

# CHEMPROOF HB COATING

## epigen 4029

Designed as the ultimate chemical resistant high build coating, 4029 is based on high performance Novalac resin technology, solventless in nature, to meet the highest practical standards of chemical resistance and corrosion protection achievable.

Primarily a barrier coating or lining suited to treatment of steel, concrete and brick in applications where acids, alkalis, organic solvents, or a number of chemicals in process give rise to problematic conditions.

Novalac functionality and high cross linking density is the key stone of 4029 which also contains a unique fill that offers high resistance to erosion and abrasion without compromising chemical resistance.

### TYPICAL APPLICATIONS

|                            |                         |
|----------------------------|-------------------------|
| Acid Bunds                 | Tanks & Vessels         |
| Rail Cars                  | Scrubbers               |
| Steelwork Coating          | Pipelines & Valves      |
| Solvent Extraction Systems | Acid Sumps & Drains     |
| Ducting Systems            | Acid Fume Proof Roofing |
| Sulfur Pits                | Concrete Repair         |



### PROFILE

|                                  |                           |
|----------------------------------|---------------------------|
| Ratio by weight                  | 2 parts "A" to 1 part "B" |
| Pot Life minutes @ 24°C          | 30                        |
| Mixed consistency @ 24°C         | Viscous Flowable Liquid   |
| Specific gravity when mixed      | 1.5                       |
| Kg/m <sup>2</sup> for 500 micron | 0.75                      |
| Tack free time @ 24°C            | 180 minutes               |

### TYPICAL CURED PROPERTIES

|   |      |
|---|------|
| Compressive strength ASTM D695, Mpa       | >110 |
| Tensile strength ASTM D638, Mpa           | >26  |
| Flexural strength ASTM D790, Mpa          | >50  |
| Hardness, Shore D                         | 80   |
| Dielectric constant ASTM D150 (150KHz)    | 3.0  |
| Maximum exposure temperature, °C          | 125  |
| Heat deflection temperature ASTM D648, °C | 70   |
| Thin Film Gel, (min recoat time) Minutes  | 75   |
| Maximum recoat time, Hours                | 48   |
| Ultimate cure time to Service, Hours      | 96   |

### FEATURES

- Superior Novalac polymer system
- Highly erosion resistant fill
- Application DFT up to 1000 micron in the one coat
- Free of all solvents - zero VOC
- Outstanding resistance to chemicals & acids
- Versatility in application - can be used with GF
- Suitable in patching or repair of mortar

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

## SURFACE PREPARATION

Methods for substrate preparation may include chemical means such as washing & etching, high pressure water blasting, or traditional abrasive blasting techniques . Caution should be maintained in selecting a technique that provides satisfactory anchor for the lining. 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 and completed by adding to the part "A", the part "B". Ensure the mix is homogeneous and free from lumps. Avoid air entrainment.

4029 can be applied either by airless spray, brush or roller. Since it does not contain solvents, application by spray allows the application of high film thicknesses in single coats, and ensures that all material purchased actually contributes to the final DFT. 4029 is a higher viscosity than conventional solvent containing coatings and application may require more specialised practices but is generally compensated for by the speed of application and need to apply fewer coats.

Epigen Diluent maybe added to 4029 to control viscosity under some circumstances. Avoid excessive additions and do not add Diluent in confined spaces or near naked flame. Do not add thinners to extend pot life.

In concrete correction applications, blow holes, cracks, or significant damage maybe faired by mixing 1 part 4029 with 1.5parts 30/50 sand and applying the paste to the damaged areas. This practice should be employed after the first coat application when the extent of degradation becomes apparent and before second coat application.

4029 is a functional, industrial finish and is not developed to possess asthetic properties such as high gloss which would enable it to be used where appearance is particularly important.

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## 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   | 1 | Diesel Fuel         | 1 |
| Nitric Acid, 5 %          | 2 | Isopropyl Alcohol   | 1 |
| Nitric Acid, 10 %         | 2 | Kerosene            | 1 |
| Phosphoric Acid, 5 %      | 1 | Petrol              | 1 |
| Phosphoric Acid, 20 %     | 1 | Salt Water          | 1 |
| Sulfuric Acid, 20 %       | 1 | Sewage              | 1 |
| Sulfuric Acid, 75 %       | 1 | Skydrol             | 1 |
| Sulfuric Acid, 98 %       | 2 | Sodium Cyanide      | 1 |
| Ammonium Hydroxide, 20 %  | 1 | Sodium Hypochlorite | 1 |
| Ammonium Hydroxide, 50 %  | 1 | Toluene             | 2 |
| Potassium Hydroxide, 5 %  | 1 | Trichloroethane     | 2 |
| Potassium Hydroxide, 20 % | 1 | Vinegar             | 1 |
| Sodium Hydroxide, 20 %    | 1 | Wine                | 1 |
| Sodium Hydroxide, 50 %    | 1 | Xylene              | 2 |

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Note : Under acidic conditions, 4029 has been designed to change colour allowing OH&S steps to be taken in cleaning up spills or as a warning to beware.

## 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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