

PRODUCT DESCRIPTION

Stonchem 821 is a highly cross-linked, vinyl ester, spark-proof lining system applied at a nominal thickness of 25 mil/625 microns. The Stonchem 821 system has excellent resistance to a broad base of chemicals, including hydrofluoric acid, 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
- Chemical Storage Rooms

PRODUCT ADVANTAGES

- Excellent chemical resistance to hydrofluoric acid
- Carbon filled
- Factory proportioned units for easy application

CHEMICAL RESISTANCE

Stonchem 821 is formulated to resist a variety of chemical solutions. Please refer to the Stonchem 800 Series Chemical Resistance Guide which lists reagent concentration and temperature recommendations for each product.

PACKAGING

Stonchem 821 is packaged in units for easy handling. Each unit consists of:

Topcoat

2 cartons of Stonchem 820 Series Topcoat

A carton contains:

- 2 jars of peroxide
- 2 cans of resin

COVERAGE

Each unit of Stonchem 821 will cover approximately 180 sq. ft./16.72 sq. m at a thickness of 25 mil/625 microns.

STORAGE CONDITIONS

Store all components between 50 to 75°F/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.

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.,

PHYSICAL CHARACTERISTICS

Tensile Strength	2,500 psi
(ASTM D-638)	
Flexural Strength	7,000 psi
(ASTM C-580)	
Flexural Modulus of Elasticity	5×10^5 psi
(ASTM C-580)	
Hardness	85 to 90
(ASTM D-2240, Shore D)	
Bond Strength	>250 psi
(ASTM D-7234)	(100% concrete failure)
Abrasion Resistance	0.10 gm max. weight loss
(ASTM D-4060, CS-17)	
Thermal Coefficient of Linear Expansion	2×10^{-5} in./in.°C
(ASTM C-531)	
Colour	Black

Note: The above physical properties were measured in accordance with the referenced standards. Samples of the actual system, including binder and filler, were used as test specimens.

abrasive blasting or scarifying. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent (Stonkleen DG9) and rinsing with clean water. The surface must show open pores throughout and have a sandpaper texture. For recommendations or additional information regarding substrate preparation, contact Stonhard's Technical Service Department.

APPLICATION GUIDELINES

Before mixing and applying any material, make sure environmental conditions are satisfactory for application. For optimal working conditions, the substrate temperature must be between 60 to 80°F/15 to 27°C. Measure the surface temperature with a surface thermometer. Cold areas must be heated until the slab temperature is above 55°F/13°C. This will allow the material to achieve a proper cure. Also, 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 (60 to 80°F/15 to 27°C) will aid in the material's workability; however, a hot substrate (90 to 100°F/32 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.

APPLICATION

Priming

Vacuum the substrate before priming and make sure the surface is dry. The use of Stonchem 800 Series Primer is necessary in all applications of Stonchem 821. This ensures maximum product performance. (See the Stonchem 800 Series Primer product data sheet for details.)

Note: Stonchem 800 Series Primer must be tack-free prior to application of the Basecoat.

Basecoat

Mix the peroxide and resin in a 5 gallon mixing container, 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 15 mil 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 up onto the wall. The wet film thickness of the coating is 10 to 12 mil/250 to 300 microns. Check the thickness with a wet film gauge.

Topcoat

Apply the same as the Basecoat.

Note: Stonchem 821 is not a conductive system and will not yield point to point readings.

CURING

The surface of Stonchem 821 will be tack-free in 4 to 6 hours at 70°F/21°C. The coated area may be put back in service in 24 hours at 70°F/21°C. Ultimate physical characteristics will be achieved in 7 days.

RECOMMENDATIONS

- Stonkleen DG9 is recommended as an industrial detergent for removal of most contaminants.
- Apply only on clean, sound, dry and properly prepared substrate.
- Minimum ambient and surface temperatures are 55°F/13°C at the time of application.
- Maximum surface temperatures should not exceed 90°F/32°C during application.
- Substrate temperature should be greater than 5°F/3°C above dew point.
- Application and curing times are dependent upon ambient and surface conditions. Consult Stonhard's Technical Service Department if conditions are not within recommended guidelines.

PRECAUTIONS

- Avoid contact with Stonchem 821 peroxide (catalyst/organic peroxide) and resin (vinyl ester resin and styrene monomer), as they may cause skin, respiratory and eye irritation.
- **The use of NIOSH/MSHA approved respirators using an organic vapor cartridge is mandatory.**
- The selection of proper protective clothing and equipment will significantly reduce the risk of injury. Body covering apparel, safety glasses and impermeable nitrile gloves is highly recommended.
- In the event of accidental eye contact, rinse eyes immediately with water.
- If material is ingested, immediately contact a physician and consult MSDS.
- Use only with adequate ventilation. Inhalation of vapors may cause severe headaches, nausea and possibly unconsciousness.

NOTES

- Material Safety Data Sheets for Stonchem 821 are available on line at www.stonhard.com under Tech Info or upon request.
- Specific information regarding the chemical resistance of Stonchem 821 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 products.
- Requests for technical literature or service can be made through local sales representatives and offices, or corporate offices located worldwide.

IMPORTANT:

Stonhard believes the information contained here to be true and accurate as of the date of publication. Stonhard makes no warranty, expressed or implied, based on this literature and assumes no responsibility for consequential or incidental damages in the use of the systems described, including any warranty of merchantability or fitness. Information contained here is for evaluation only. We further reserve the right to modify and change products or literature at any time and without prior notice.

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