STONHARD

STONCHEM®610

PRODUCT DATA

PRODUCT DESCRIPTION

Stonchem 610 is a highly cross-linked, novolac epoxy, mineral composite lining system applied to horizontal surfaces at a thickness of 3.3 mm. One trowel applied mortar layer coated with Stonchem 610 provides a heavy-duty chemical barrier for moderate traffic areas. The Stonchem 610 system has excellent resistance to concentrated sulfuric acid and is recommended for areas with severe solvent exposure.

USES, APPLICATIONS

- Process floors
- Solvent storage rooms
- Drum storage areas

PRODUCT ADVANTAGES

- Superior chemical resistance to concentrated sulfuric acid and chlorinated solvents
- Mineral composite topcoat for low permeability
- Factory proportioned units for easy application

CHEMICAL RESISTANCE

Stonchem 610 is formulated to resist a variety of chemical solutions. Refer to the Stonchem 600 Series Chemical Resistance Guide for lists of reagent concentrations and temperature recommendations.

PACKAGING

Stonchem 610 is packaged in units for easy handling. Each unit consists of:

Mortar

1 carton of Stonchem 600 Series Mortar
A carton contains:
- 6 foil bags of amine
- 6 poly bags of resin
- 6 bags of Mortar aggregate

Topcoat

1 carton of Stonchem 600 Series Topcoat
A carton contains:
- 4 foil bags of amine
- 4 poly bags of resin

COVERAGE

Each unit of Stonchem 610 will cover approximately 16.72 m^2 at a thickness of 3.3 mm.

PHYSICAL CHARACTERISTICS

Compressive Strength (ASTM C-579)	69 N/mm^2
Tensile Strength (ASTM D-638)	13 N/mm^2
Flexural Strength (ASTM C-580)	29 N/mm^2
Flexural Modulus of Elasticity (ASTM C-580)	5.5×10^3 N/mm^2
Hardness. (ASTM D-2240, Shore D)	85 to 90
Abrasion Resistance (ASTM D-4060, CS-17)	0.07 gm max. weight loss
Thermal Coefficient of Linear Expansion (ASTM C-531)	2.2×10^{-5} m/mm°C
Color	Gray

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.

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 3 years.

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., abrasive blasting or scarifying. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent 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 15 to 27°C. Measure the surface temperature with a surface thermometer. Cold areas must be heated until the slab temperature is above 12.7°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 (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 pinholing and bubbling.

APPLYING

Priming

Vacuum the substrate to remove all dirt and dust. Dry all wet spots completely before priming. Seal the concrete with HT and SL Primer to prevent pinholing in the mortar system. Before applying the Mortar, squeegee a light coat of HT Primer (74.35 m^2 per unit) on top of the cured SL Primer. (See the HT Primer product data sheet for details.)

Note: The HT Primer must remain tacky during installation of the Mortar.

Mortar

Empty the amine and resin into a 5 gallon mixing bucket. Put the container on a J.B. Blender and premix for one minute. When pre-mixing is complete, set the timer for 90 seconds. Start the J.B. Blender and gradually add the Mortar aggregate. The mixed mortar should be free of any clumps. Apply the mortar onto the substrate by pouring the entire contents of the bucket onto the floor and screeding with a 1/2 in. x 1/2 in. V-notch trowel. If the entire contents of the bucket is not poured onto the floor, the material remaining in the bucket will settle. Additional mixing is required to remove settled material from the bucket. Screed the material immediately after it has been poured. Material allowed to settle on the substrate will become harder to screed. To achieve proper thickness of 125 mil/3 mm, the trowel should be held at a 45 degree angle with the notch tips in contact with the substrate at all times. Using a spike roller, roll the surface of the mortar until an even finish is achieved. Allow the material to cure for 4 to 6 hours.

Topcoat

Sand the mortar with a mechanical sander and sanding disc. Vacuum the area completely before applying Stonchem 600 Series Topcoat. Mix the Stonchem 600 Series Topcoat amine and resin in a 5 gallon mixing container using a heavy-duty, slowspeed drill (400 to 600 rpm) with a Jiffy Mixer for 2 minutes. Pour the material onto the floor and spread using a 381 microns notched squeegee. Backroll the area with a medium nap roller to remove squeegee lines. When backrolling, use long roll strokes to decrease the visibility of roller lines. The wet film thickness of the coating is 250 to 300 microns. Check the thickness with a wet film gauge.

CURING

The surface of Stonchem 610 and Stonchem 600 Series Topcoat will be tack-free in 4 to 6 hours at 21˚C. The area may be put back into service in 24 hours at 21˚C. Ultimate physical and chemical characteristics will be achieved in 7 days.

RECOMMENDATIONS

- Apply only on clean, sound, dry and properly prepared substrates.
- Minimum ambient and surface temperatures are 13˚C at the time of application.
- Maximum ambient temperatures should not exceed 32˚C during time of application.
- Substrate temperature should be greater than 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 the recommended guidelines.

PRECAUTIONS

- Avoid contact with Stonchem 610 amine and resin as they may cause skin, respiratory and eye irritation.
- Toluene or Xylene solvents are recommended for clean up of Stonchem 610 resin or amine 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/MSHA approved respirators using an organic vapor acid gas cartridge is recommended.
- The selection of proper protective clothing and equipment will significantly reduce the risk of injury. Body covering apparel, safety goggles and impermeable nitrile gloves are highly recommended. In case of contact, flush the area with copious amounts of 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

- Material Safety Data Sheets for Stonchem 610 are available upon request.
- Specific information regarding chemical resistance of Stonchem 610 is available in the Stonchem 600 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.

STONHARD A Division of StonCor Group www.stoncor-europe.com

Belgium	+32 67493710	Spain/Portugal	+351 707200088	Germany	+49 240541740
France	+33 160064419	United Kingdom	+44 1256336600	The Netherlands	+31 165585200
Poland	+48 422112768	East Europe	+31 165585200	Italy	+39 02253751