

STONGLAZE® VSI

PRODUCT DESCRIPTION

Stonglaze VSI is a high-performance, high-gloss, pigmented wall system designed for use on most wall surfaces. This system is reinforced with micro-fiberglass additives for enhanced mechanical strength.

Stonglaze VSI is a nominal 250 to 300 microns wall system comprised of two coats of Stonglaze E4 with micro-fiberglass additions with appropriate primer.

USES, APPLICATIONS

Stonglaze VSI is a multiple layer wall system designed for use on drywall surfaces to obtain increased durability and resistance to cracking and punctures while providing a smooth, tile-like, high gloss finish. Stonglaze VSI is ideally suited for industrial and institutional facilities requiring superior durability on vertical surfaces. Some of these applications include:

- Medical facilities
- Educational facilities
- Pharmaceutical facilities
- Food processing facilities

OPTIONS

Antimicrobial

Stonplus AM9 is an antimicrobial, organic thione compound that acts as a permanent bacteriostat and fungistat against a broad range of gram-positive and gram-negative bacteria and fungi. Stonplus AM9 is EPA registered and contains no heavy metals.

Urethane Top Coat

A urethane topcoat can be added to increase UV stability and chemical resistance.

PRODUCT ADVANTAGES

- Durable, puncture-resistant wall surface
- Long-term abrasion and chemical resistance
- Aesthetically pleasing, easy to clean, high gloss finish
- Stain resistant
- Excellent bond strength assures good adhesion to drywall, wallboard, etc.
- Available in standard and custom colors

PACKAGING

Stonglaze VSI is packaged in units for easy handling. Each unit consists of:

Stonglaze E4

2 cartons of Stonglaze E4 each containing:

- 2 foil bags of Stonglaze E4 Amine
- (2) 1 gallon cans of Stonglaze E4 Resin

Fiberglass Additive

0.25 carton containing:

8 bags of fiberglass microfiber

COVERAGE

Each unit of Stonglaze VSI will cover approximately 37.16 m² at a 250 to 300 microns thickness (DFT) over relatively smooth surfaces.

STORAGE CONDITIONS

Store all components of Stonglaze VSI at or above 18°C in a dry area. Avoid excessive heat. Do not freeze. The shelf life is 3 years in the original, unopened container.

PHYSICAL CHARACTERISTICS

Pot Life	20 to 25 minutes @ 21°C
Minimum Dry Film Thickness	250 microns
Cure Rate	8 hours for tack-free surface (@25°C). 24 hours minimum for normal operations
Temperature Limitations	60°C continuous exposure 93°C intermittent exposure
Fire Resistance of Dry Film	Class A (ASTM E84). Flame spread 10 Smoke developed 20 Stonglaze E4 - 39 g/l
V.O.C. (ASTM D-2369)	

Note: The above physical properties were measured in accordance with the referenced standards. Samples of the actual wall system, including binder and filler, were used as test specimens.

COLOR

Stonglaze VSI is available in 6 dynamic colors. Refer to the Stonglaze color sheet. Custom colors are available upon request.

SUBSTRATES/PREPARATION

When used in conjunction with its appropriate primer, Stonglaze VSI is suitable for use over wall board, wood, metal and concrete substrates. These substrates must be clean, dry, and free of any laitance or unbonded materials.

Any wall board surface must be finished to a level 1, 2, or 3 drywall finish with an appropriate spackle compound (green board and cement board will require water resistant drywall compound or setting compound). **To ensure excellent, long-term performance, it is critical that Stonglaze VSI is never installed over a level 4 or 5 drywall finish.**

Concrete block walls (CMU) must be given sufficient time for the mortar to fully cure. Excess mortar and any residual laitance or debris must be removed by mechanical means prior to installing Stonglaze VSI.

Formed or poured concrete walls must be prepared by mechanical means to remove any laitance or efflorescence and provide a sandpaper texture suitable for bonding.

Previously painted substrates must be inspected to determine the level of drywall finish (for wall boards) and the type of paint. Stonglaze VSI will bond well to prepared epoxy paints, but will not bond to latex, oil, urethane, or acrylic paints. If upon inspection, a level 4 or 5 drywall finish, or one of the previously mentioned paints is found, it must be removed by mechanical means prior to application of the Stonglaze system.

PRIMING

Priming for wall board applications, including sheetrock, green board, and paperless drywall, Primer 180 should be used to ensure proper adhesion and serve as a sealer coat between the Stonglaze coating and the substrate. The coverage for Primer 180 will be approximately 37.16 m² per unit over any of the wall boards mentioned. For concrete and concrete masonry unit (CMU) walls, Stonglaze E4 should be used as a primer. The coverage for Stonglaze E4 will fall between 23.23 to 37.16 m² per unit depending on the condition and porosity of the substrate.

MIXING

Stonglaze E4

The components of Stonglaze VSI are mixed just prior to use and must be applied immediately. Mixing is accomplished as follows:

1. Using a heavy-duty, slow speed drill (400 to 600 rpm) with a mixing paddle or a Jiffy mixer, pre-mix the epoxy material to assure the suspension of solids.
2. Slowly add one bag of fiberglass additive and mix for 60 seconds until well blended.

Note: The fiberglass additive is only added to the first coat of Stonglaze E4 after the primer.

3. Pour the contents of epoxy into a 18.93 liter bucket or appropriate mixing container.
4. Add amine and continue to mix thoroughly to a uniform consistency for 2 minutes. While mixing, scrape the sides of the bucket to ensure that the epoxy is being mixed completely with the amine.

