

## Extended Pot Life Epoxy Coating

SP- 2889<sup>®</sup> EPL (Extended Pot Life) is a variation of SP-2888<sup>®</sup> R.G. Epoxy / Polyurethane coating in which the pot life has been extended. This enables the Spray Grade to be applied with airless spray equipment. The performance properties of SP-2889<sup>®</sup> EPL are similar to SP-2888<sup>®</sup> R.G. in which the urethane polymer is pre-bonded to the epoxy resin, rendering the coating “isocyanate free”. The synergistic effect of co-polymerizing epoxy and polyurethane produces a coating with the superior adhesion and corrosion resistance of epoxy along with the added toughness and abrasion resistance of polyurethane. This environmentally friendly, 100% solids, no VOCs & Isocyanate free two component coating system is available in Spray Grade and Brush Grade.



**Applications:** SP- 2889<sup>®</sup> EPL can be used as an internal lining for pipelines carrying crude oil, natural gas or processed water or an exterior coating for pipelines in buried or immersed services.



### Features & Benefits

- Excellent resistance to high temperature cathodic disbonding up to 80°C (176°F)
- Excellent adhesion to grit steel surfaces, Fusion Bond Epoxy (FEB), Fiber Reinforced Plastic (FRP), Polyolefin (PP/PE)
- 100% Solids, zero VOCs, Isocyanate free, environmentally friendly & safe
- Good flexibility
- Excellent chemical, abrasion and impact resistance
- Easily applied by spray, brush or roller

*The World Leader in Specialty Coatings*

# SP-2889<sup>®</sup> EPL

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### Technical Data

<b>Solid Content</b>	100%		
<b>Colour:</b>	Base: Grey	Activator: Clear	Mixed: Grey
<b>Theoretical Coverage:</b>	1.0 m <sup>2</sup> /Litre/mm (1604 ft <sup>2</sup> /US Gallon/mil)		
<b>Recommended Thickness:</b>	Wet & Dry: 0.50 mm to 1.25 mm (20.0 mils to 50.0 mils) Depends upon application; consult with SPC Representative		
<b>Specific Gravity:</b>	Base: 1.68±0.03	Hardener: 1.07±0.03	Mixed Material: 1.53±0.03
<b>Mixing Ratio by Volume:</b>	3 parts Base to 1 part Hardener		
<b>Spray &amp; Brush Grade</b>	3 parts Base to 1 part Hardener		

### Typical Performance Properties

<b>Service Temperature</b>	Up to 80°C (176°F)
<b>Adhesion to Steel</b>	@ 25°C (77°F): >20 MPa (>3000 psi) (ASTM D4541)
<b>Cathodic Disbondment resistance</b>	28 days @ 25°C (77°F) : 1.97 mmR (CSA-Z245.20) 28 days @ 65°C (149°F) : 5.78 mmR (CSA-Z245.20) 28 days @ 80°C (77°F) : 8.00 mmR (CSA-Z245.20)
<b>Impact Resistance</b>	@ 25°C (77°F): 3.0 J (2.21 ft-lbf) (CSA-Z245.20-10) @ -30°C (-22°F): 1.5 J (1.11 ft-lbf) (CSA-Z245.20-10)
<b>Elongation at Break</b>	@ 25°C (77°F): 9.0% (ASTM D638)
<b>Dielectric Strength</b>	400 Volt/10 <sup>-3</sup> in (ASTM D149)
<b>Dielectric Constant</b>	4.2 (ASTM D150, 60 cycles)
<b>Tensile Strength</b>	25°C (77°F): 42.7 MPa (6200 psi) ASTM D638
<b>Chemical Resistance</b>	No change in various chemical solutions (ASTM G20, 90day immersion, R.T.)
<b>Water Absorption</b>	< 0.1% (ASTM D570, (%), 24h, R.T.)
<b>Water Vapour Permeability</b>	< 0.003 perm-in (ASTM D1434)
<b>Volume Resistivity</b>	1.0 x 10 <sup>14</sup> (ohm-cm) (ASTM D257)
<b>Hardness</b>	25°C (77°F): 85 Shore D (ASTM D2240)

### Surface Preparation

<b>Steel Substrate:</b>	Cleanliness: Near-White
	Standards: NACE No. 2/ SSPC SP-10, SA 2.5 (ISO 8501-1)
	Profile: 62.5 microns minimum to 125 microns maximum (2.5 mils to 5.0 mils).

