PRODUCT DESCRIPTION

Stonchem 788 is a silica-free and spark-proof, unsaturated polyester lining system applied at a nominal thickness of 140 mil/3.5 mm. The carbon-filled mortar, engineering fabric, carbon-filled mortarcoat and silica-free topcoat provide a smooth, heavy-duty, and non-sparking chemical barrier, which is resistant to thermal chock, thermal cycling, static cracks, permeation and abrasion.
The Stonchem 788 system has excellent resistance to hydrofluoric acid and oxidizers such as concentrated nitric and chromic acid.

USES, APPLICATIONS

- Secondary Containment Areas
- Tank Farms
- Sumps and Trenches
- Pump Pads and Pedestals

PRODUCT ADVANTAGES

- Excellent chemical resistance to concentrated nitric, chromic and hydrofluoric acids
- Engineering fabric aids in crack resistance
- Mortarcoat for added abrasion resistance
- Silica-free topcoat
- Factory proportioned units for easy application
- Non-sparking

CHEMICAL RESISTANCE

Stonchem 788 is formulated to resist a variety of chemical solutions. Refer to the Stonchem 700 Series Chemical Resistance Guide for lists of reagent concentrations and temperature recommendations.

PACKAGING

Stonchem 788 is packaged in units for easy handling. Each unit consists of:

Mortar
3.125 cartons of Stonchem 700 Liquids
Each carton contains:
2 jars of Peroxide
2 cans of Resin
6.25 bags of X20 Mortar aggregate

Engineering Fabric
1 roll @ 200 sq. ft./18.58 sq. m roll

Saturant
0.925 cartons Stonchem 700 Liquids Each carton contains:
2 jars of Peroxide
2 cans of Resin

Mortarcoat
1.5 cartons Stonchem 700 Liquids
Each carton contains:
2 jars of Peroxide
2 cans of Resin
3 bags of X20 Mortarcoat aggregate

Topcoat
1 carton of Stonchem 700 SF Topcoat
Each carton contains:
2 jars of Peroxide
2 cans of Resin

PHYSICAL CHARACTERISTICS

Compressive Strength (ASTM C-579)	11,500 psi
Tensile Strength (ASTM D-638)	3,000 psi
Flexural Strength (ASTM C-580)	8,000 psi
Flexural Modulus of Elasticity (ASTM C-580)	1 x 10^6 psi
Hardness (ASTM D-2240, Shore D)	85 to 90
Abrasion Resistance (ASTM D-4060, CS-17)	0.10 gm max. weight loss
Thermal Coefficient of Linear Expansion (ASTM C-531)	1.2 x 10^{-5} in./in.˚F
Color	Gray
Cure Rate (@70F˚/21˚C)	4 to 6 hours tack-free 24 hours chemical service
VOC (ASTM D-2369, Method E)	700 Liquids 31 g/l 700 SF Topcoat 97 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 environment, values obtained on field applied materials may vary and certain test methods can only be conducted on lab-made test coupons.

COVERAGE

Each unit of Stonchem 788 will cover approximately 180 sq. ft./16.72 sq. m at a thickness of 140 mil/3.5 mm.

Note: If utilizing chopper gun applied fiberglass, there will be a reduction in saturant coverage. Questions regarding coverage rates should be directed to your local Stonhard representative or Technical Service.

STORAGE CONDITIONS
Store all components between 50 to 75˚F/10 to 24˚C in a dry area. Keep out of direct sunlight. Avoid excessive heat and do not freeze. The shelf life is 6 months in the original, unopened container. Store all engineering fabric in a clean and dry area.

SUBSTRATE
Stonchem 788, with 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 60 to 80˚F/15 to 27˚C. Cold areas must be heated until the slab temperature is above 55˚F/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 (60 to 80˚F/15 to 27˚C) will aid in the material's workability; however, a hot substrate (80 to 100˚F/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 must be greater than 5˚F/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 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 700 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 700 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 surface before priming, and make sure the concrete substrate is dry. The use of Stonchem 700/800 Series Primer is necessary in all applications of Stonchem 788.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 wet during installation of the Mortar.

