

PRODUCT DESCRIPTION

Stonchem 656 is a highly cross-linked novolac epoxy system applied at a nominal thickness of 1.5 mm. The resin, engineering fabric, mortarcoat, mineral composite topcoat sequencing provides a smooth, heavy-duty chemical barrier which is resistant to small static cracks and moderate thermal shock. The Stonchem 656 has excellent resistance to concentrated sulfuric acid, chlorinated solvents and caustics.

USES, APPLICATIONS

- Secondary containment areas/tank farms
- Concrete sumps, vaults and trenches
- Pump pads and pedestals
- Storage tanks
- Neutralization pits

PRODUCT ADVANTAGES

- Excellent chemical resistance to concentrated sulfuric acid, chlorinated solvents and caustics
- Engineering fabric resists cracking
- Mortarcoat for added abrasion resistance
- Mineral composite topcoat for increased impermeability
- Factory proportioned units for easy application

CHEMICAL RESISTANCE

Stonchem 656 is formulated to resist a variety of chemical solutions. Please refer to the Stonchem 600 Series Chemical Resistance Guide which lists reagent concentration and temperature recommendations for each product.

PACKAGING

Stonchem 656 is packaged in units for easy handling. Each unit of Stonchem 656 consists of:

Saturant

1.2 cartons of 600 Series Saturant
 A carton contains:
 6 foil bags of amine
 6 poly bags of resin

Engineering Fabric

1 roll of Engineering Fabric 18.58 m² roll

Mortarcoat

0.5 cartons of 600 Series Mortarcoat
 A carton contains:
 6 foil bags of amine
 6 poly bags of resin
 3 bags of Mortarcoat aggregate

PHYSICAL CHARACTERISTICS

Tensile Strength (ASTM D-307)	34 N/mm ²
Flexural Strength (ASTM C-580)	83 N/mm ²
Flexural Modulus of Elasticity (ASTM C-790)	6.8 x 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)	2.1 x 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.

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 656 will cover approximately 16.72 m² at an application thickness of 1.5 mm.

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. Store all engineering fabric in a clean and dry area.

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, please 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 13°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 other phenomenon such as pinholing and bubbling.

APPLYING

Priming

Vacuum the substrate before priming and make sure the surface is dry. The use of HT Primer is necessary in all applications of Stonchem 656. This ensures maximum product performance. (See the HT Primer product sheet for details.)

Note: HT Primer must be tack-free prior to application of Saturant Base Coat.

Saturant Base Coat

Mix the amine and resin in a 5 gallon bucket using a heavy-duty, slow-speed drill (400 to 600 rpm) with a Jiffy Mixer for one minute. Pour the saturant onto the substrate and spread out with a 15 mil notched squeegee. The saturant should be spread out in a sequence to allow application of the engineering fabric. Do not leave any puddling during this squeegee step. Puddling will lead to over saturation of the fiberglass.

Engineering Fabric

Place the engineering fabric on the saturant immediately after it is applied. This is important to achieve maximum wetting. Press the fabric into the saturant with a dry, medium nap roller. Overlap adjacent fabric 13 mm. Immediately apply the saturant.

Saturant

Mix the amine and resin in a 5 gallon bucket 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 bucket. Always work from the bucket. Do not pour the saturant directly onto the fabric. This will decrease the saturant's coverage. If the air temperature is high, the use of plastic buckets will increase the pot life of the material. The fabric is completely saturated when white strands are no longer present. When the fabric is completely saturated, roll with a ribbed roller to release air pockets in the reinforcement and to help mesh the glass and saturant together.

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 saturant and fabric to cure (usually 4 to 6 hours) before proceeding.

Mortarcoat

Lightly sand the fabric and saturant layer with a sanding disc attachment in areas with protruding fibers. 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 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 protrusions exist. Vacuum area completely. Mix the amine and 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 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 and, using a medium nap roller, roll the material onto the vertical surface. 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 656 will be tack-free in 4 to 6 hours at 21°C. The coated area may be put back in service in 24 hours at 21°C. Ultimate physical characteristics will be achieved in 7 days.

RECOMMENDATIONS

- Apply only on clean, sound, dry and properly prepared substrates.
- Minimum ambient and surface temperature is 13°C at the time of application.
- Maximum surface temperature should not exceed 32°C during application. **Substrate temperatures above 38°C will drastically affect the working time of the product.**
- Substrate temperature should be greater than 3°C above dew point.
- Material should not be applied if humidity is above 85%.
- 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 656 amine and resin as they may cause skin, respiratory and eye irritation.
- Toluene or Xylene solvents are recommended for clean up of Stonchem 656 resin and amine material spills. Use these materials only in strict accordance with 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 the event of accidental eye contact, rinse eyes immediately with 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 656 are available upon request.
- Specific information regarding chemical resistance of Stonchem 656 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 products.
- Requests for technical literature or service can be made through local sales representatives and offices, or corporate offices located worldwide

IMPORTANT:

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