protection of steel and concrete substrates. Available in Spray Grade and Brush Grade. This product meets the AWWA C222 requirements.
Features	<ul style="list-style-type: none"> • Excellent adhesion to steel surfaces, Fusion Bond Epoxy (FBE) • 100% solids • Excellent fresh water and salt water resistance • Good flexibility with >50% elongation • Good acid and abrasion resistance • High build one-coat application • Certified by UL to meet NSF/ANSI/CAN 61 and NSF/ANSI/CAN 600
Typical Uses	<ul style="list-style-type: none"> • Pipelines • Valves and fittings • Dam gates and penstocks • Girth welds • Existing pipeline rehabilitation • Sewer lines and general piping • Onshore and offshore structures • Piles • Lining of tanks and sewage digesters • Open top gondola railcars for transporting sulphur and coal
Color	Grey (0700), White (0800), Blue (0100)
Primer	Not required on steel SP-1264® Damp Concrete Primer Sealer required prior to application of SP-1386® to concrete.
Dry Film Thickness	508 - 3048 microns (20 - 120 mils) DFT Depends upon application. Consult with your SPC Representative.
Solids Content	By Volume 100%
Theoretical Coverage Rate	39.4 m ² /l at 25 microns (1604 ft ² /gal at 1.0 mils) 2.0 m ² /l at 500 microns (80 ft ² /gal at 20.0 mils) 0.3 m ² /l at 3000 microns (13 ft ² /gal at 120.0 mils) Allow for loss in mixing and application.
VOC Values	As Supplied : 0 g/L
Specific Gravity	Base: 1.36 ± 0.03 Hardener: 1.22 ± 0.03 Mixed Material: 1.32 ± 0.03

SUBSTRATES & SURFACE PREPARATION

Steel	Cleanliness: NACE No. 2/SSPC SP-10, SA 2.5 (ISO 8501-1) Profile: 75 microns minimum to 125 microns maximum (3.0 mils to 5.0 mils)
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SP-1386

PRODUCT DATA SHEET



SUBSTRATES & SURFACE PREPARATION

Concrete	SP-1264® Damp Concrete Primer Sealer required prior to application of SP-1386® to concrete. Cleanliness: Remove laitance and other surface contaminants by grit blasting or mechanical scarification. Seal using SP-1264® Damp Concrete Primer Sealer.
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PERFORMANCE DATA (TYPICAL VALUES)

Service Temperature	Up to 65°C (149°F)
Adhesion to Steel (Pull Off Strength)	25°C (77°F): >13 MPa (>2000 psi) (ASTM D4541)
Adhesion to Steel (Hot Water Soak)	28 Days @ 40°C (104°F): Rating#1 (CSA-Z245.20)
Cathodic Disbondment Resistance	7 days @ 25°C (77°F) @ - 1.5 Volts: 9.78 (CSA-Z245.20) 28 days @ 25°C (77°F) @ - 1.5 Volts: <12 mmR (AWWA C222)
Impact Resistance	>75 in/lbs (ASTM G14)
Flexibility	3° PPD @ 25°C (77°F) (CSA-Z245.20)
Dielectric Strength	> 250 V/mil (ASTM D149)
Elongation at Break	25°C (77°F): 66% (ASTM D522)
Chemical Resistance	No change in various chemical solutions (ASTM G20, 1 year immersion, R.T.). It has shown resistance to: 10% Hydrochloric acid, 10% Nitric Acid, 10% Sulfuric acid, 25% Sodium Hydroxide, 30% Ammonium hydroxide, 2-3% Sodium Hypochlorite, 15% Ammonium Chloride solution, 15% Calcium Chloride solution, 15% Potassium Chloride solution, 25% Sodium Chloride solution, 25% Sodium Carbonate solution, Sodium Silicate solution, 25% Zinc Sulfate, Distilled water.
Water Absorption	0.10% for 24 hours at 25°C (77°F) (ASTM D 570)
Volume Resistivity	1.0×10^{14} (ohm-cm) (ASTM D257)
Hardness	25°C (77°F): >65 Shore D (ASTM D2240)
Abrasion Resistance	0.3788 g weight loss @ 21°C (70 °F)(ASTM D4060), CS-17, 1 kg, 5000 cycles)

MIXING & THINNING

Brush Grade Pot Life	15 minutes @ 25°C (77°F)
Spray Grade Gel Time	7 minutes @ 25°C (77°F) 2 minutes @ 55°C (131°F)
Mixing	Spray Grade: Agitation of the Part A component is recommended during the preheating process and during application to ensure a uniform heat throughout the base portion. Component Details for Color: Grey (0700): The Base is Grey (0700) and the Hardener is Amber (0908)
Thinning	DO NOT THIN.