APPLYING
Mortar
Pre-mix the peroxide and resin in a 5-gallon mixing bucket on a J.B. Blender for one minute. Next, gradually add the Mortar aggregate while mixing for an additional 150 seconds. Mixing is complete when no clumps of dry material exist. For vertical applications use Vertical Mortar aggregate. Apply the mortar onto the substrate with a 3/8 in. x 3/8 in. V-notched trowel. To obtain the proper thickness, hold the trowel at approximately 45 degrees and keep the tips of the V-notches in contact with the substrate. The material must be applied evenly over the substrate with no clumps or ridges present before embedding the engineering fabric. The engineering fabric will not remove or hide any unevenness in the troweled mortar layer. If applying mortar on a vertical surface, use the same V-notched trowel to spread the material, then finish smooth with a flat steel finishing trowel. A smooth and even distribution of the material must exist on a vertical surface before embedding the reinforcement.

Engineering Fabric
Place the engineering fabric on the mortar immediately after the mortar is applied. Press the engineering fabric onto the mortar using a dry, medium nap roller and allow the wet mortar to begin saturation of engineering fabric. Overlap adjacent fabric 1 in./26 mm.

Saturant
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. Apply the saturant to the engineering fabric with a saturated medium nap roller. To wet the roller, dip it into the mixing container. Always work from the bucket. Do not pour the saturant directly onto the engineering fabric. This will decrease the saturant's coverage. The use of plastic mixing buckets will increase the pot life of the material during warmer working conditions. The engineering fabric is completely saturated when white strands are no longer present. When the engineering fabric is completely saturated, roll with a ribbed roller to release air pockets in the reinforcement and to embed the engineering fabric into the mortar. To saturate the overlaps, roll several times over the length of the overlap with a saturated roller, then roll with a ribbed roller several times until the overlap is no longer visible. Allow the mortar, engineering fabric and saturant to cure (usually 2 to 4 hours) before proceeding.

Mortarcoat
Lightly sand the engineering fabric/saturant layer in areas with protruding fibers. Pre-mix the peroxide and resin in a 5 gallon mixing container with a heavy-duty, slow-speed drill (400 to 600 rpm) with a Jiffy Mixer for one minute. Next, gradually add the mortarcoat aggregate while mixing for an additional 2 minutes. For vertical applications, use vertical mortarcoat aggregate. Mixing is complete when no dry clumps of material exist. 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. The material may appear rough at first but will level out to a smooth finish. For vertical surfaces, use a large steel trowel or knife to pull an initial coat of vertical material onto the wall, then finish smooth with a flat rubber squeegee.

Topcoat
Lightly sand the mortarcoat in areas where ridges or imperfections exist. Vacuum the area completely. Mix the peroxide and resin in a 5 gallon mixing container using a heavy-duty, slow- speed drill (400 to 600 rpm) with a mixing blade 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 de- crease the visibility of roller lines. For vertical surfaces, pour a bead of material along the base of the wall and, using a medium nap roller, roll the material onto the vertical surface. The wet film thickness of the coating is 10 to 12 mil/250 to 300 microns.

Check the thickness with a wet film gauge.

CURING
The surface of Stonchem 788 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 70°F/21°C. Ultimate physical characteristics will be achieved in 7 days.

PRECAUTIONS
- Avoid contact with Stonchem 788 resin (polyester resin and styrene monomer) and peroxide (catalyst/organic peroxide), as they may cause skin, respiratory and eye irritation.
- Acetone is recommended for cleanup of Stonchem 788 resin (polyester 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.
- During prep-work of floor substrate or mixing of Stonhard product while adding aggregate, dust masks must be worn.

NOTES
- Safety Data Sheets for Stonchem 788 are available online at www.stonhard.com under Products or upon request.
- Specific information regarding chemical resistance of Stonchem 788 is available in the Stonchem 700 Series Chemical Resistance Guide.
- A staff of technical service engineers is available to assist with installation or to answer questions related to Stonhard products.
- Requests for literature can be made through local sales representatives and offices or corporate offices located worldwide.

06/19

STONHARD®

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