

# BRUSHABLE ABRASION RESISTANT COMPOSITE

## epigen 806BR



### TECHNICAL BULLETIN

A two component, brushable compound containing fine ceramic particles to combat abrasive conditions in a broad range of applications. The epoxy resin base provides additional benefits in the form of superior adhesive strength, high corrosive resistance and excellent mechanical properties and adhering strongly to suitably treated metal, concrete and other substances.

The polymer composite comprises graded sintered ceramic of extreme hardness and abrasion resistance. The polymer binder cures to form an infusible material possessing excellent wear resistance.

806BR passes the requirements for use in Potable Water Applications when assessed to the AS/NZS 4020. A copy of the full report is available for review.

The surface finish should be laid a minimum 0.5mm thick. It is acceptable to apply high builds in most situations since the thicker the application the longer the life.

#### TYPICAL APPLICATIONS

Agitator Shafts	Chutes & Bins
Slurry Lines	Pipe Elbows
Spiral Classifiers	Valves

#### INDUSTRY TYPES IN USE

Iron Ore,	Coal Mining,	Diamond,
Copper,	Nickel,	Gold,
Manganese,	Dredging,	Power Generation,
Quarrying,	WWTP,	Engineering,

#### FEATURES

- Excellent resistance to sliding abrasion
- Suitable for use in Potable Water applications
- Tough polymer with high adhesive strength
- Long pot life for ease of use
- Free of all solvents - zero VOC
- Engineered for high mechanical strength
- Cures under cold adverse conditions
- Easy to apply using brush or trowel
- Recoatible with minimal preparation



#### PROFILE

Colour	Dark Grey
Ratio by weight	1 "A" to 1 "B"
	1 kg Component "A"
	1 kg Component "B"
Pot Life minutes @ 20°C	35
Mixed consistency @ 20°C	Thick Liquid
Specific gravity when mixed	1.8
Coverage, /m <sup>2</sup> @ 10mm	18.0kg

#### TYPICAL CURED PROPERTIES

Compressive strength ASTM D695, Mpa	>70
Tensile strength ASTM D638, Mpa	29
Flexural strength ASTM D790, Mpa	33
Hardness, Shore D	>89
Elongation ASTM D638, %	0.8
Tensile Adhesion ASTM 4541, MPa	>12
Thermal conductivity ASTM C177, Kcal/m.hr° C	0.6
Coeff of Therm Exp ASTM C531, 10 <sup>-5</sup> /° C	2.0
Maximum exposure temperature, ° C	125
Heat deflection temperature ASTM D648, ° C	80
Thin Film Gel @ 1mm, Minutes	180
Thin Film Set @ 1mm, Minutes	240
Ultimate cure time to Service @ 1mm, Hours	72

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

# BRUSHABLE ABRASION RESISTANT COATING epigen 806BR



## 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. 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, and completed by adding to the component "A", the component "B". Ensure the mix is homogeneous and free from lumps.

Application can be carried out by applying mixed compound directly to the desired area or component with brush, squeegee, 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.

806BR may be sprayed. Practical trials and work show HVLP equipment is suitable provided 10 to 20% Epigen Diluent is added to reduce viscosity.



## 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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