

TECHNICAL DATA

FASMETAL 10 HVAC REPAIR

Aluminium-Filled Epoxy Paste

Description

Fasmetal 10 HVAC Repair is an aluminium-filled, 1:1 mix epoxy packaged in a 128gm tube kit for repairs to copper coils in HVAC equipment.

Areas of application

- Seal leaks in pipes and tanks
- Repair copper coils in compressors
- Repair holes in aluminium and other metals

Features

- Bonds, patches and seals metals
- Hardens to a rigid material that can be ground, drilled or tapped
- Bonds to aluminium, steel and many other metals, as well as concrete
- Fills voids or pores in castings
- Makes repairs that are non-rusting
- Aids in quickly returning equipment back to service

Chemical Resistance

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

1,1,1 Trichloroethane	Fair	Phosphoric 10%	Fair
Ammonium Hydroxide 20%	Fair	Potassium Hydroxide 40%	Fair
Benzene	Very good	Sodium Chloride Brine	Fair
Cutting Oil	Very good	Sodium Hypochlorite	Fair
Petrol (Unleaded)	Very good	Sulphuric 10%	Fair
Hydrochloric 10%	Fair	Sulphuric 50%	Poor
Methyl Ethyl Ketone	Poor	Trisodium Phosphate	Fair
Methylene Chloride	Poor	Xylene	Fair

The information contained in this Technical Bulletin is as up to date and correct as possible as at the time of issue. The data provided should be used as a guide only as the performance of the product will vary depending on differing operating conditions and application methods.

The sale of any product described in this Technical Bulletin will be in accordance with ITW Polymers & Fluids Conditions Of Sale, a copy of which is available on request. To the extent permitted by law, ITW Polymers & Fluids excludes all other warranties in relation to this product.

Limitations

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

Technical Data

Typical Physical Properties: Cured 7 days @ 24°C

		Test Method
Colour	Aluminium	
Mix Ratio (Resin to Hardener)	Weight 0.9:1 Volume 1:1	
Mixed Viscosity	Paste	
Work Time of 500gms minutes @ 24°C	60	
Cure Time	16 hours	
Recoat Time	10-12 hours	
% Solids by Volume	100	
Specific Volume	581cm ³ /kg	
Specific Gravity	1.72 gm/cm ³	
Cure Shrinkage	0.0008 cm/cm	ASTM D2566
Hardness Shore D	85	ASTM D2240
Adhesive Tensile Shear	17.2 MPa	ASTM D1002
Tensile Strength	22.2 MPa	ASTM D638
Compressive Strength	58 MPa	ASTM D695
Modulus of Elasticity	1739 MPa	ASTM D695
Co-efficient of Thermal Expansion	51 x 10 ⁻⁶ °C ⁻¹	AS TM D696
Thermal Conductivity	1.73 x 10 ⁻³ cal.cm/sec/cm ² .°C	ASTM C177
Dielectric Strength	3937 volts/mm	ASTM D149
Dielectric Constant	21.4	ASTM D150
Flexural Strength	42.2 MPa	ASTM D790
Maximum Operating Temperature	Wet: 43°C, Dry: 120°C	
Coverage (per coat)	232 cm ² /0.184gm @ 5mm	

Directions for use

Surface Preparation

Proper surface preparation is essential to the success of any epoxy application. In all cases the surface should be clean, dry, free from oils, and rough.

1. Remove all oils, dirt and grease by means of a strong cleaner/degreaser (Devcon® Surface Cleaner is suitable for this process).
2. Roughen the surface by grit blasting (8-40 mesh grit) or grinding. A 75-125 micron profile is desired for most applications, 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. All abrasive preparation should be followed by another cleaning to remove any remnants from that process.
4. Repair surface as soon as possible to eliminate any changes or surface contaminants.

Mixing

Ideal application temperature is 13°C - 32°C. Under cold conditions, heating the repair area to 38°C - 43°C is recommended to dry off any moisture, contamination, or solvents, as well as to assist epoxy in achieving maximum adhesion properties.

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Mix Ratio – Resin to hardener: Weight 0.9:1, Volume 1:1

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

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

Application

Spread mixed material over the repair area and work firmly into the substrate to ensure maximum surface contact. Fasmetal 10 HVAC Repair fully cures in 16 hours, at which time it can be machined, drilled, or painted.

For Bridging Large Gaps or Holes

Place fibreglass sheet, expanded metal or mechanical fasteners between repair area and Fasmetal 10 HVAC Repair prior to application.

For Vertical Surface Applications

Fasmetal 10 HVAC Repair can be trowelled up to 12mm thick without sagging. Chemical immersion is possible after 24 hours.

For Maximum Physical Properties

Cure at room temperature for 2 ½ hours, then heat cure for 4 hours @ 100°C.

For ±24°C Applications

Applying epoxy at temperatures below 24°C lengthens functional cure and pot life times. Conversely, applying above 24°C shortens functional cure and pot life.

Compliances

None

Storage and Shelf Life

Store in dry conditions between 10°C and 40°C, away from sources of heat and naked flames. Protect from frost. When stored in original sealed containers, the minimum shelf life is five (5) years.

Packaging

Fasmetal 10 HVAC Repair is available in a 184gm tube kit.

Ordering Information:

184gm Tube Kit

#D19770

Health & Safety Information

The product is non-hazardous. A Material Safety Data Sheet is available from the ITW Polymers & Fluids Technical Department upon request or available on our website www.itw-devcon.com.au.

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