STONCHEM 622

PRODUCT DESCRIPTION
Stonchem 622 is a highly cross-linked, novolac epoxy, conductive and spark-proof lining system applied at a nominal thickness of 35 mil/.89 mm. The mortarcoat, carbon-filled topcoat sequencing provides a light-duty conductive and non-sparking chemical barrier. When tested using the ASTM F150 test method, this carbon-based system measures a resistance lower than 1,000,000 ohms. The Stonchem 622 system has excellent resistance to concentrated sulfuric acid, chlorinated solvents and caustics.

USES, APPLICATIONS
- Explosion proof rooms
- Secondary containment areas
- Concrete pads and pedestals
- Splash/spill areas
- Solvent storage
- Tank farms

PRODUCT ADVANTAGES
- Excellent chemical resistance to most mineral acids, solvents and all caustic
- Mortar adds abrasion resistance
- Carbon composite filled
- Factory proportioned units for easy application
- Conductive and non-sparking

CHEMICAL RESISTANCE
Stonchem 622 is formulated to resist a variety of chemical solutions. Refer to the Stonchem 600 Series Chemical Resistance Guide, which lists reagent concentration and temperature recommendations for each product.

PHYSICAL CHARACTERISTICS

Tensile Strength (ASTM D-638)	3,100 psi
Flexural Strength (ASTM C-580)	7,300 psi
Flexural Modulus of Elasticity (ASTM C-580)	1.1 x 10^6 psi
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)	1.2 x 10^{-5} in./in.˚F
Cure Rate (@70F˚/21˚C)	4 to 6 hours tack-free 24 hours chemical service
VOC (ASTM D-2369, Method E)	600/620 Liquids - 20 g/l 620 Series Topcoat - 68 g/l
Color	Black

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.

PACKAGING
Stonchem 622 is packaged in units for easy handling. Each unit consists of:

Mortarcoat
0.75 carton of Stonchem 600/620 Series Liquids
A carton contains:
4 foil bags of Amine
4 poly bags of Resin

3 bags of Mortarcoat Aggregate

Topcoat
0.5 carton of Stonchem 620 Series Topcoat A carton contains:
2 foil bags of Amine
2 cans of Resin

COVERAGE
Each unit of Stonchem 622 will cover approximately 180 sq. ft./16.72 sq. m at a thickness of 35 mil/1 mm.

Note: Coverage rates shown are theoretical. Actual coverage rates may vary. Make necessary allowances for the condition of the surface to be coated, working conditions, waste, spillage, experience level and skill of the installers, etc.

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 3 years in the original, unopened container.

SUBSTRATE
Stonchem 622, 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, CR5and PM5. 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. 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.

PRIMING
Vacuum the surface before priming and make sure the concrete substrate is dry. The use of Stonchem Epoxy Primer is necessary in all applications of Stonchem 622.This ensures maximum product performance. (See the Stonchem Epoxy Primer product data sheet for details.)

Note: Stonchem Epoxy Primer must be tack-free prior to application of the Mortarcoat.

APPLICATION
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 one minute. Next, gradually add 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 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.

Note: If the application requires a conductive system, you must test the mortar layer for conductivity using the megger to ensure it is within the proper range. The conductivity of the mortar layer must be below 500,000 ohms.

Topcoat
Lightly sand the Mortarcoat in areas where protrusions exist. Vacuum the area completely. Mix 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 flat 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 5 to 7 mil/127 to 178 microns. Check the thickness with a wet film gauge. **It is pivotal for the coating to be applied within the specified thickness range. If the coating is too thick, the conductivity readings will be affected.**

Note: If the application requires a conductive system, you must test the finished system for conductivity using the megger to ensure it is within the proper range. The conductivity of the final system should be below 1,000,000 ohms. A static control report detailing the resistance readings over the entire area must be filled out and submitted to the customer.

CURING
The surface of Stonchem 622 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.

STATIC CONTROL PROPERTIES

Stonchem 622 has been specifically designed to comply with the ANSI/ESD S20.20 specification for the protection of electrical and electronic parts, assemblies and equipment.
Surface Resistance ..... < 1 megohms (ESD-S7.1)
Body Voltage Generation ..... < 100 volts* (ESD STM97.2)

*Body Voltage Generation is not solely a function of flooring conductivity but is a combination of many factors, including footwear and environmental conditions. Your specific environment and choice of footwear may yield slightly different results.

Electrostatic Discharge (ESD) flooring has a variety of applications from microchip manufacturing to military ordinance.
Therefore, each facility may have unique resistance requirements based on their individual ESD programs. It is important to identify the resistance requirements and test method used for each project prior to installing any ESD flooring.

ELECTRICAL TESTING
Once the conductive mortar layer has cured, it must be tested for proper conductivity. Point-to-point and point-to-ground readings should be taken, and all values should fall below $5.0x10^5$ ohms(Ω).

The floor must also be tested after the carbon-filled topcoat has cured. Once the conductive sealer is tack-free, point-to- point and point-to-ground readings should be taken. All values must fall below $1.0x10^6$ ohms(Ω).

Note: Stonhard tests all floors in accordance with the ESD S7.1 test method. Various other ESD standards and test methods are available, and they each have their own unique parameters. Please contact the Stonhard's technical service department if you wish to use a different test method.

PRECAUTIONS

- Avoid contact with Stonchem 620 amine and resin, as they may cause skin, respiratory and eye irritation.
- Acetone is recommended for cleanup of Stonchem 600 amine and resin material spills. Use this material only in strict accordance with the manufacturer's recommended safety procedures. Dispose of waste materials in accordance with government regulations.
- 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.
- If eye contact occurs, 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.

NOTES

- Safety Data Sheets for Stonchem 622 are available online at www.stonhard.com under Products or upon request.
- Specific information regarding chemical resistance 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.
- The appearance of all floor, wall and lining systems will change over time due to normal wear, abrasion, traffic and cleaning. Generally, high-gloss coatings are subject to a reduction in gloss, while matte-finish coatings can increase in gloss level under normal operating conditions.
- Surface texture of resinous flooring surfaces can change over time as a result of wear and surface contaminants. Surfaces should be cleaned regularly and deep cleaned periodically to ensure no contaminant buildup occurs. Surfaces should be periodically inspected to ensure they are performing as expected and may require traction-enhancing maintenance to ensure they continue to meet expectations for the particular area and conditions of use.

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