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PRODUCT DATA SHEET

SP-3888[®]

DESCRIPTION: **SP-3888[®]** is a range of surface coatings based on “State of the Art” epoxy chemistry. **SP-3888[®]** is similar to SP-2888[®] R.G. but has high temperature operating capability. The cathodic disbonding resistance of **SP-3888[®]** is excellent at temperatures up to 95°C (203°F). **SP-3888[®]** is available in Brush Grade and Spray Grade. **SP-3888[®]** is also available in Cartridges for coating repairs.

ADVANTAGES:

- 100% Solids - No VOCs.
- High build single coat application.
- Isocyanate free.
- Excellent resistance to high temperature cathodic disbonding at temperatures up to 95°C (203°F)
- Excellent adhesion to grit blasted steel surfaces, Fusion Bond Epoxy, liquid epoxy, and urethane coatings.

USES:

- Coating of pipe, valves and fittings.
- Rehabilitation of existing pipelines.
- Girth weld coatings.
- Tank linings.

APPLICATION:

- Spray Grade: Graco Hydra-Cat - Tip Size: .019 - .031
- Brush Grade: Brush or Roller
- Cartridge : Manual Dispenser

CLEANING MATERIALS:

- SP-100 Equipment Wash
- SP-110 Tool Cleaner
- SP-120 Internal Storage Lubricant



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RECOMMENDED

FILM THICKNESS:

- **Wet:** 20 mils minimum to 50 mils maximum (0.50 mm to 1.25 mm)
- **Dry:** 20 mils minimum to 50 mils maximum (0.50 mm to 1.25 mm)
- **Tank Lining:** 30 to 60 mils (0.75 to 1.50 mm) *
50 to 70 mils (1.25 to 1.75 mm) – Tank bottom and
6 to 8 ft. (1.8 to 2.4 m) up the tank wall. *

* Dependent on application, consult your SPC Representative.

SURFACE PREPARATION: (Steel Substrate)

- **Cleanliness** : Near White
- **Standards** : NACE 2, Sa 2½ (Swedish Scale, ISO 8501-1)
: SSPC SP-10 (Steel Structures Painting Council)
- **Profile** : 2.5 mils minimum to 5.0 mils maximum
(62.5 microns to 127 microns)

RE-COAT INTERVAL:

- @ 25°C (77°F) - Maximum: 2 Hours
- @ 100°C (212°F) - Maximum: 5 Minutes

- Sweep blasting 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 a 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.

MIXING RATIO:

- Brush Grade and Spray Grade: By Volume: 3 Parts Base to 1 Part Hardener.
- Cartridge: By Volume: 2 Parts Base to 1 Part Hardener.

HANDLING PROPERTIES:

Pot Life (100 gm mass @ 25°C / 77°F)	15 minutes
Dry Time (ASTM D-1640) (30 mil coating thickness @ 25°C / 77°F)	
Tack Free Time.....	90 minutes
Dry Hard Time	2.5 hours



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HANDLING PROPERTIES (cont.):

- Ambient Temperature °C (°F) -25° to 100° (-13° to 212°)
- Substrate Temperature..... The acceptable substrate (metal surface) temperature range for the application of SP-3888[®] is 10°C (50°F) to 100°C (212°F). Preheating of the substrate is required if the surface to be coated is below 10°C (50°F). The substrate temperature must be a minimum of 3°C (5°F) above the dew point temperature before proceeding with the coating operation. Refer to the attached Curing Table.
- Storage/Shelf Life Store in a cool, dry, well-ventilated area at temperatures between 5°C (41°F) and 40°C (104°F). Keep lids sealed. The Shelf Life is a maximum of 24 months in unopened containers.

LIQUID PROPERTIES:

	<u>BASE</u>	<u>HARDENER</u>
Appearance.....	Grey Viscous Liquid.	Light Amber Liquid.
Solids Content (%).....	100	100
Specific Gravity (ASTM D-792).....	1.60 ± 0.03	1.03 ± 0.02
Specific Gravity (ASTM D-792).....	Base & Hardener Mixed:	1.46 ± 0.03
Coverage (Theoretical).....	Base & Hardener Mixed:	1604 (ft ² /U.S. Gallon/mil) 39.0 (m ² /Litre/25 microns)

PHYSICAL / MECHANICAL / ELECTRICAL PROPERTIES:

- Adhesion to Steel:
- Dry Adhesion (Pull-off Strength) (PSI) (ASTM D-4541-95-A4) (25°C / 77°F)
(Self-Alignment Adhesion Tester, Type IV)..... 3000
- Wet Adhesion (Hot Water Soak) (CSA-Z245.20-02, Clause 12.14, 28 Days)
(75°C / 167°F) Rating #1
- Wet Adhesion (Hot Water Soak) (CSA-Z245.20-02, Clause 12.14, 120 Days)
(75°C ± 3°C / 167°F ± 5°F)..... Rating #1



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PHYSICAL / MECHANICAL / ELECTRICAL PROPERTIES (cont.):

Cathodic Disbonding Test (mm) (CSA-Z245.20-02 Clause 12.8 modified to 28 Days @ 65°C / 150°F).....	9-10
Cathodic Disbonding Test (mm) (CSA-Z245.20-02 Clause 12.8 modified to 28 Days @ 95°C / 203°F).....	10-11
Dielectric Strength (volt/10 ⁻³ in) (ASTM D-149)	400
Dielectric Constant (60 cycles) (ASTM D-150)	4.2
Flexibility (CSA-Z245.20-02 Clause 12.11) (25°C / 77°F).....	2.59 ° PPD
Hardness (Shore D) (ASTM D-2240-91) (25°C / 77°F).....	85
Heat Resistance (°C / °F)	195 / 383
Impact Strength (in.-lbs. / J) (25°C / 77°F) (ASTM D-256).....	26.5 / 3.0
Salt Spray Resistance (h) (ASTM B-117).....	> 1000
Volume Resistivity (ohm-cm) (ASTM D-257).....	1.0 x 10 ¹⁴
Water Vapour Permeability (perm-in) (ASTM D-1434)	< 0.003
Water Absorption (% , 24 ^h , r.t.) (ASTM D-570)	0.1

CHEMICAL RESISTANCE (25°C / 77°F) 90 Days:

Nitric acid, 10% solution.....	No change observed.
Sulfuric acid, 5% solution.....	No change observed.
Acetic acid, 5% solution.....	No change observed.
Sodium hydroxide, 10% solution.....	No change observed.
Sodium chloride, 10% solution.....	No change observed.
Toluene.....	No change observed.
Ethyl acetate.....	No change observed.
Ethanol, 50% solution.....	No change observed.
Mineral Oil.....	No change observed.
30% xylene, 30% toluol, 40% benzene.....	No change observed.

SAFETY: Read the Material Safety Data Sheets before use.

NOTE: All epoxy coatings will change colour, lose gloss and chalk on exterior exposure.
However, the protective properties of the material will not be affected.

EFFECTIVE DATE: November 30, 2004