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, APPLICATIONS

- Secondary containment areas/tank farms
- Concrete sumps, vaults and trenches
- Pump pads and pedestals
- Storage tanks
- Neutralization 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.

PHYSICAL CHARACTERISTICS

Tensile Strength .....17 N/mm^2
(ASTM D-638)
Flexural Strength .....42 N/mm^2
(ASTM C-580)
Flexural Modulus of Elasticity .....7.6 x 10^3 N/mm^2
(ASTM C-580)
Hardness .....85 to 90
(ASTM D-2240, Shore D)
Abrasion Resistance.....0.10 gm max. weight loss
(ASTM D-4060, CS-17)
Thermal Coefficient
of Linear Expansion.....3.6 x 10^{-5} mm/m°C
(ASTM C-531)
Color .....Gray
VOC .....800 Topcoat 62 g/l
(ASTM D-2369, Method E)

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 environment, values obtained on field applied materials may vary and certain test methods can only be conducted on lab made test coupons.

PACKAGING

Stonchem 801 is packaged in units for easy handling. Each unit consists of:
2 cartons of Stonchem 800 Series Topcoat
A carton contains:
2 jars of Peroxide
2 cans of Resin

COVERAGE

Each unit of Stonchem 801 will cover approximately 16.72 m^2 at a thickness of 625 microns.

STORAGE CONDITIONS

Store all components between 10 to 24°C in a dry area. Keep out of direct sunlight. When stored in the unopened containers at the proper temperatures, the shelf life is 6 months. Store all engineering fabric in a clean and dry area.

SUBSTRATE

Stonchem 801, with the appropriate primer, is suitable for application over concrete and the following uncoated newly applied Stonhard mortars and grouts: GS, HT, UR, UT, TG6, TG8, CR5 and PM8. For questions regarding other possible substrates or an appropriate primer, contact your local Stonhard representative or Technical Service.

SUBSTRATE PREPARATION

Proper preparation is critical to ensure an adequate bond and system performance. The substrate must be dry and properly prepared utilizing mechanical methods. For existing coated surfaces, the coating must be completely removed back down to an intact mortar or substrate. Once the coating is removed, prime the prepared surface with Stonchem Epoxy Primer and broadcast with silica aggregate to refusal. Remove any excess silica aggregate prior to system overlayment. Omitting these steps could result in uncured material. Questions regarding substrate preparation should be directed to your local Stonhard representative or Technical Service.

APPLICATION GUIDELINES

For optimal working conditions, substrate temperature must be between 15 to 27°C. Cold areas must be heated until the slab temperature is above 13°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 27°C) will aid in the material's workability; however, a hot substrate (27 to 37°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 during application and curing period. Application and curing times are dependent upon ambient and surface conditions. Consult Stonhard's 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. Field gel test kits are included in every shipment of 800 Series material. One gel test contains directions and all of the necessary materials to conduct the testing. 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 801. This ensures maximum product performance. (See Stonchem 700/800 Series Primer product data sheet for details.)

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

APPLYING

First Coat

After allowing the primer to cure, mix the peroxide and resin in a 20 liter 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 0.4 mm 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 one hour. Area may be returned to dry service after 4 hours and full service after 48 hours of cure 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) material spills. Use these materials only in strict accordance with the manufacturers' recommended safety procedures. Dispose of waste materials in accordance with government regulations.
- The use of NIOSH 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 vapors may cause severe headaches, nausea and possibly unconsciousness.

NOTES

- Safety Data Sheets for Stonchem 801 are available on line at www.stonhard.com under Products or upon request.
- Specific information regarding chemical resistance of Stonchem 801 is available in the Stonchem 800 Series Chemical Resistance Guide.
- A staff of technical service engineers is available to assist with product application or to answer questions related to Stonhard's products.
- Requests for technical literature or service can be made through local sales representatives and offices or corporate offices located worldwide.
- The appearance of all floor, wall and lining systems will change over time due to normal wear, abrasion, traffic and cleaning. Generally, high gloss coatings are subject to a reduction in gloss, while matte finish coatings can increase in gloss level under normal operating conditions.
- Surface texture of resinous flooring surfaces can change over time as a result of wear and surface contaminants. Surfaces should be cleaned regularly and deep cleaned periodically to ensure no contaminant buildup occurs. Surfaces should be periodically inspected to ensure they are performing as expected and may require traction-enhancing maintenance to ensure they continue to meet expectations for the particular area and conditions of use.

CE MARKING

The harmonized European Standard EN 1504-2 „Products and systems for the protection and repair of concrete structures – Definitions, requirements, quality control and evaluation of conformity – Part 2 : Surface protection systems for concrete" gives specifications for products and systems based on methods "hydrophobic impregnation", "impregnation" and "coating" for the various principles presented under EN 1504-9.

Products which fall under this specification have to be CE-labelled as per Annex ZA. 1, Tables ZA1a to ZA 1g according to the scope and relevant clauses there indicated and fulfill the requirements of the given mandate of the Construction Products Regulation nr. 305/2011.

For flooring systems not dedicated to protect or reinstate the integrity of a concrete structure, EN 13813 applies. Products acc. EN 1504-2 used as flooring systems with mechanical loads also must fulfil EN 13813. Here below indicated are the performance classes achieve according to the standard. For the specific performance results of the product to the particular tests, please see the actual values above in the PDS.

CE

Stoncor Europe
Rue du Travail 9
1400 Nivelles, Belgium

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DOP.801.2021.10.9-1

EN 1504-2

Surface Protection Product
Ingress Protection 1.3 (C)

Cap. Absorption & Permeability
to Water Vapor .....W<0.1 kg/m^2*h$^{0.5}$
Water Permeability .....Class II
Permeability to CO_2 .....S_d>50m
Adhesion Strength by
Pull-Off Test.....>2.0 MPa
Fire Resistance.....B_{fl}-s1
Abrasion Resistance .....<3000mg H-22

Rev.3/22

STONHARD®

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