

NOVOLAC EPOXY COATING SYSTEM STONCHEM 658

Ref # Date

REQUIREMENTS:

Proposed high performance epoxy lining system, applied at a nominal thickness of 3mm. The base coat liquids are reinforced with a fiberglass woven cloth that reinforces the system to resist the stresses caused by cracks. The heavily broadcasted aggregate topcoat over the fiberglass woven cloth helps protect the fabric by providing a wear layer that adds durability and abrasion resistance to the system – more than a typical reinforced lining system. The system will be exposed to 45% caustic as well as 33% hydrochloric acid and operating temperatures not exceeding 38°C at (project name and location).

SCOPE OF WORK (BOQ):

Apply **Stonchem 658** as a 3mm chemical resistant novolac epoxy lining system. Inclusive of surface preparation, apply **Stonchem 658** in strict accordance with the manufacturer's product data sheet.

THE STONCHEM 658 SYSTEM CONSISTS OF:

	Product	Kit Size	Theoretical Coverage
Primer	Stonprime 786 OPR	5 Litre kit	16m ²
Base Coat	Stonchem 658	5 Litre kit	2m ²
Acid-resistant Engineering Fabric	Stonchem 450 Woven Fabric	50kg roll	0.45m ²
Mortar Coat	Stonchem 658 & Stonhard 6222 Aggregate	5 Litre kit	3m ²
Topcoat	Stonchem 658	5 Litre kit	2m ²

TEMPERATURE:

Apply **Stonchem 658** only in temperatures ranging between 15°C to 30°C.

SUBSTRATE PREPARATION:

Proper preparation is critical to ensure an adequate bond. The substrate must be dry and free of all wax, grease, oils, fats, soil, loose or foreign materials and laitance. Laitance and unbonded cement particles must be removed by mechanical methods, i.e. abrasive blasting or scarifying. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent, such as **Carboclean 250** and **Carboclean 252**, and rinsing with clean water. Previously contaminated substrates should be neutralised and thoroughly rinsed clean with potable water. pH checks with litmus paper should be carried out to confirm neutral substrates. The surface must show open pores throughout with main aggregate in concrete exposed and have a sandpaper texture. Substrate moisture content prior to coating should be below 5% and substrate tensile strength above 2 MPa. For recommendations or additional information regarding substrate preparation, refer to surface preparation data sheet or contact StonCor Africa Technical Service department.

The Applicator contracts with the Client to apply the coating system strictly in accordance with the specification, and is therefore required to monitor the quality of his own workmanship. Any deviations from the specification are for agreement between the Applicator and the Client. StonCor Africa acts in an advisory capacity only, to provide technical assistance to other parties, and does not inspect nor approve the quality of application and workmanship.

REFER TO THE LATEST PRODUCT DATA SHEETS BEFORE PRICING OR COMMENCING APPLICATION, FOR ADDITIONAL INFORMATION AND CAUTIONS CONCERNING PRODUCT USAGE.

StonCor Africa (Pty) Ltd
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SURFACE TREATMENT:

Additional surface treatment may be required after preparation to address honeycombing, omegas, porous concrete, contamination, etc. that may not have been evident upon initial observation. (Possible products suitable for re-profiling could be **Eucoseal**).

JOINT TREATMENT PRIOR TO LINING:

All joints should be profiled such that they are raised and liquids flow away from the joints and not along the joint. If this has not been catered for in the design, an epoxy mortar consisting of 1 litre **Stonprime 786 OPR** mixed with 6kg **Stonhard 622** graded aggregate should be screeded 100mm on either side of the joint to create a wedge shape at least 5mm at the joint, screeded down to 1mm on the perimeter. Allow to cure and re-cut the joint to the width specified by the engineer to cater for slab movement. **Applicator must ensure that no ponding will occur behind raised joint, depending on the direction of fall.**

Apply **Stonchem 658** lining system over the epoxy mortar up to the raised joint and when cured, recut the joint to give clean, sound edges. Prime the cut sides with **Stonprime 639** and place a backing cord to a minimum depth of 10mm. Install **Dymonic 100** Sealant tooling level with the lining system, ensuring depressions are not left in the sealant to harbour chemical attack.