### Coating Application

<b>Application Equipment</b>	Spray Grade	Airless Spray – Graco 45:1 or higher is recommended. Suggested Tip Size: .021
	Brush Grade	Brush or Roller
<b>Mixing &amp; Thinning:</b>	After mixing, a minimum of five (5) minutes induction time is required prior to the spray application. Do not thin.	
<b>Application Conditions</b>	Ambient Temperature:	Minimum Ambient Application Temperature: -40°C (-40°F) to 50°C (122°F)
	Substrate Temperature:	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.
	Material Temperature:	SP-2889 <sup>®</sup> EPL Spray Grade Base and Hardener must be preheated to a temperature of 40°C (104°F) prior to mixing. In cold climates or when fan atomization is difficult, a gravity feed hopper combined with an inline fluid heater may be desired.
	Shelf Life:	SP-2889 <sup>®</sup> EPL has a maximum Shelf Life of 24 months from the date of manufacture if the materials are in unopened containers.

### Storage and Shelf Life

Store in a cool, dry, well-ventilated area at temperatures between 5°C (41°F) and 40°C (104°F). Keep in a tightly sealed container when not in use. The shelf life of SP-2889<sup>®</sup> EPL is a maximum of 24 months from the date of manufacture if the materials are in unopened containers. DO NOT FREEZE.

All information, recommendations, and test performance results herein were obtained in a controlled environment and SPC makes no claim that the data and tests accurately represent all environments and specific project specification requirements. As application, environmental and design factors can vary significantly, due care should be exercised in the selection and use of the coating. SPC products are sold with the understanding that the purchaser or user is solely responsible for determining their suitability for any purpose, and that the purchaser or user assumes all risks and liability associated with the use of the product. No guarantee, either expressed or implied, is made with respect thereto or with respect to the infringement of any patent. The information herein is not to be copied, used in evidence, released for publication, or public distribution without written permission from Specialty Polymer Coatings.

# SP-2889<sup>®</sup> EPL

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### Pot Life and Cure Times

**Pot Life:** 2 hour @ 25°C (77°F)

**Recoat Interval:**

25°C (77°F) @ 50% RH

**Maximum 2 hours**

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 the product application temperature. The recommended recoat intervals are general guidelines only. SP-2889<sup>®</sup> EPL is a one-coat application system. However, if there are areas below the specified thickness and the coating has cured beyond the specified re-coat window, roughening of the surface is necessary to ensure inter-coat adhesion. Contact your SPC representative for assistance in determining minimum and maximum recoat intervals specific to your application.

**Dry Time:** (ASTM D 1640): @25°C (77°F)

Touch Dry: 4 hours

Hard Dry: 12 hours

Full Cure: 4 days

### SP-2889<sup>®</sup> EPL Curing Table

SUBSTRATE TEMPERATURE	DRY HARD CURING TIME
	0.63 mm (22 mils) DFT as per ASTM D-1640
90°C (194°F)	9 minutes
80°C (176°F)	23 minutes
70°C (158°F)	47 minutes
60°C (140°F)	1 hour 25 minutes
50°C (122°F)	3 hours 20 minutes
40°C (104°F)	4 hours
30°C (86°F)	8 hours 45 minutes
25°C (77°F)	12 hours
20°C (68°F)	21 hours
10°C (50°F)	27 hours

Material Temperature: Base & Hardener: 25° C (77°F).  
Note: This information is to serve as a guide only. The test results were compiled under laboratory-controlled conditions. Field results may vary due to variable conditions such as radiant heat loss and the cooling effects of wind.

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

Effective Date: March 13, 2017.

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