

# HI BOND ADHESIVE

## epigen 0911

**epigen**  
Performance Resins &  
Composite Systems

### TECHNICAL BULLETIN

A high strength multipurpose paste suitable for grouting and caulking, designed for use on a variety of surfaces including steel, concrete, timber and fibreglass. Characterised by exceptional toughness and durability, use has extended to ceramic wear tile bedding and grouting, fairing blowholes on concrete, and pitting on steel surfaces prior to coating.

Epigen 911 possesses exceptional water resistance and resistance to a broad range of chemicals including degreasers, cleaners, aviation fuels and lubricants, and a range of acid and alkali reagents.

#### TYPICAL APPLICATIONS

Ceramic Wear Tile Adhesive

Applying Fillets and Aris to Steel Surfaces

Fairing Pitting and Hollows on Steel Tanks

Pile Capping

Concrete Crack and Void Repair

Anti Corrosion Barrier Lining



#### PROFILE

|                                 |  |
|---------------------------------|--|
| Colour                          | Off White                                |
| Ratio by weight                 | 1 kg Component "A"<br>1 kg Component "B" |
| Pot Life minutes @ 24°C         | 30                                       |
| Mixed consistency @ 24°C        | Paste                                    |
| Specific gravity when mixed     | 1.4                                      |
| Coverage /m <sup>2</sup> @ 10mm | 14 kg                                    |

#### TYPICAL CURED PROPERTIES

|   |     |
|---|-----|
| Compressive strength ASTM D695, Mpa                 | 70  |
| Tensile strength ASTM D638, Mpa                     | 18  |
| Flexural strength ASTM D790, Mpa                    | 32  |
| Hardness, Shore D                                   | >85 |
| Elongation ASTM D638, %                             | 1.0 |
| 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                   | 120 |
| Heat deflection temperature ASTM D648, ° C          | 75  |
| Thin Film Gel @ 1mm, Minutes                        | 180 |
| Thin Film Set @ 1mm, Minutes                        | 240 |
| Ultimate cure time, Hours                           | 96  |

#### FEATURES

- Excellent chemical resistance
- Food industry suitable
- Non sag viscosity for easy installation
- Free of all solvents - zero VOC
- Tough and durable
- Versatility in application allows concrete patching
- Suitable on steel to void fill or fair surfaces
- Strongly adhesive for optimum adhesion

**Epigen 911** is supplied as a two part kit comprising component "A" resin, and component "B" curative. The entire kit is supplied in a pre weighed convenient size to make on site activities easier.

Peerless Industrial Systems can provide information on specific applications based on industry acceptable practices or historical results.

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

## SURFACE PREPARATION

Methods for surface preparation prior to use include using chemical means such as washing & etching, high pressure water blasting, or mechanical techniques such as abrasive blasting, grinding or scarifying. Specialist advice is available from Peerless Industrial Systems to ensure the correct preparation procedure is employed for specific application.

## APPLICATION

Mixing of product should be carried out using spatula or by slow speed blender, and completed by adding to the component "A", component "B". Ensure the mix is homogeneous and even in colour.

### Bedding:

In all cases, the minimum depth should be nominally 2mm to ensure sufficient adhesive is in place and afford reasonable compressive strength. There is no maximum thickness requirement. No primer is required to facilitate adhesion unless the surface is loose or friable. In cool environments, pre warm the product before use.

### Adhesive Applications:

Apply a thin coat of Epigen 911 to both surfaces before bringing the two together. Do not use where a flexible or resilient glue line is required. Recommended where strength or heavy shock resistant is required (eg: Ceramic Tiles to Steel on chutes, steel onto steel, concrete onto steel). Preheat the material before use to achieve best cure rate and strength.

### Crack Repairs:

In horizontal installations, open up cracks using a grinder before applying directly into crack. In vertical installations, use an abrasive bit on a drill and follow the crack keeping the surface shoulders narrow.

## COVERAGE GUIDE

### Bedding Application - nominally 5mm thickness

7kg = 1000mm X 1000mm X 5mm

### Adhesive or Void Filling Application

1.4kg = 1 litre

1.4kg = 100mm X 100mm X 100mm

## 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 %   | 2 | Dichloromethane     | 4 |
| Hydrochloric Acid, conc   | 2 | Diesel Fuel         | 1 |
| Nitric Acid, 5 %          | 2 | Isopropyl Alcohol   | 2 |
| Nitric Acid, 10 %         | 2 | Kerosene            | 1 |
| Phosphoric Acid, 5 %      | 1 | Petrol              | 2 |
| Phosphoric Acid, 20 %     | 2 | Salt Water          | 1 |
| Sulfuric Acid, 5 %        | 3 | Sewage              | 2 |
| Sulfuric Acid, 20 %       | 3 | Skydrol             | 2 |
| 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     | 3 |
| Sodium Hydroxide, 5 %     | 1 | Wine                | 2 |
| Sodium Hydroxide, 20 %    | 1 | Xylene              | 2 |

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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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