



## Technical Data Sheet

4/2/2019

# EZ-Spray Ceramic Blue/Red

**Description:** A sprayable, solvent-free, high performance ceramic-filled epoxy for sealing, protecting and repairing surfaces subject to erosion, corrosion and wear. Significantly reduces equipment repair time with easy-to-use delivery system.

**Intended Use:** Seal and protect new equipment exposed to erosion and corrosion; protect pump casings, impeller blades, gate valves, water boxes, flotation cells, fan blades and scrubbers; rebuild heat exchangers, tube sheets, and other water circulating equipment; top coat for providing exceptionally smooth surface to repaired equipment.

**Product features:**  
**Fast application time due to spray delivery and automix nozzle.**  
**Eliminate product wastage. Cartridge allows for use of partial portions.**  
**Excellent chemical resistance.**  
**Temperature resistance to 350°F.**  
**No VOCs.**  
**Fast cure time.**

**Limitations:** Product must be a minimum of 72°F to spray. Heating product to 85-90°F will improve spray characteristics.

**Typical Physical Properties:** *Technical data should be considered representative or typical only and should not be used for specification purposes.*

**Cured 7 days @ 75° F**

|  |                                   |
|--|-----------------------------------|
| <b>Adhesive Tensile Shear</b>            | <b>2,000 psi</b>                  |
| <b>Coefficient of Thermal Expansion</b>  | <b>25.6 [in/in/°F]x10(-6)</b>     |
| <b>Color</b>                             | <b>Blue or Red</b>                |
| <b>Compressive Strength</b>              | <b>13,700 psi</b>                 |
| <b>Coverage per Unit</b>                 | <b>28.2 sq ft at 15 mil</b>       |
| <b>Cured Hardness</b>                    | <b>85 D</b>                       |
| <b>Cured Shrinkage</b>                   | <b>0.0020 in./in.</b>             |
| <b>Dielectric Constant</b>               | <b>3.87 @ 1 MHz</b>               |
| <b>Flexural Strength</b>                 | <b>8,000 psi</b>                  |
| <b>Functional Cure</b>                   | <b>16 hours</b>                   |
| <b>Mix Ratio by Volume</b>               | <b>3 : 1</b>                      |
| <b>Mix Ratio by Weight</b>               | <b>5.0 : 1</b>                    |
| <b>Mixed Viscosity</b>                   | <b>30,000 cPs</b>                 |
| <b>Pot Life at 75°F</b>                  | <b>40 minutes</b>                 |
| <b>Recoat Time</b>                       | <b>4-6 hours</b>                  |
| <b>Salt Spray Resistance</b>             | <b>5,000 hours</b>                |
| <b>Solids by Volume (%)</b>              | <b>100</b>                        |
| <b>Specific Gravity</b>                  | <b>1.62</b>                       |
| <b>Specific Volume</b>                   | <b>17.1 in.(3)/lb.</b>            |
| <b>Spray Coat Thickness</b>              | <b>15-22 mils (.015-.022 in.)</b> |
| <b>Taber Wear (CS17,1kg,1000 cycles)</b> | <b>49 mg loss</b>                 |
| <b>Temperature Resistance</b>            | <b>Wet: 150°F; Dry: 350°F</b>     |

**TESTS CONDUCTED**

Flexural Strength ASTM D 790  
 Adhesive Tensile Shear ASTM D 1002  
 Coef. of Thermal Expansion ASTM D 696  
 Compressive Strength ASTM D 695  
 Cure Shrinkage ASTM D 2566  
 Cured Hardness Shore D ASTM D 2240  
 Dielectric Constant ASTM D 150

**Surface Preparation:**

1. Thoroughly clean the surface with Devcon® Cleaner Blend 300 to remove all oil, grease and dirt.
2. Grit blast surface area with 8-40 mesh grit, or grind with a coarse wheel or abrasive disc pad, to create increased surface area for better adhesion (Caution: An abrasive disc pad can only be used provided white metal is revealed). Desired profile is 3-5mil, including defined edges (do not "feather-edge" epoxy).

Note: For metals exposed to sea water or other salt solution, grit-blast and high-pressure-water-blast the area, then leave overnight to allow any salts in the metal to "sweat" to the surface. Repeat blasting to "sweat out" all soluble salts. Perform chloride contamination test to determine soluble salt content (should be no more than 40ppm).

3. Clean surface again with Devcon® Cleaner Blend 300 to remove all traces of oil, grease, dust, or other foreign substances from the grit blasting.
4. Coat surface as soon as possible to eliminate any changes or surface contaminants.