APPLYING

The application of Stonglaze VSI system, which begins immediately after mixing, may be accomplished using a high quality medium nap roller or an airless sprayer.

Application of Stonglaze VSI by roller method should be accomplished in two coats of Stonglaze E4 at 127 to 178 microns. The second coat of Stonglaze E4 can be applied after the first coat is tack free. (8 hours at 25°C.)

To spray Stonglaze VSI, suitable NIOSH/MSHA approved respirators should be worn by all personnel in the area. Stonglaze VSI can be spray-applied in a single application at a thickness ranging from 250 to 380 microns (WFT.) Spray-applying this material should be done using a plural component pump with the following specifications:

63:1 pump - 2 1/2 gallons per minute
0.019 - 0.035 inch spray tip
3,000 - 4,000 psi spray tip pressure

It should be noted that the finished texture of a sprayed surface will be much smoother than the orange peel texture that is associated with roller applications. For more information on spraying Stonglaze VSI, contact Stonhard's Technical Service Department.

CURING

The surface of Stonglaze VSI will be tack-free in 8 hours at 25°C. The coated area may be put into service in 24 hours. Ultimate physical characteristics will be achieved in seven days.

RECOMMENDATIONS

- Apply on a clean, sound and properly prepared substrate.
- Minimum ambient and surface temperatures are 16°C at the time of application.
- Do not use water or steam in the vicinity of the application. **Moisture can seriously affect the working time and properties of the material.**
- Application and curing times are dependent upon ambient and surface conditions.

PRECAUTIONS

- The use of safety glasses and impervious gloves are required.
- 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.
- **The use of NIOSH/MSHA approved respirators with organic vapor/acid gas cartridges is required when spray-applying this product.**
- Material, air and substrate temperatures should be 6 to 30°C during installation.

NOTES

- For environments not referenced in the Chemical Resistance Guide, consult Stonhard's Technical Service Department for recommendations.
- Safety Data Sheets for Stonglaze VSI are available online at www.stonhard.com under Products or upon request.
- A staff of technical service engineers is available to assist with product application or to answer any 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.

CHEMICAL RESISTANCE GUIDE

The purpose of this guide is to aid in determining the potential value of Stonglaze VSI when exposed to the damaging effects of corrosive chemical environments.

RATING CODE

E - Excellent
 G - Good
 NR - Not Recommended
 OS - Suitable for use where "occasional spillages" occur, when flushing with water immediately follows.

ACIDS

	RATING		RATING
Acetic - 5%.....	G	Hypochlorous - 5%.....	E
Acetic -20%.....	OS	Lactic -up to 20%.....	OS
Acetic - Glacial.....	NR	Maleic - 30%.....	G
Benzoic - Sat. 3%.....	E	Maleic - 40%.....	OS
Boric - Sat. 30%.....	E	Maleic - 50%.....	NR
Butyric -10%.....	OS	Nitric - 10%.....	G
Chromic - 10%.....	G	Nitric - 30%.....	OS
Chromic - 20%.....	OS	Oleic.....	G
Citric - 50%.....	E	Oxalic - Sat.....	E
Cresylic.....	OS	Perchloric - 35%.....	OS
Diglycolic.....	G	Phosphoric -up to 50%.....	OS
Fatty.....	G	Picric - Sat.....	E
Fluoboric.....	G	Phthalic.....	OS
Formic -up to 10%.....	OS	Succinic - Sat.....	E
Heptanoic.....	OS	Sulfuric - 20%.....	E
Hydrochloric -15%.....	G	Sulfuric - 50%.....	G
Hydrochloric - 37%.....	OS	Sulfuric - 70%.....	OS
Hydrofluoric - 5%.....	G	Tannic - Sat.....	G
Hydrofluoric -10%.....	OS	Tartaric - Sat.....	E

ALKALIES AND SALTS

Stonglaze VSI is rated *Good* to *Excellent* when exposed to most commonly known alkalis and salts.

SOLVENTS AND OTHER CHEMICALS

	RATING		RATING
Acetone.....	NR	Methyl Ethyl Ketone.....	NR
Alcohol (Methyl).....	OS	Methylene Chloride.....	NR
Alcohol (Ethyl, Propyl, Isopropyl, Butyl).....	G	Milk.....	E
Benzene.....	OS	Mineral Spirits.....	G
Carbon Tetrachloride.....	OS	Mustard.....	G
Corn Oil.....	E	Naphtha.....	OS
Cyclohexane.....	G	Oils - Cutting.....	G
Diacetone Alcohol.....	OS	Oils - Mineral.....	E
Ethylene Glycol.....	G	Oils - Vegetable.....	G
Ether.....	OS	Perchloroethylene.....	OS
Formaldehyde.....	G	Skydrol.....	G
Gasoline.....	E	Sucrose - Sat. (Sugar).....	E
Glycerine.....	E	Toluene.....	OS
Hydrogen Peroxide - 10%.....	G	Trichloroethylene.....	NR
JP5 Jet Fuel.....	G	Urea.....	G
Juices - Fruit.....	E	Vinegar (Household).....	G
Juices - Vegetable.....	E	Water.....	E
Lard.....	G	Wine.....	E
Linseed Oil.....	G	Xylene.....	OS

Note: This data is based on laboratory tests performed under carefully controlled conditions. (All solutions are at ambient temperatures.) No warranty can be expressed or implied regarding the accuracy of this information as it will apply to actual plant operation or job site use. Plant operations and job site uses vary widely, and the individual results obtained are affected by the specific conditions encountered, which are beyond our control.

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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