CRACK TREATMENT:

The joint or crack to be treated must be filled with **Dymonic 100** prior to the application of **Stonflex CR9**. **Dymonic 100** must be allowed to cure for a minimum of 12 hours at 21°C. Mix and apply **Stonflex CR9** by brush over the crack at a thickness of 500 microns, 30mm either side of the crack.

Using pre-cut 50mm wide non-woven 110 to 120g/m² geotextile fabric (pre-approved by StonCor Africa), centre the geotextile fabric lengthwise over the joint, firmly press and embed it into the Stonflex CR9 whilst still wet. Use a non-stick roller, squeegee or trowel to embed the geotextile fabric.

Apply a saturation coat, ensuring full saturation of the fabric. Allow to cure. Exposed fabric fibres or edges or other discontinuities shall not be accepted. Apply a further coat at 250µm.

APPLICATION PROCEDURE FOR STONCHEM 658:

Priming:

Vacuum the substrate before priming, and make sure the surface is dry. The use of **Stonprime 786 OPR** is necessary in all applications of **Stonchem 658**. This ensures maximum product performance (see the **Stonprime 786 OPR** product data sheet for details).

NOTE: **Stonprime 786 OPR** must be tack-free prior to the application of the Saturant-Basecoat (usually 4 to 6 hours). If the primer is left longer than 24 hours, it must be abraded and reprimed.

LININGS:

- Mix the **Stonchem 658** Base and Activator thoroughly for 2 minutes using a mechanical mixer fitted with a spiral impeller. Pour onto the primed area and spread with a 3mm notched rake to achieve 1.2mm dry film thickness (theoretical coverage 0.83m²/litre).

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- Place the pre-cut 450 gram per m² acid resistant woven fiberglass cloth into the wet **Stonchem 658**, overlapping seams by 50mm as the installation proceeds. Using a steel float, flatten and embed the fiberglass cloth into the resin, ensuring total saturation of the cloth, leaving no cloth or cavity exposed.
- Immediately broadcast the **Stonhard 6222** aggregate at a theoretical coverage rate of 2kg/m² or until a dry layer is achieved on the surface. Allow the resin to cure for a minimum of 6 hours at 25°C, then sweep off the excess aggregate, de-nib and vacuum off all loose material.
- Within 6 to 18 hours, apply a topcoat of **Stonchem 658** resin to the cured system to achieve 380 microns dry film thickness (theoretical coverage 2.6m²/litre). More product may be needed to meet the finish texture and the 3mm thickness required by the job specification. The surface of **Stonchem 658** will be tack-free in 12 to 18 hours at 25°C. The coating may be put back into service in 36 hours at 25°C. Ultimate physical characteristics will be achieved in 7 days. The curing time may vary depending on ambient and surface conditions.

Do not attempt to install material if temperature of components and substrate are not within 16 to 30°C. Application properties, cure time and chemical resistance of the material is severely affected.

RECOMMENDATIONS:

- Apply only on clean, sound, dry and properly prepared substrates.
- Minimum ambient and surface temperature is 16°C at the time of application.
- Maximum surface temperature should not exceed 30°C during application. Substrate temperatures above 38°C will drastically affect the working time of the product.
- Substrate temperature should be greater than 3°C above dew point.
- Material should not be applied if humidity is above 85%.
- Application and curing times are dependent upon ambient and surface conditions. Consult StonCor Africa Technical Service Department if conditions are not within recommended guidelines.
- A trial reference sample should be installed by the applicator prior to start of the contract to verify correct coverages, workmanship, appearance, colour and texture.

ARCHITECT DETAIL:

