

## CHEMICAL RESISTANT EPOXY MORTAR

**HIGH RESISTANCE TO A WIDE RANGE OF  
CORROSIVE CHEMICALS  
HIGH IMPACT AND ABRASION RESISTANCE  
NON-POROUS GROUTING SYSTEM FOR ACID  
RESISTANT BRICKING  
QUICK CURING**

### PRINCIPAL USES

Chemical and wear resistant mortar and grout for chemical plants, mineral processing facilities, sewage works and other problem areas where conventional mortars and resin systems fail.

### RESISTANCE

**Weather:** Excellent resistance. Surface will chalk.

**Temperature:** Good resistance to temperatures up to 90°C (dry) and 60°C (wet). Not suitable in areas of thermal shock.

**Acids and Alkalies:** The compressive strength of the mortar is unaffected after 100 days immersion at 60°C in the following: 20% Hydrofluoric acid, 5% Nitric Acid, 30%, 70%, 90% and 98% Sulphuric Acid, 50% and 80% Phosphoric Acid, 30% Hydrochloric Acid, 5%, 20% and 35% Sodium Hydroxide, 12% Sodium Hypochlorite, 50% Sugar solution. For specific applications, consult Pro-Struct Technical Department.

**Petroleum Products:** No damage by spillages of diesel, petrol, jet fuel and most aromatic and aliphatic solvents.

**Water and most Salt Solutions:** Excellent resistance to continual immersion at 60°C in most solutions.

**Compressive Strength:** 90-120MPa

### SPECIFICATION

All concrete surfaces to be treated with Pro-Struct 6240 Chemical Resistant Epoxy Mortar in accordance with manufacturers detailed instructions.

### INSTRUCTIONS

Prior to application, the surface must be clean, dry and sound and surfaces should be prepared by vacublasting, scabbling or scarifying. Pro-Struct 6240 is supplied in two attached containers together with bagged aggregate. The contents of these two containers must be mixed thoroughly for 2-3 minutes. The aggregate should be mixed so that no particle size separation is apparent and then blended with the pre-mixed liquid. Prime the surface with Pro-Struct 6240 Resin only, at 2-4m<sup>2</sup>/litre and scatter part of the aggregate into the wet primer and allow to cure. This will create a non-slip screedable surface for topping. Sweep off unbonded aggregate before screeding. Evenly spread the mixed Pro-Struct 6240 mortar with a wooden float to the required thickness and smooth with a steel trowel. If acid bricking, imbed bricks into wet mortar buttering the sides of the bricks before placing and squeezing together, wiping off excess extruded mortar. Under extreme corrosive and impact conditions, and for the protection of ground water, install a laminate of Pro-Struct 6320 and chopped strand glass fibre membrane into which is sprinkled a coarse aggregate, before installing the mortar. Clean equipment immediately after use with Pro-Struct 105 Brush Cleaner and rinse off in clean water.

### CAUTION

Under no circumstances should Pro-Struct 105 Brush Cleaner be mixed with any Pro-Struct Epoxy Compound as this will inhibit the curing of the material. To avoid confusion, Pro-Struct 105 Brush Cleaner is coloured **blue**. Remove spots of Pro-Struct Epoxy on hands with cotton waste dipped in water. Always wash well with soap and water after using this material.

**See also Instructions "Handling of Epoxy Products"**

### TYPICAL PROPERTIES AT 25°C

Finish	Aggregate / Resin
Colour	Neutral
Consistency	Resin rich Trowellable Mortar
Volume Solids	100%
Theoretical Coverage	1m <sup>2</sup> /3 litre kit at 3mm thick
No. of Components	3
Mixing Ratio By Volume	2:1 plus aggregate Resin : Aggregate ratio 1:4,6
Pot Life	15 – 20 Minutes
Apply Over	Primed concrete or steel
Apply By	Trowel
Set Time	4-6 Hours recoat at 25°C 16-25 Hours full service Full cure 3-5 days
Thinners	Nil
Shelf Life	12 Months
Max Service Temperature	90°C dry 60°C wet
Application Temperature Range	10°C to 35°C

June 08 SA replaces June 06 SA

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# APPLICATION INSTRUCTIONS

These instructions are not intended to show product recommendations for specific service. They are issued as an aid in determining correct surface preparation, mixing instructions and application procedure. It is assumed that the proper product recommendations have been made. These instructions should be followed closely to obtain the maximum service from the materials.

