

CHEMPROOF HB COATING FC

epigen 4029FC



Performance Resins &
Composite Systems

TECHNICAL BULLETIN

Epigen 4029FC was designed as the ultimate chemical resistant high build coating. Epigen 4029FC has increased resistance to chemicals and higher strength but requires consideration for a very short pot life and fast cure. Epigen 4029FC is based on high performance Novolac resin technology with a fast acting cycloaliphatic amine, and maintains solventless character to meet the highest 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.

Novolac functionality and high cross linking density is the key stone of Epigen 4029FC technology 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	4 parts "A" to 1 part "B"
Pot Life minutes @ 24°C	<20
Mixed consistency @ 24°C	Viscous Flowable Liquid
Specific gravity when mixed	1.6
Kg/m ² for 500 micron	0.8
Tack free time @ 24°C	60 minutes

TYPICAL CURED PROPERTIES

Compressive strength ASTM D695, Mpa	>115
Tensile strength ASTM D638, Mpa	>26
Flexural strength ASTM D790, Mpa	>50
Hardness, Shore D	84
Dielectric constant ASTM D150 (150KHz)	3.0
Maximum exposure temperature, °C	125
Heat deflection temperature ASTM D648, °C	85
Thin Film Gel, (min recoat time) Minutes	20
Maximum recoat time, Hours	24
Ultimate cure time to Service, Hours	24

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

FEATURES

- Superior Novolac 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
- Fast Cure allows rapid return to service

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.

4029FC can be applied 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 ensuring all material purchased contributes to the final DFT. Epigen 4029FC is a higher viscosity than solvent based coatings and application may require more specialised practices but is generally compensated for by the speed of application.

Epigen Diluent maybe added to Epigen 4029FC to control viscosity in limited cases. Do not add Epigen Diluent when it is cold, wet, 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 may be faired by mixing 1 part 4029FC 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.

Epigen 4029FC 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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rev5,2021/Jan

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 %	1	Acetone	1
Acetic Acid, Glacial	2	Ammonium Chloride	1
Hydrochloric Acid, 5 %	1	Beer	1
Hydrochloric Acid, 10 %	1	Dichloromethane	2
Hydrochloric Acid, conc	1	Diesel Fuel	1
Nitric Acid, 5 %	1	Isopropyl Alcohol	1
Nitric Acid, 10 %	2	Kerosene	1
Phosphoric Acid, 10 %	1	Petrol	1
Phosphoric Acid, 35 %	1	Salt Water	1
Sulfuric Acid, 30 %	1	Sewage	1
Sulfuric Acid, 70 %	1	Skydrol	1
Sulfuric Acid, 98 %	1	Sodium Cyanide	1
Ammonium Hydroxide, 5 %	1	Sodium Hypochlorite	1
Ammonium Hydroxide, 20 %	1	Toluene	2
Potassium Hydroxide, 5 %	1	Trichloroethane	1
Potassium Hydroxide, 20 %	1	Wine	1
Sodium Hydroxide, 20 %	1	Xylene	1
Sodium Hydroxide, 50 %	1		

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Note : Under acidic conditions, Epigen 4029FC 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

Peerless Industrial Systems Pty Ltd

ABN 14 097 615 391

79 Robinson Ave, Belmont, WA 6104

PO Box 407, Cloverdale, WA 6985

Phone: (08) 9477 3788 Fax: (08) 9477 3766

Email: service@peerlessindustrialsystems.com

www.peerlessindustrialsystems.com

www.epigen.com.au