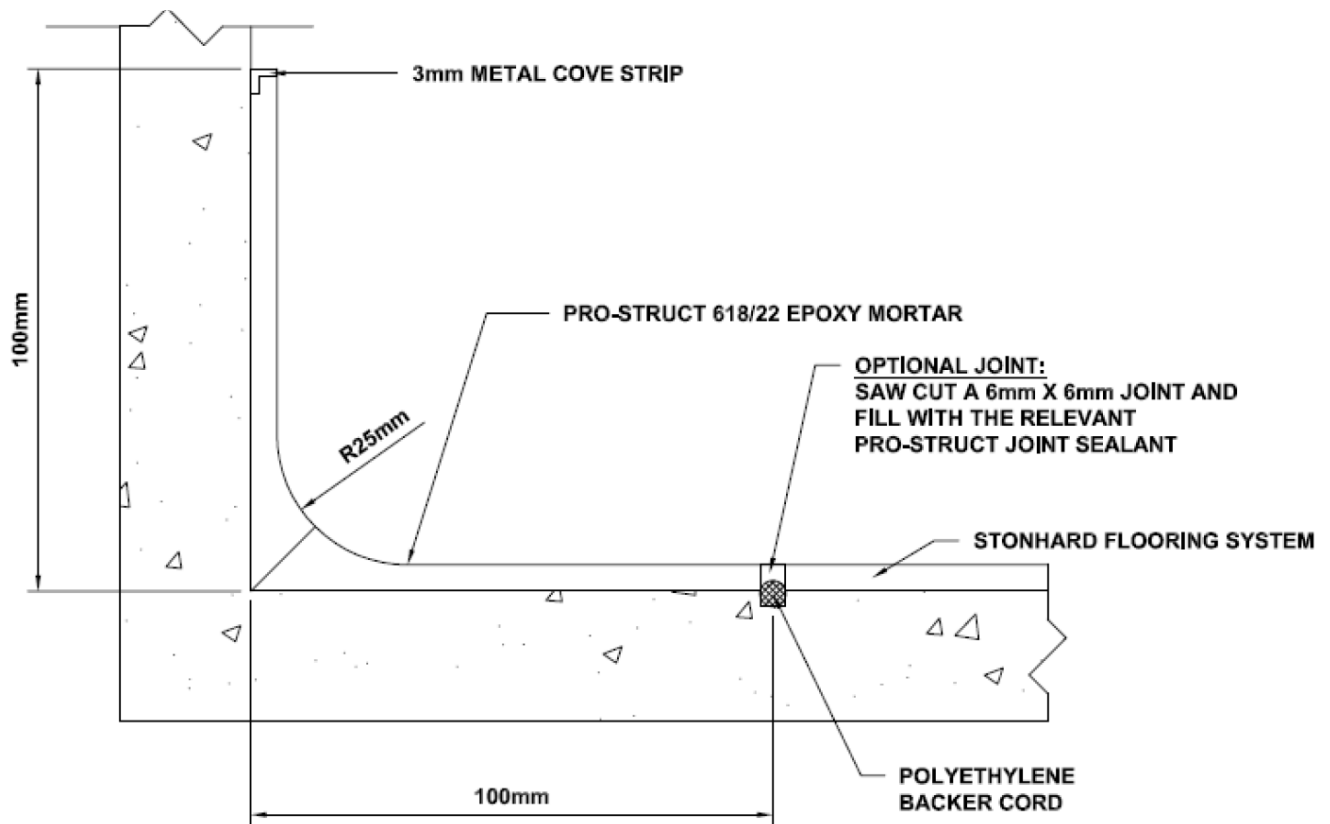
- Coving
- Joints

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COVING:



APPLICATION PROCEDURE FOR EPOXY MORTAR COVERED SKIRTINGS:

- Epoxy mortar coved skirtings shall be installed prior to the installation of the flooring system.
- Install the metal cove strip to the wall to the desired height using contact adhesive, taking care to mask above the cove strip for neatness.
- Prime the prepared plastered / concrete surfaces with **Dural 618R** at a theoretical coverage of 15 linear metres x 200mm wide per 1 litre kit and broadcast **Stonhard 6222** Aggregate into the wet resin. Allow 6 to 8 hours to cure at 25°C.
- Mix the 1 litre kits of base and activator of **Dural 618/22** for 2 minutes using a JB blender. Add the 6kg bag of **Stonhard 622** aggregate and mix for a further 2 minutes. The yield of this kit is 3,64 litres. Using a steel trowel, apply the **Dural 618/22** Mortar to the primed concrete and plastered surfaces to a theoretical spreading rate of 3,6 linear metres for a 100mm x 100mm x 25mm radius.
- Form the cove to the desired radius using a suitable coving trowel, allow to cure for 18 to 24 hours at 25°C.
- Abrade the vertical surface of the cove to remove surface imperfections.
- Overcoat the coving with the proposed flooring sealer.

Technical Approval: _____

Date: _____

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