Technical Data Sheet

4/14/2018

FasMetal™

Description: A high-performance, fast-curing 100% solids epoxy for emergency repairs to stainless steel, equipment that needs good chemical resistance.

Intended Use: Repair breakers and transformers in an emergency; patch holes and leaks in coal fuel lines; repair cracks in housing and pipes; rebuild keyways and treads

Product features:
Can be applied in temperatures as low as 40°F
Full cure in 6 hours
Easy to use 1:1 formula
Sets up in 5 minutes

Limitations: Not recommended for long term exposure to concentrated acids and organic solvents

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	
Adhesive Tensile Shear	**2,000 psi**
Coefficient of Thermal Expansion	**32 [(in.) / (in). x °F)] x 10(-6)**
Color	**Grey**
Compresive Strength	**12,700 psi**
Coverage/lb	**69 sq.in./3/4 lb. @ 1/4"**
Cured Hardness	**90D**
Cured Shrinkage	**.0093 in./in.**
Dielectric Constant	**18.6**
Dielectric Strength	**370 volts/mil**
Flexural Strength	**7,700 psi**
Functional Cure	**1 hr.**
Mix Ratio by Volume	**1:1**
Mix Ratio by Weight	**1.07:1**
Mixed Viscosity	**Non-sag putty**
Modulus of Elasticity	**8.5 psi x 10(5)**
Pot Life @ 75F	**4 min. (3/4 lb. mass)**
Recoat Time	**30 min.**
Solids by Volume	**100%**
Specific Gravity	**1.69 gm/cc**
Specific Volume	**17.2 in.(3)/lb.**
Temperature Resistance	**Wet: NR; Dry: 250°F**
Thermal Conductivity	**2.04[cal/(secxcmx°C)]x10(-3)**

TESTS CONDUCTED

Coef. of Thermal Expansion ASTM D 696
Cure Shrinkage ASTM D 2566
Dielectric Constant ASTM D 150
Flexural Strength ASTM D 790
Thermal Conductivity ASTM C 177
Adhesive Tensile Shear ASTM D 1002
Compressive Strength ASTM D 695
Cured Hardness Shore D ASTM D 2240
Dielectric Strength, volts/mil ASTM D 149
Modulus of Elasticity ASTM D 638

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. Repair surface as soon as possible to eliminate any changes or surface contaminants.

WORKING CONDITIONS: Ideal application temperature is 55°F to 90°F. In cold working conditions, directly heat repair area to100-110°F prior to applying epoxy and maintain at this temperature during product cure to dry off any moisture,

contamination or solvents, as well as to achieve maximum performance properties.

Mixing Instructions:

---- It is strongly recommended that full units be mixed, as ratios are pre-measured. ----

1. Add hardener to resin.
2. Mix thoroughly with screwdriver or similar tool (continuously scrape material away from sides and bottom of container) until a uniform, streak-free consistency is obtained.

INTERMEDIATE SIZES (1,2,3 lb. units): Place resin and hardener on a flat, disposable surface such as cardboard, plywood or plastic sheet. Use a trowel or wide-blade tool to mix the material as in Step 2 above.

LARGE SIZES: (25 lb., 30 lb., 50 lb. buckets): Use a T-shaped mixing paddle or a propeller-type Jiffy Mixer Model ES on an electric drill. Thoroughly fold putty by vigorously moving paddle/propeller up and down until a homogenous mix of resin and hardener is attained.

Application Instructions:

Spread mixed material on repair area and work firmly into substrate to ensure maximum surface contact. FasMetal™ fully cures in 16 hours, at which time it can be machined, drilled, or painted.

FOR BRIDGING LARGE GAPS OR HOLES
Place fiberglass sheet, expanded metal, or mechanical fasteners between repair area and FasMetal™ prior to application.

FOR VERTICAL SURFACE APPLICATIONS
FasMetal™ can be troweled up to ¼" thick without sagging.

FOR MAXIMUM PHYSICAL PROPERTIES
Cure at room temperature for 2.5 hours, then heat cure for 4 hours @ 200°F.

FOR ± 70°F APPLICATIONS
Applying epoxy at temperatures below 70°F lengthens functional cure and pot life times. Conversely, applying above 70°F shortens functional cure and pot life.

Storage: Store at room temperature, 70 °F.

Compliances: None

Chemical Resistance:

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

1,1,1-Trichloroethane	Fair	Phosphoric 10%	Fair
Ammonium Hydroxide 20%	Fair	Potassium Hydroxide 40%	Fair
Cutting Oil	Very good	Sodium Chloride Brine	Fair
Gasoline (Unleaded)	Very good	Sodium Hydroxide 10%	Fair
Hydrochloric 10%	Fair	Sodium Hydroxide 50%	Poor
Methyl Ethyl Ketone	Poor	Sodium Hypochlorite	Fair
Methylene Chloride	Poor	Sulfuric 10%	Fair
Mineral Spirits	Very good	Trisodium Phosphate	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: **10780 0.75 lb.**