

METAL REPAIR PUTTY

epigen 2008

A two component polymer composite putty system, which produces, when cured, a tough, high strength, infusible material capable of being sanded, machined, drilled and tapped, and worked to any specific configuration. It exhibits excellent adhesion to a variety of metallic substrates such as stainless steel, iron, brass and aluminium as well as ceramics, wood and concrete.

The intrinsic properties of Epigen 2008 allow it to be used for patching, strapping or in sealing applications on metal pipes and tanks, shafts and keyways or on housings and castings.

Negligible shrinkage and excellent compatibility with dissimilar metals takes the use of Epigen 2008 simple to use and can even be painted over to enhance the appearance of the final job.

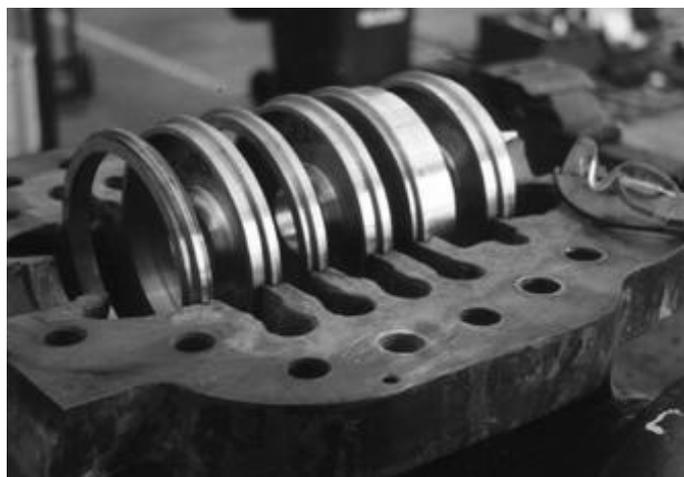
The surface finish may be laid as a thin film with 3mm recommended to be the minimum. It is acceptable to apply high builds in most situations since the thicker the application the more thorough the cure and ultimate life.

TYPICAL APPLICATIONS

Flanges	Bearing Faces
Castings	Shafts Rebuilt
Chutes & Bins	Pipe Elbows
Screens	Valves

FEATURES

- Tough polymer with high adhesive strength
- Easily machinable to very tight tolerance
- Long pot life for ease of use
- Free of all solvents - zero VOC
- Engineered for high mechanical strength
- Versatility in application
- Cures under adverse conditions
- Very easy application in any orientation
- Recoatable with minimal preparation



PROFILE

Colour	Grey
Ratio by weight	1 Parts Component "A" 1 Part Component "B"
Pot Life minutes @ 20°C	30
Mixed consistency @ 20°C	Paste
Specific gravity when mixed	2.0
Coverage, /m ² @ 10mm	20.0kg

TYPICAL CURED PROPERTIES

Compressive strength ASTM D695, Mpa	>60
Tensile strength ASTM D638, Mpa	20
Flexural strength ASTM D790, Mpa	28
Hardness, Shore D	>90
Elongation ASTM D638, %	0.5
Thermal conductivity ASTM C177, Kcal/m.hroC	0.6
Maximum exposure temperature, °C	115
Heat deflection temperature ASTM D648, °C	75
Thin Film Gel @ 5mm, Minutes	180
Thin Film Set @ 5mm, Minutes	240
Ultimate cure time to Service @ 5mm, days	5

This information is supplied as an indicative reference only. Caution should be used where direct comparisons are to be made.

SURFACE PREPARATION

In line with all cases where good adhesion is expected, the substrate should be reasonably clean and free from loose particles. Methods for substrate preparation include abrasive blasting, etching, grinding or scarifying. The technique best suited depends on the substrate, the service conditions, and practical considerations.

In relation to shaft repairs, turn the piece to provide a square shoulder up to which the Epigen 2008 is applied. The area of application should be knurled or roughened before application. Heating the steel after the repair and allowing the conducting heat to cure thoroughly the Epigen 2008 is advisable in cold environments or when very thin applications are applied.

Specialist advice is available from Peerless Industrial Systems to ensure the correct preparation procedure is employed for specific applications.

APPLICATION

Mixing of product should be carried out using slow speed mixers or spatulas, by adding to the component "A", the component "B". Ensure the mix is homogenous, even on colour, and free from lumps.

Application can be carried out by applying mixed compound directly to the desired area or component with gloved hands or by tools such as paint scrapers, putty knives or flat steel trowels, the latter mainly for large horizontal areas. Application can be carried out with relative ease whether in either vertical or horizontal configurations.

Epigen 2008 may be finished smooth with the aid of water for appearance.

RECOMMENDED MACHINING PRACTICES

Although a variety of methods exist for machining Epigen Ceramic Composites, most depend on the individuals own findings and inhouse systems available. The following should only be construed as the starting point guide.

Minimum machined thickness is 0.5mm.

Achievable tolerance is 0.002mm.

Use Tungsten Carbide Tooling after ultimate cure.

Use High Speed Steel Tooling with overnight cure.

Tooling should also be selected relative to substrate.

Cut from centre of Composite repair to parent metal where possible.

CHEMICAL RESISTANCE

Tested at 21°C. Samples cured for 10 days at 25°C.

Curing at elevated temperatures will improve chemical resistance.

1 = Continuous or long term immersion

2 = Short term immersion

3 = Splash and spills

4 = Avoid contact

Acetic Acid, 10 %	2	Acetone	2
Acetic Acid, Glacial	2	Ammonium Chloride	1
Hydrochloric Acid, 5 %	1	Beer	1
Hydrochloric Acid, 10 %	1	Dichloromethane	3
Hydrochloric Acid, conc	2	Diesel Fuel	1
Nitric Acid, 5 %	2	Isopropyl Alcohol	1
Nitric Acid, 10 %	3	Kerosene	1
Phosphoric Acid, 5 %	1	Petrol	1
Phosphoric Acid, 20 %	2	Salt Water	1
Sulfuric Acid, 5 %	2	Sewage	1
Sulfuric Acid, 20 %	2	Skydrol	1
Ammonium Hydroxide, 5 %	1	Sodium Cyanide	1
Ammonium Hydroxide, 20 %	1	Sodium Hypochlorite	2
Potassium Hydroxide, 5 %	1	Toluene	2
Potassium Hydroxide, 20 %	1	Trichloroethane	2
Sodium Hydroxide, 5 %	1	Wine	1
Sodium Hydroxide, 20 %	1	Xylene	1

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CURE

Variations in cure may arise due to the amount of material being applied, the thickness of material being applied, the surface temperature, and the product temperature. The cure may be increased by heating product or by leaving mixed material stand for 15 minutes before use. The cure may be decreased by cooling the product before mixing.

EPIGEN PRODUCTS

MANUFACTURED BY

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