STONHARD

PRODUCT DATA

STONCHEM® 801

PRODUCT DESCRIPTION
Stonchem 801 is a highly cross-linked, vinyl ester lining system applied at a nominal thickness of 625 microns. Two coats of mineral composite filled coating is ideal for the coating of bases, piers, walls and concrete structures. A one coat, 250 to 300 micron application will renew the surface of an aged lining system. The Stonchem 801 system has excellent resistance to a broad base of chemicals, including strong organic acids, caustics, solvents and moderate to strong inorganic acids.

USES:
- Secondary containment areas / tank farms
- Concrete sumps, vaults and trenches
- Pump pads and pedestals
- Storage tanks
- Neutralisation pits
- Chemical storage rooms

PRODUCT ADVANTAGES:
- Excellent chemical resistance to a broad range of acids, bases and solvents
- Mineral composite filled for low impermeability
- Factory proportioned units for easy application

CHEMICAL RESISTANCE:
Stonchem 801 is formulated to resist a variety of chemical solutions. Refer to the Stonchem 800 Series Chemical Resistance Guide, which lists reagent concentration and temperature recommendations for each product.

TYPICAL PROPERTIES AT 25°C

Tensile Strength (ASTM D-638)	16 MPa
Flexural Strength (ASTM C-580)	41 MPa
Flexural Modulus of Elasticity (ASTM C-580)	7 x 10^3 MPa
Hardness (ASTM D-2240, Shore D)	85-90
Abrasion Resistance (ASTM D-4060, CS-17)	0.10gm max. weight loss
Thermal Coefficient of Linear Expansion (ASTM C-531)	20 x 10^{-6} mm/mm°C
Colour	Pewter Grey
VOC (ASTM D-2369, Method E)	62 g/l

NOTE: The above physical properties were measured in accordance with the referenced standards. Samples of the actual floor system, including binder and filler, were used as test specimens. All sample preparation and testing is conducted in a laboratory, values obtained on the field applied materials may vary.

PACKAGING & COVERAGE:
Primer:
5 Litre Stonchem 700/800 Primer + 100ml Peroxide, approx. 16m²/5 litre

Topcoat:
5 Litre Stonchem 800 Topcoat Pewter Grey + 100ml Peroxide, approx. 16m²/5 litre

ORDERING PROCESS:
Due to Stonchem 800 Series limited shelf life, material will only be manufactured on order, and note should be taken of manufactured dates and storage condition requirements.

STORAGE CONDITIONS:
Store all components between 10 to 24°C in a dry area. Keep out of direct sunlight. Avoid excessive heat and do not freeze. The shelf life is 3 months in the original, unopened container.

APPLICATION

SUBSTRATE:
Stonchem 801, with the appropriate primer, is suitable for application over concrete, wood, brick, quarry tile, metal or Pro-Struct 528/529 Concrete Repair products. For questions regarding other possible substrates or an appropriate primer, contact your local StonCor ME representative or Technical Service Department.

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 grinding. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent (Carboclean 250 and Carboclean 252) and rinsing with clean water. Previously contaminated substrates should be neutralized 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 ME Technical Service Department.

SUBSTRATE REPAIR, REPROFILING AND "NEGATIVE SIDE" WATERPROOFING:
Reinstatement of damaged or defective concrete should be carried out using Pro-Struct 528 VO-MCI for vertical and overhead repairs or Pro-Struct 529-MCI for floor repairs as per the product data sheets. The minimum depth repair should be no less than 10mm and perimeter edge cuts should be made perpendicular to the surface to avoid feather edging (for trafficable areas, minimum 25mm).

Reprofiling of uneven surfaces and controlling rising moisture should be carried out using Pro-Struct 526 Waterproofer applied as a dense 3mm layer using steel trowels, as per the product data sheet.

CRACK TREATMENT:
Mix and apply Stonflex CR9 by brush over the crack at a thickness of 500 microns, 30mm on both sides of the crack.

Using pre-cut 50mm wide non-woven 110 to 120 gm/m² geotextile fabric (pre-approved by StonCor ME), 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 further 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 GUIDELINES:
For optimal working conditions, substrate temperature must be between 15 to 30°C. Cold areas must be heated until the slab temperature is above 15°C to ensure the material achieves a proper cure. A cold substrate will make the material stiff and difficult to apply. Warm areas or areas in direct sunlight must be shaded or arrangements made to work during evenings or at night. A warm substrate (15 to 30°C) will aid in the material's workability; however, a hot substrate (30 to 35°C) or a substrate directly in the sun will shorten the material's working time and can cause other phenomenon such as pinholing and bubbling. Substrate temperature should be greater than 3°C above dew point.

Application and curing times are dependent upon ambient and surface conditions. Consult StonCor ME Technical Service Department if conditions are not within recommended guidelines.

FIELD GEL TESTS:
Due to the unique nature of the 800 Series resins, their reactivity is affected by storage conditions and age, therefore it is important to test the cure of the materials prior to application. Gel tests should be performed for each lot of each product shipped to a job to prevent problems related to material curing. Test all lots of material prior to use.

PRIMING:
Vacuum the substrate before priming, and make sure the surface is dry. The use of Stonchem 700/800 Series Primer is necessary in all applications of Stonchem 726. This ensures maximum product performance. (See the Stonchem 700/800 Series Primer product data sheet for details).

NOTE: Stonchem 700/800 Series Primer must be tack-free prior to the application of Stonchem 800 Series Topcoat.

APPLYING:
First Coat
After allowing the primer to cure, mix the peroxide and resin in a 5 litre mixing bucket using a heavy-duty, slow-speed drill (400 to 600 rpm) with a Jiffy Mixer for one minute. Pour the material onto the floor and spread out with a 375 micron notched squeegee. Backroll the area with a medium nap roller to remove squeegee lines using long roll strokes to decrease the visibility of roller lines. For vertical surfaces, pour a bead of material along the base of the wall. Using a medium nap roller, roll the material onto the wall. The wet film thickness of the coating is 250 to 300 microns. Check the thickness with a wet film gauge.

Final Coat
After allowing the first coat to cure, sand the surface with a rotary sanding machine. Thoroughly vacuum the sanded area and apply the final topcoat in the same manner as the first coat.

CURING
The surface of Stonchem 801 will be tack-free in 4 to 6 hours at 21°C. The coated area may be put back into service in 24 hours at 21°C. Ultimate physical characteristics will be achieved in 7 days.

PRECAUTIONS:
- Avoid contact with Stonchem 801 resin (vinyl ester resin and styrene monomer) and peroxide (catalyst / organic peroxide) as they may cause skin, respiratory and eye irritation.
- Acetone is recommended for clean-up of Stonchem 801 resin (vinyl ester resin and styrene monomer) and peroxide (catalyst / organic peroxide) materials spills. Use these materials only in strict accordance with the manufacturer's recommended safety procedures. Dispose of waste materials in accordance with government regulations.
- The use of NIOSH/MSHA approved respirators using an organic vapor / acid gas cartridge is mandatory.
- The selection of proper protective clothing and equipment will significantly reduce the risk of injury. Body covering apparel, safety goggles or safety glasses and impermeable gloves are required.
- In case of contact, flush area with water for 15 minutes and seek medical attention. Wash skin with soap and water.
- If material is ingested, immediately contact a physician. DO NOT INDUCE VOMITING.
- Use only with adequate ventilation. Inhalation of vapours may cause severe headaches, nausea and possibly unconsciousness.

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