Technical Data Sheet
Version 3. 04/2023

FasMetal™

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

Intended Use: Industrial 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

Features:
Can be applied in temperatures as low as 40°F (4.4°C)
Full cure in 6 hours
Easy to use 1:1 formula
Sets up in 5 minutes

Limitations: Suitability of product is determined by the end user for their application and process.

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 (24°C)	Typical Values	Standard Tests
Adhesive Tensile Shear	2,000 psi (13.79 MPa)	Coef. of Thermal Expansion ASTM D 696
Coefficient of Thermal Expansion (x10-6)	32 in/in.°F (57.6 cm/cm.°C)	Cure Shrinkage ASTM D 2566
Compressive Strength	12,700 psi (87.6 MPa)	Dielectric Constant ASTM D 150
Coverage (1/4" / 6.35mm)	69 in2/lb (978 cm2/Kg)	Flexural Strength ASTM D 790
Cured Shrinkage	0.0093 in/in (cm/cm)	Thermal Conductivity ASTM C 177
Dielectric Constant	18.6	Adhesive Tensile Shear ASTM D 1002
Dielectric Strength	370 volts/mil (14.6 kV/mm)	Compressive Strength ASTM D 695
Flexural Strength	7,700 psi (53 MPa)	Cured Hardness Shore D ASTM D 2240
Hardness	90 Shore D	Dielectric Strength, volts/mil ASTM D 149
Solids by Volume	100%	Modulus of Elasticity ASTM D 638
Temperature Resistance	Wet: NR; Dry: 250°F (121°C)	
Thermal Conductivity (x10-3)	2.04 cal/(sec.cm.°C)	
Uncured Properties @ 72°F (23°C)		
Color	Grey	
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 x10^5 (5860 MPa)	
Pot Life @ 75F	4 min (3/4 lb. mass)	
Recoat Time	30 min	
Specific Gravity	14.1 lb/Gal (1.69 g/cm3)	
Specific Volume	17.2 in3/lb (0.621 cm3/g)	

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 (0.076-0.13 mm), 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 40 ppm).

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 (13°C- 32°C). In cold working conditions, directly heat repair area to 100°F-110°F (38°C to 43°C) 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. / 0.45, 0.9, 1.3 kg 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.

Application Instructions:

LARGE SIZES: (25 lb., 30 lb., 50 lb. / 11.3, 13.6, 22.7 kg buckets): Use a T-shaped mixing paddle or a propeller-type Jiffy Mixer Model ESon an electric drill. Thoroughly fold putty by vigorously moving paddle/propeller up and down until a homogenous mixof resin and hardener is attained.

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 (93°C).

FOR ± 70°F (21°C) APPLICATIONS
Applying epoxy at temperatures below 70°F (21°C) lengthens functional cure and pot lifetimes. Conversely, applying above 70°F shortens functional cure and pot life.

Storage:

Shelf life 3 yrs from manufacture. See package label. Store at room temperature, 70 °F (21°C)

Compliances:

None

Chemical Resistance:

Chemical resistance is calculated with a 7 day, room temp. cure (30 days immersion) @ 75°F (24°C)

1,1,1-Trichloroethane	Fair
Ammonium Hydroxide 20%	Fair
Cutting Oil	Very good
Gasoline (Unleaded)	Very good
Hydrochloric 10%	Fair
Methyl Ethyl Ketone	Poor
Methylene Chloride	Poor
Mineral Spirits	Very good

Phosphoric 10%	Fair
Potassium Hydroxide 40%	Fair
Sodium Chloride Brine	Fair
Sodium Hydroxide 10%	Fair
Sodium Hydroxide 50%	Fair
Sodium Hypochlorite	Poor
Sulfuric 10%	Fair
Trisodium Phosphate	Fair

Precautions:

FOR INDUSTRIAL USE ONLY: Please refer to the appropriate **S**afety **D**ata **S**heet prior to using this product.

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.

Order Information:

Item No.	Package Size
10780	0.75 lb (340g)

Contacts:

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Disclaimer: