STONCHEM® 702

PRODUCT DESCRIPTION
Stonchem 702 is a chlorendic acid-based, unsaturated polyester resin lining system applied at a nominal thickness of 40 mil/1 mm. The mortarcoat, mineral composite filled topcoat sequencing provides a versatile chemical barrier designed for long-lasting performance. The Stonchem 702 system has excellent resistance to 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 concentrated nitric and chromic acids
- Mineral composite filled for increased impermeability
- Factory proportioned units for easy application

CHEMICAL RESISTANCE
Stonchem 702 is formulated to resist a variety of chemical solutions. Refer to the Stonchem 700 Series Chemical Resistance Guide which lists reagent concentration and temperature recommendations for each product.

PACKAGING
Stonchem 702 is packaged in units for easy handling.
Each unit consists of:

Mortarcoat

1 carton of Stonchem 700 Liquids Resin
A carton contains:
2 cans of Resin

1 carton of Peroxide (700/800 Primer-700/800/820 Liquids-BPO)
A carton contains:
2 jars of Peroxide

2 bags of Mortarcoat aggregate

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

PHYSICAL CHARACTERISTICS

Tensile Strength (ASTM D-638)	3,000 psi
Flexural Strength (ASTM C-580)	9,000 psi
Flexural Modulus of Elasticity (ASTM C-580)	5 x 10^5 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)	2 x 10^{-5} in./in.˚F
Color	Gray
VOC Content (ASTM D-2369, Method E)	700 Liquids - 31 g/l 700 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.

COVERAGE
Each unit of Stonchem 702 will cover approximately 180 sq. ft./16.72 sq. m at a thickness of 40 mil/1 mm.

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 702, 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 702.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 application of the Mortarcoat.

APPLYING
Mortarcoat
Pre-mix the peroxide and resin in a 5-gallon mixing bucket 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.

Note: It's critical to monitor thickness application. The wet film thickness of the mortarcoat is 20 to 25mil/508 to 635 microns.

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 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 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 702 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 all liquids as they may cause skin, respiratory and eye irritation.
- Acetone is recommended for cleanup of Stonchem 702 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.
- If eye contact occurs, flush the area with clean 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 702 are available online at www.stonhard.com under Products or upon request.
- Specific information regarding the chemical resistance of Stonchem 702 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.

07/25

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