

PRODUCT DESCRIPTION

Stonchem 502 is a 100% solids, high performance, epoxy hybrid lining system applied at a nominal thickness of 40 mil/1 mm. The mortarcoat, topcoat sequencing provides a light-duty chemical barrier for areas with occasional foot traffic. The Stonchem 502 system has excellent resistance to caustics and moderate concentrations of 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 caustics and moderate concentrations of acids
- Mineral composite filled for increased impermeability
- Factory proportioned units for easy application

CHEMICAL RESISTANCE

Stonchem 502 is formulated to resist a variety of chemical solutions. Refer to the Stonchem 500 Series Chemical Resistance Guide which lists reagent concentration and temperature recommendations for each product.

PACKAGING

Stonchem 502 is packaged in units for easy handling. Each unit consists of:

Mortarcoat

0.5 carton of Stonchem 500 Series Mortarcoat

- A carton contains:
 - 6 foil bags of amine
 - 6 polybags of resin
- 3 bags of Mortarcoat aggregate

Topcoat

1 carton of Stonchem 500 Series Topcoat

- A carton contains:
 - 4 foil bags of amine
 - 4 polybags of resin

PHYSICAL CHARACTERISTICS

Tensile Strength	4,400 psi (ASTM D-638)
Flexural Strength	12,000 psi (ASTM C-580)
Flexural Modulus of Elasticity	5.0×10^5 psi (ASTM C-580)
Hardness	85-90 (ASTM D-2240, Shore D)
Bond Strength	>400 psi (ASTM D-4541) (100% concrete failure)
Abrasion Resistance	0.07 gm max. weight loss (ASTM D-4060, CS-17)
Thermal Coefficient of Linear Expansion	2×10^{-5} in./in. $^{\circ}$ C (ASTM C-531)
Colour	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.

COVERAGE

Each unit of Stonchem 502 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 sun light. 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 (Stonklean 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, 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/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 (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.

APPLYING

Priming

Vacuum the surface before priming and make sure the substrate is dry. The use of HT Primer is necessary in all applications of Stonchem 502. This ensures maximum product performance. (See the HT Primer product data sheet for details.)

Note: HT Primer must be tack-free prior to application of the mortarcoat.

Mortarcoat

After the primer has been applied and allowed to fully cure, pre-mix the amine and resin in a 5 gallon mixing bucket with a heavy-duty, slow-speed drill (400 to 600 rpm) with a Jiffy Mixer attachment for 1 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 squeegee. Backroll the material 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 protrusions exist. Vacuum the area completely. Mix the amine and the resin in a 5 gallon mixing container using a heavy-duty, slow-speed drill (400 to 600 rpm) with a Jiffy Mixer for 2 minutes. Pour the material onto the floor and spread out with a 15 mil 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 and, using a medium nap roller, roll the material onto the vertical surface. The wet film thickness of the coating is 10 to 12 mils. Check the thickness with a wet film gauge.

CURING

The surface of Stonchem 502 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 time of 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 502 amine and resin. They may cause skin, respiratory and eye irritation.
- Toluene or Xylene solvents are recommended for clean up of Stonchem 502 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/MSHA approved respirators using an organic vapour acid gas cartridge is recommended.
- The use of protective clothing such as long sleeve shirts, safety goggles and impermeable nitrile gloves is highly recommended.
- In case of contact, flush the area with water for 15 minutes and seek medical attention. Wash skin with soap and water.
- Use only with adequate ventilation.

NOTES

- Material Safety Data Sheets for Stonchem 502 are available upon request.
- Specific information regarding chemical resistance of Stonchem 502 is available in the Stonchem 500 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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