PRODUCT DESCRIPTION

Stonchem 701 is a chlorendic acid based, unsaturated polyester resin lining system applied at a nominal thickness of 25 mil/625 microns. Two coats of mineral composite filled coating is ideal for the coating of bases, piers, walls and concrete structures. A one coat, 10 to 12 mil/250 to 300 microns application will renew the surface of an aged lining system. The Stonchem 701 system has excellent resistance to strong oxidizers such as concentrated nitric and chromic acids.

USES, APPLICATIONS

- Secondary containment areas
- Concrete pads and pedestals
- Process piping and equipment
- Storage tanks
- Neutralization pits
- Splash/spill areas

PRODUCT ADVANTAGES

- Excellent chemical resistance to oxidizers such as concentrated nitric and chromic acids
- Mineral composite filled for increased impermeability
- Factory proportioned units for easy application

PHYSICAL CHARACTERISTICS

Tensile Strength. (ASTM D-638)	4,300 psi
Flexural Strength (ASTM C-580)	12,000 psi
Flexural Modulus of Elasticity (ASTM C-580)	2 x 10^6 psi
Hardness (ASTM D-2240, Shore D)	85 to 90
Abrasion Resistance	0.10 gm max. weight loss
(ASTM D-4060, CS-17)	
Thermal Coefficient of Linear Expansion (ASTM C-531)	2 x 10^{-5} in./in.˚F
Color	Gray
VOC Content (ASTM D-2369, Method E)	700 Basecoat/Topcoat 41 g/l

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.

CHEMICAL RESISTANCE

Stonchem 701 is formulated to resist a variety of chemical solutions. Please refer to the Stonchem 700 Series Chemical Resistance Guide which lists reagent concentration and temperature recommendations for each product.

PACKAGING

Stonchem 701 is packaged in units for easy handling. Each unit consists of:

Basecoat

1 carton of Stonchem 700 Basecoat Resin
A carton contains:
2 cans of Resin
1 carton of Peroxide (700 BC-700/800 TPCT BPO)
A carton contains:
2 jars of Peroxide

Topcoat

1 carton of Stonchem 700 Topcoat Resin
A carton contains:
2 cans of Resin
1 carton of Peroxide (700 BC-700/800 TPCT BPO)
A carton contains:
2 jars of Peroxide

COVERAGE

Each unit of Stonchem 701 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. Avoid excessive heat and do not freeze. The shelf life is 6 months in the original, unopened container.

SUBSTRATE

Stonchem 701, 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.

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 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 701.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 700 Series Basecoat.

APPLYING

Basecoat

After allowing the primer to cure, mix the peroxide and resin in a 5-gallon mixing bucket 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 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 10 to 12 mil/250 to 300 microns. Check the thickness with a wet film gauge.

Topcoat

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 701 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 701 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 701 resin (polyester resin and styrene monomer) and peroxide (catalyst/organic peroxide) material 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 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 701 are available online at www.stonhard.com under Products or upon request.
- Specific information regarding chemical resistance of Stonchem 701 is available in the Stonchem 700 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.

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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