MIXING & THINNING

Ratio	3:1 Base to Hardener, by volume
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APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

Spray Grade	Plural Component Spray Equipment: Graco XP-70 or equivalent Tip Size:: 0.019-0.031 0.031 Heated hose bundle consisting of 3/8" ID base and 1/4" ID hardener with a solvent flush line. Glycol heat trace or equivalent capable of 80°C (176°F)
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Brush Grade	Brush or Roller
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APPLICATION CONDITIONS

Ambient Temperature	-40°C to 50°C (-40°F to 122°F)
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Substrate Temperature	The acceptable substrate (metal or concrete surface) temperature range is 1°C (33°F) to 100°C (212°F). Preheating of the substrate is required if the surface to be coated is below 1°C (33°F). Relative Humidity prior to and during the application must be 80% or less. The substrate temperature must be a minimum of 3°C (5°F) above the dew point temperature before proceeding with the coating operation.
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Material Temperature	Typical Spray Grade Base material temperature during application is 55°C (131°F) and 60°C (140°F).
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CURING SCHEDULE

Touch Dry	Brush Grade: 3 hours @ 25°C (77°F) Spray Grade: 1 hour 15 minutes @ 55°C (131°F)
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Recoat Interval	@ 50% RH Brush Grade: Maximum 48 hours @ 25°C (77°F) Spray Grade: Maximum 48 hours @ 25°C (77°F) The recommended Recoat Intervals are general guidelines only. The Recoat intervals may vary significantly due to variable conditions including but not limited to, humidity, surface temperature, and product application temperature. Contact your SPC representative for assistance in determining minimum and maximum recoat intervals specific to your application. Roughening of the surface is required if the maximum re-coat interval is exceeded. Small areas ≤316 sq. cm. (≤49 sq.in.) may be sanded using medium grit (80-100) carborundum cloth. All dust from the sanding or blast roughening must be removed from the surface prior to the application of the coating.
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SP-1386

PRODUCT DATA SHEET



CURING SCHEDULE

Surface Temp.	Dry Hard (Spray Grade)	Dry Hard (Brush Grade)
10°C (50°F)	28 Hours	30 Hours
25°C (77°F)	9 Hours	12 Hours
35°C (95°F)	4 Hours	6 Hours

Brush Grade Base and Hardener material temperature: 25°C (77°F).

Spray Grade: Base 60°C (140°F), Hardener: 25°C (77°F)

Note: The information above is to serve as a guide only. The test results were compiled under laboratory-controlled conditions, as per ASTM D1640. Field results may vary due to variable conditions such as radiant heat loss and the cooling effects of wind.

Full Cure | Brush Grade: 4 days @ 25°C (77°F)
Spray Grade: 4 days @ 25°C (77°F)

CLEANUP & SAFETY

Cleanup | Carboline Thinner 2 or SP-100 Equipment Wash

Safety | Refer to SPC's Safety Data Sheet prior to use. Carefully read and follow all safety instructions on labels and packing. Handle and store material with care in accordance to the Safety Data Sheet. Follow and observe any applicable local or national laws and regulations.

TESTING / CERTIFICATION / LISTING

Potable Water Certifications | **Potable Water Use Limitations @ 75°F (24°C):**
Max DFT: 120 mils (508 microns)
Coats: 1
Tank Rating: >500 gal (1893 Liters)
Pipe Rating: 9" or larger (23 cm)
Valve Rating: 6" or larger (15 cm)
4 Day Cure Required before service

PACKAGING, HANDLING & STORAGE

Shelf Life | Base: 24 months max
Activator: 12 months

From the date of manufacture if the materials are in unopened containers.

Storage Temperature & Humidity | (4°C to 49°C) 40°F to 120°F
0 to 95% Humidity

Storage | Store indoors and keep Dry. Do not place drums directly on concrete or earth. Store on top of wood slats or pallets. Blanket all partial drums with nitrogen gas to prevent moisture contamination. Avoid freezing. Do not open until ready to use. Rotate Resin (Part A) drums regularly if stored for the long term.

Packaging - Spray Grade | **80 Liter (21.1 Gallon) Kit**
Part A: 60 liters (15.9 gallons)
Part B: 20 liters (5.3 gallons)
800 Liter (211.3 Gallon) Kit
Part A: 600 liters (158.5 gallons)
Part B: 200 liters (52.8 gallons)

PACKAGING, HANDLING & STORAGE

**Packaging - Brush
Grade**

0.5 Liter (0.13 Gallon) Kit

Part A: 0.38 liters (0.10 gallons)

Part B: 0.12 liters (0.03 gallons)

1 Liter (0.26 Gallon) Kit

Part A: 0.75 liters (0.20 gallons)

Part B: 0.25 liters (0.06 gallons)

2 Liter (0.53 gallons) Kit

Part A: 1.5 liters (0.40 gallons)

Part B: 0.5 liters (0.13 gallons)

WARRANTY

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