



CORPORATE HEAD OFFICE: #104, 20529 - 62nd Avenue, Langley, BC, CANADA V3A 8R4

EASTERN SALES OFFICE: 33 Lakecrest Trail, Brampton, Ontario, CANADA L6Z 1S3

U.S.A. HEAD OFFICE: 6202 Brookdale Drive, League City, TX 77573 U.S.A.

U.S.A. SALES OFFICE: P.O. Box 640202, Kenner Branch, New Orleans, LA 70064 U.S.A.

Tel: (604) 514-9711 • Fax: (604) 514-9722

Tel: (905) 846-8870 • Fax: (905) 846-9553

Tel: (281) 332-6948 • Fax: (281) 332-6948

Tel: (504) 469-0661 • Fax: (504) 469-0661

PRODUCT DATA SHEET

SP-2888® R.G.

DESCRIPTION

: **SP-2888® R.G.** is a range of surface coatings based on "State of the Art" epoxy/urethane chemistry. The urethane polymer is pre-bonded to the epoxy resin rendering the coating "isocyanate free". The synergistic effect of copolymerizing epoxy and urethane produces a coating with the superior adhesion and permeability of epoxy along with the added toughness and abrasion resistance of urethane. **SP-2888® R.G.** is available in Brush Grade and Spray Grade. **SP-2888® R.G.** is also available in Cartridges for coating repairs.

ADVANTAGES

- 100% Solids - No VOCs
- Isocyanate free.
- Excellent resistance to high temperature cathodic disbonding up to 80°C (176°F).
- Excellent adhesion to grit blasted steel surfaces, Fusion Bond Epoxy, and FRP.
- Excellent abrasion and impact resistance.

USES

- Exterior coatings for pipelines in buried or immersed services.
- Slip bore and directional drilling applications.

APPLICATION

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

CLEANING MATERIALS

- : SP-10® Equipment Wash
- SP-11® Tool Cleaner
- SP-12® Internal Storage Lubricant

FILM THICKNESS

- : **Wet:** 20 mils to 50 mils (0.50 mm to 1.25 mm)
- Dry:** 20 mils to 50 mils (0.50 mm to 125 mm)



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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** : 3.0 mils to 5.0 mils (75 microns to 125 microns)

TEMPERATURE PARAMETERS DURING APPLICATION

- : To avoid risk of condensation, application should be done only when the temperature of the steel is at least 3°C (5°F) higher than the dew point. Application temperatures below 1°C (33°F) must be watched carefully since ice crystals could be present in the surface pores of the steel resulting in poor adhesion and reduce corrosion protection. If the surface to be coated is below 10°C (50°F), preheating of the substrate is recommended (not to exceed 100°C, 212°F) prior to the application of **SP-2888® R.G.** Refer to the Curing Tables.

RE-COAT INTERVAL

- : @ 25°C (77°F) - Maximum: 4 Hours
- : @ 100°C (212°F) - Maximum: 20 Minutes
 - If the maximum re-coat interval is exceeded, the surface must be blast roughened to a minimum surface profile of 2.5 mils. Small areas (\leq 250 sq. cm.) may be sanded using medium grit (80-100) carborundum cloth. Prior to the re-coat application of the coating, the surface must be wiped free of all dust using a clean dry cloth.

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.



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HANDLING PROPERTIES:

		<u>Brush Grade</u>	<u>Spray Grade</u>
Pot Life	- 100 gm mass @ 25°C (77°F)	20 ± 2 minutes	14 ± 2 minutes
Accept to Touch Time	- 20 mil coating thickness @ 25°C (77°F)	75 minutes	60 minutes
Tack Free Time	- 20 mil coating thickness @ 25°C (77°F)	120 minutes	75 minutes
Dry Hard Time	- 20 mil coating thickness @ 25°C (77°F)	4.5 hours	3.5 hours
Application Temperature	- °C (°F) Both Brush & Spray Grade: -30° to 105°C (-22° to 221°F)		
Shelf Life	- Store in a dry area at temperatures between 5°C (41°F) and 40°C (104°F). Keep lids sealed. The Shelf Life is a minimum of 24 months.		

LIQUID PROPERTIES:

	<u>BASE</u>	<u>HARDENER</u>
Appearance	- White Viscous Liquid	Blue Liquid
Solids Content (%)	- 100	100
Specific Gravity (ASTM D-792)	- 1.55 ± 0.03 (Spray Grade) - 1.55 ± 0.03 (Brush Grade) - Base & Hardener Mixed:	1.03 ± 0.02 (Spray Grade) 1.05 ± 0.02 (Brush Grade) 1.42 ± 0.03 (Spray Grade) 1.42 ± 0.03 (Brush Grade)
Coverage (Theoretical)	- Base & Hardener Mixed:	1629 (ft ² /U.S. Gallon/mil) 1.0 (m ² /Litre/mm)

PHYSICAL / MECHANICAL / ELECTRICAL PROPERTIES:

Hardness (Shore D) (25°C / 77°F) (ASTM D-2240-91)	85
Tensile Strength (PSI) (25°C / 77°F) (ASTM D-638).....	6200
Tensile Modulus (PSI x 10 ⁶ @ 25°C / 77°F) (ASTM D-638).....	9.4
Elongation (%) (25°C / 77°F) (ASTM D-638)	9.0
Compressive Strength (PSI) (25°C / 77°F) (ASTM D-695).....	1.56 x 10 ⁴
Water Vapour Permeability (perm-in) (ASTM D-1434)	< 0.003
Water Absorption (%, 24 ^h , r.t.) (ASTM D-570)	0.1
Volume Resistivity (ohm-cm) (ASTM D-257).....	1.0 x 10 ¹⁴



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PHYSICAL / MECHANICAL / ELECTRICAL PROPERTIES (cont.):

Dielectric Strength (volt/10 ⁻³ in) (ASTM D-149)	400
Dielectric Constant (60 cycles) (ASTM D-150).....	4.2
Cathodic Disbondment Test (mm) (80°C / 176°F) (CSA-Z245.20-M92, 28 Days)....	7
Tensile Adhesion to Steel (PSI) (25°C / 77°F) (ASTM D-4541-Type III)	> 3000
Impact (CSA-Z245.20-M92) (@ -30°C ± 3°C)	Spray - Pass 1.5 Joules
Impact (CSA-Z245.20-M92) (@ -30°C ± 3°C)	Brush - Pass 3.0 Joules
Impact (CSA-Z245.20-M92) (@ 25°C ± 3°C)	Spray - Pass 3.0 Joules
Impact (CSA-Z245.20-M92) (@ 25°C ± 3°C)	Brush - Pass 5.0 Joules

CHEMICAL RESISTANCE (One week immersion @ ambient temperatures):

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.

Effective: April 7, 2003