## METHOD STATEMENT FOR THE ACID PROOFING OF CONCRETE FLOORS, WALLS AND COLUMNS

### DESCRIPTION

This specification deals with the preparation, priming, laminating and grouting of acid resistant bricks using Pro-Struct 6240 Mortar. The resin system without the aggregate is referred to as Pro-Struct 6320.

### SURFACE PREPARATION

#### New Concrete

All concrete prior to application is to be clean, dry and sound and laid to falls. Lightly abrade the entire surface to remove laitance and repair any areas that are not sound using Pro-Struct 6240 Mortar.

#### Existing Concrete – Minimum Contamination

- Prepare concrete surfaces by high pressure water washing until sound uncontaminated surface is achieved.
- Neutralise any traces of acid with lime and clean surface by means of high pressure water washing.
- Reinstall all surfaces to original levels by applying Pro-Struct 529 Five Star Structural Concrete to a minimum thickness of 10mm and allow to cure for a minimum of 48 hours.

#### Existing Concrete – Major Contamination

Completely remove all contaminated concrete and re-establish floor levels with new concrete allowing up to 28 days curing before application of Acid proofing system. If insufficient time is available, apply Pro-Struct 529 Five Star Structural Concrete to a minimum thickness of 10mm and allow to cure for a minimum period of 48 hours.

### MIXING

Under no circumstances are the supplied kits to be split. The contents of the components in a kit are to be thoroughly mixed before use, note being taken of the limited pot life necessitating short application times per kit.

### PRIMING AND LAMINATING

Apply a generous primer coat of Pro-Struct 6320 Resin and lay in a chopped strand fibreglass mat (300gm/m<sup>2</sup>) saturating from above with Pro-Struct 6320 Resin.

While still wet, scatter Pro-Struct 622 Coarse Aggregate at 1kg/m<sup>2</sup> and allow to cure for 4-6 hours. This coating system must be done as one process.

### MORTAR PLACING TO BRICKING

Sweep off unbonded aggregate before placing of mortar. Onto the bonded aggregate, evenly spread the mixed kit of Pro-Struct 6240 Acid Resistant Epoxy Mortar at approximately 5mm thick. Into the wet mortar embed the acid resistant bricks which have been buttered on the sides with Pro-Struct 6240 Acid Resistant Epoxy Mortar. Each brick is placed level, butting one against the other such that the grout extrudes from the joint, and the excess grout is to be removed from the surface. Under extreme corrosive and impact conditions, and for the protection of ground water, install a laminate of Pro-Struct 6320 and chopped strand glass membrane into which is sprinkled a coarse aggregate, before installing the mortar. Clean equipment immediately after use with Pro-Struct 105 Brush Cleaner and rinse with water.

### COVERAGE

Pro-Struct 6320 Resin  $\pm$  1 litre/m<sup>2</sup>

Pro-Struct 6240 Mortar  $\pm$  6 litres/m<sup>2</sup>

It is, however, imperative that trial consumption figures be obtained on the given surface.

### EXPANSION JOINTS

Expansion joints in the concrete screed should be carried through the Pro-Struct 6240 Epoxy Mortar. Other situations where expansion joints are necessary, include:

- Boundaries between different floors or flooring materials.
- Load supporting columns set in the floor.
- Vessel sealing rings.
- Areas around heavy vibrating machinery.
- Major cracks in the concrete screed.

The choice of sealant should be made according to the expected chemical conditions but would generally be Pro-Struct 849 chemical resistant joint sealant or Pro-Struct 617NS Hypalon Bandage System.

**CAUTION: MAY CONTAIN FLAMMABLE SOLVENTS.** KEEP AWAY FROM SPARKS AND OPEN FLAMES. IN CONFINED AREAS WORKMEN MUST WEAR FRESH AIRLINE RESPIRATORS. HYPERSENSITIVE PERSONS SHOULD WEAR GLOVES OR USE PROTECTIVE CREAM. ALL ELECTRONIC EQUIPMENT AND INSTALLATIONS SHOULD BE MADE AND GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE. IN AREAS WHERE EXPLOSION HAZARDS EXIST, WORKMEN SHOULD BE REQUIRED TO USE NONFERROUS TOOLS AND TO WEAR CONDUCTIVE AND NONSPARKING SHOES.



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