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PRODUCT DATA SHEET

SP-1891 PRIMER

DESCRIPTION: Specialty Polymer Coatings, Inc.'s ("SPC's") **SP-1891 Primer** is a two-component Ultra High Solids modified epoxy primer specifically formulated to provide superior adhesion between three-layer ("3L") Polypropylene ("PP") and liquid epoxy joint coatings. **SP-1891 Primer** over-coated with SP-8888[®] topcoat is suitable for high temperature operating pipelines.

ADVANTAGES:

- Provides outstanding adhesion to properly prepared PP surfaces and liquid epoxy field joint coatings.
- Ultra High Solids (95%).
- Excellent surface wetting of treated 3L PP.

USES:

- Adhesion enhancer for liquid epoxy joint coatings when utilized on pipelines coated with 3L PP.

APPLICATION:

- Brush Grade: Brush or roller.

SURFACE PREPARATION:

- All surfaces to be treated or coated shall be free of grease, oil, moisture, soil, dust, abrasive material and all other contaminants.
- The surface of the PP shall be prepared by either sanding or sweep blasting, and then shall be flame treated before application of SP-1891 Primer. Refer to the SP-1891 Primer Application Specification.



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SURFACE PREPARATION (cont.):

Step 1: Use either the sanding or sweep blasting procedure:

- A) Sanding procedure: Thoroughly sand the PP surface to be coated using an electric sheet sander fitted with 80 grit sandpaper. There should be **NO GLOSSY OR SHINY** areas on the PP surface, these areas or missed spots must be re-sanded. The sandpaper must be changed when it is plugged with PP dust and no longer effective. All sanding dust must be removed before flame-treating to avoid adhesion problems with SP-1891 Primer.

- B) Sweep blasting procedure: Sweep blast or brush off blast (SSPC SP 7) the PP surface to be coated using grit abrasive. Avoid aggressive blasting of the PP surface because this will cause a “burr” or carpet like effect on the surface that will lead to poor adhesion. The resulting surface roughness profile shall be 75-100 microns (3-4 mils). There should be **NO GLOSSY OR SHINY** areas on the PP surface, these areas or missed spots must be re-blasted. All dust must be removed before flame-treating to avoid adhesion problems with SP-1891 Primer.

Step 2: Flame-treat the PP surface using an SPC Plasma Torch fitted with a flame spreader. The surface tension reading should be between 52-70 dynes/cm. Refer to SPC’s SP-1891 Primer Application Specification. Contact an SPC Technical Representative for information on the appropriate flame treatment torch to use.

MIXING RATIO: By Volume: 6 Parts Base to 1 Part Hardener.

MIXING INSTRUCTIONS:

- Base and Hardener components are to be uniformly mixed together using a variable speed drill fitted with a mixing impeller. During mixing, care is to be taken to prevent the introduction of air into the product.
- Refer to the SP-1891 Primer Application Specification.



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RECOMMENDED FILM THICKNESS:

- 100-150 microns (4-6 mils) on the sanded or sweep blasted PP surface.
- The maximum allowable DFT is 400-480 microns (10-12 mils).

APPLICATION INSTRUCTIONS:

- Avoid coating the blasted bare steel surface with SP-1891 Primer. If any Primer is accidentally spilled onto the steel surface, remove it with a clean cloth.
- Refer to the SP-1891 Primer Application Specification.

CURING AND RE-COAT INTERVAL:

- Allow the SP-1891 Primer to flash off for 10 minutes, then post cure or post heat to a surface temperature of 80°C (176°F) and maintain at this temperature until the SP-1891 Primer reaches a slightly tacky stage [approximately seven (7) minutes]. Lower temperatures may require a longer post curing time.
- Avoid leaving the SP-1891 Primer without over-coating for an extended time due to the increased possibility of surface contamination by airborne particles.
- The maximum over-coat time at 25°C (77°F) is six (6) hours.

HANDLING PROPERTIES:

Pot Life [25°C (77°F)].....	45 ± 10 Minutes
Minimum Application Temperature.....	10°C (50°F)
Substrate Temperature.....	The substrate temperature must be a minimum of 3°C (5°F) above the dew point temperature to avoid the risk of condensation.
Storage / Shelf Life.....	Store in a cool, dry, well-ventilated area at temperatures between 5°C (41°F) and 40°C (104°F) away from incompatible materials and all sources of ignition. Keep in a tightly sealed container. The Shelf Life is a maximum of 24 months in unopened containers.

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.



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LIQUID PROPERTIES:

Appearance	Light Green
Volume Solids Content (%)	95%
Specific Gravity (ASTM D1475)	1.29 ± 0.03 (Base)
	1.04 ± 0.03 (Hardener)
Coverage (Theoretical, Base & Hardener Mixed).....	37.0 m ² /Litre/25 microns [1509 ft ² /U.S. Gallon/mil]

PHYSICAL PROPERTIES:

Adhesion to PP:

Dry Adhesion [MPa (psi)] [ASTM D4541-95-A4 (Pull-off Strength)] (Self-Alignment Adhesion Tester, Type IV) [25°C (77°F)].....	>17.24 (>2500)
Wet Adhesion [MPa (psi)] [ASTM D4541-95-A4 (Pull-off Strength)] (Self-Alignment Adhesion Tester, Type IV) [28 Days, 65°C ± 3°C (149°F ± 5°F)]	>12.41 (>1800)
Wet Adhesion [CSA Z245-20-06, Clause 12.14 (Hot Water Soak)] [28 Days, 65°C ± 3°C (149°F ± 5°F)]	Rating #2

SAFETY: Read the Material Safety Data Sheets before use.

EFFECTIVE DATE: October 21, 2016

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