**Mixing Instructions:**

It is recommended that cartridge, component, and ambient temperature be 72-90°F when spraying. The optimum cartridge temperature for spraying is approximately 85-90°F.  
 In cold working conditions, directly heat repair area to 80-90°F prior to applying epoxy and maintain at this temperature during product cure.  
 Applying epoxy at temperatures below 70°F lengthens pot life and functional cure times. Applying above 70°F shortens pot life and functional cure times.  
 For detailed User Instructions of cartridge/gun use, refer to literature provided within each case of product or visit [www.itwpp.com](http://www.itwpp.com).  
 Remove outer shrink wrap from cartridge.  
 With cartridge in a vertical position, nose end up, remove retaining nut and nose plug. Angle cartridge slightly to cause air pocket on hardener side to be positioned at the discharge port. Ensuring the discharge port is pointed away from the operator or other personnel, gently push up on the hardener piston until the air is fully evacuated and a small amount of hardener discharges. Reinsert nose plug and retaining nut.  
 Load cartridge firmly into dispenser until fully seated.  
 Connect main air supply. Maximum operating pressure is 100 psi (7 bar).  
 Close atomizing air (set to zero) using adjustment wheel at the base of the grip. Set plunger speed to lowest setting using adjustment wheel dial behind the trigger, at the top of the grip.  
 Remove retaining nut and nose plug. Pull trigger fully until A and B components are visually confirmed to flow regularly from the discharge ports. If necessary, slightly increase plunger speed setting to initiate flow. If one or both of the materials does not flow, inspect the discharge port for blockage.  
 Attach mix-spray nozzle to cartridge and secure with retaining nut.  
 Connect atomizing air line to the mix-spray nozzle tip.  
 Close the atomizing air and reduce the plunger speed to lowest setting.  
 Directing nozzle tip into a proper waste receptacle, pull trigger fully and increase plunger speed until desired flow rate is reached. The maximum setting of 8 may be desirable.  
 Keeping trigger fully engaged, adjust the atomizing air to achieve desired spray pattern.

**Application Instructions:**

Pull trigger fully. Initially direct the product spray away from the component to be coated and purge (dispense as waste) a minimum of 25 grams of product. Without releasing the trigger, direct product spray onto the component.  
 During spray dispensing it is best to maintain uninterrupted product flow. Stop-Start of the trigger should be minimized. Enact purge step again if the trigger is released and then product flow restarted at any time.  
 When finished spraying, to limit drips from the spray tip, do not release the trigger completely. Rather, release the trigger by first pausing at the first stage of trigger pull resulting in air flow only. Then release the trigger completely.  
 Press the red button at base of the grip to retract the plungers.  
 Remove atomizing air line from spray nozzle tip. Push out the cartridge from below while lifting it upwards.  
 Two coats of 15+ mil each are recommended to limit pinholes and holidays.  
 The second coat should be applied when the first coat is firm yet lightly tacky (approximately 4-6 hours at 72°F). If the optimum recoat window is exceeded, the surface should be lightly abraded and wiped with a clean cloth dampened with isopropyl alcohol prior to applying the second coat.

**Storage:**

Store in a cool, dry place.

**Compliances:**

None

**Chemical Resistance:**

*Chemical resistance is calculated with a 7 day, room temp. cure (30 days immersion) @ 75°F*

|                         |           |
|-------------------------|-----------|
| Benzene                 | Excellent |
| Gasoline (Unleaded)     | Excellent |
| Hydrochloric 10%        | Very good |
| Kerosene                | Excellent |
| Mineral Spirits         | Excellent |
| Nitric 50%              | Poor      |
| Phosphoric 10%          | Very good |
| Potassium Hydroxide 40% | Excellent |

|                      |           |
|----------------------|-----------|
| Sodium Hydroxide 10% | Excellent |
| Sodium Hydroxide 50% | Excellent |
| Sodium Hypochlorite  | Very good |
| Sulfuric 10%         | Very good |
| Sulfuric 50%         | Fair      |
| Toluene              | Excellent |
| Xylene               | Fair      |

**Precautions:**

Please refer to the appropriate safety data sheet (SDS) prior to using this product.

**For technical assistance, please call 1-855-489-7262**

**FOR INDUSTRIAL USE ONLY**

**Warranty:**

ITW Performance Polymers will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control, we can accept no liability for the results obtained.

**Disclaimer:**

All information on this data sheet is based on laboratory testing and is not intended for design purposes. ITW Performance Polymers makes no representations or warranties of any kind concerning this data.

**Order Information:**

11781 Blue 1000 ml cartridge  
 11780 Red 1000 ml cartridge

