STONHARD

STONGLAZE® VSD

PRODUCT DATA

PRODUCT DESCRIPTION

Stonglaze VSD is a high performance wall system designed for vertical use on drywall surfaces. This system is reinforced with an engineering fabric for enhanced mechanical strength. Stonglaze VSD is a nominal 25 mil/635 microns wall system comprised of:

Saturant
A two-component, epoxy based saturant layer

Engineering Fabric
Woven fiberglass designed to provide added reinforcement

Coating
A two-component, high performance, high solids epoxy coating

USES, APPLICATIONS

Stonglaze VSD 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 glaze finish. Stonglaze VSD is ideally suited for industrial and institutional facilities requiring added durability on their drywall 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 glaze finish
- Stain resistant
- Excellent bond strength assures good adhesion to drywall, wallboard, etc.
- Available in standard and custom colors

PHYSICAL CHARACTERISTICS

Pot Life	20 to 25 minutes @ 70°F/21°C
Minimum Dry Film Thickness	25 mil/635 microns
Cure Rate (@ 77°F/25°C)	8 hours for tack-free surface 24 hours minimum for normal operations
Temperature Limitations	140°F/60°C for continuous exposure 200°F/93°C intermittent exposure
Fire Resistance of Dry Film (ASTM E-84)	Class A Flame spread 25 Smoke developed 100
V.O.C. (ASTM D-2369)	Stonglaze E4 - 39 g/l

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.

PACKAGING

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

Saturant
2 cartons of Stonglaze E4 each containing:
2 foil bags of Stonglaze E4 Amine
(2) 1 gallon cans of Stonglaze E4 Resin

Engineering Fabric
1 roll containing 400 sq. ft./37.16 sq. m

Coating
1.5 cartons of Stonglaze E4 containing:
2 foil bags of Stonglaze E4 Amine
(2) 1 gallon cans of Stonglaze E4 Resin

COVERAGE

Each unit of Stonglaze VSD will cover approximately 400 sq. ft./37.16 sq. m at a 25 mil/635 microns thickness (DFT) over relatively smooth surfaces.

STORAGE CONDITIONS

Store all components of Stonglaze VSD at or above 65°F/18°C in a dry area. Avoid excessive heat. Do not freeze. The shelf life is 3 years in the original, unopened container.

COLOR

Stonglaze VSD is available in 6 colors. Custom colors are available upon request.

SUBSTRATES/PREPARATION

When used in conjunction with its appropriate primer, Stonglaze VSD 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 VSD 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 VSD.

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 VSD 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 400 sq. ft./37.16 sq. m 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 250 to 400 sq.ft/23.23 to 37.16 sq. m per unit depending on the condition and porosity of the substrate.

MIXING

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

Saturant and Topcoat

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. Pour the contents of epoxy into a 5 gallon/18.93 liter bucket or appropriate mixing container.
3. 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.

Note: Avoid high-speed mixing that will entrain air bubbles.

APPLYING

The application of Stonglaze VSD begins immediately after mixing and is accomplished as follows:

1. An initial layer of saturant is applied with a medium nap roller at a thickness of 3 mil/76 microns. The engineering fabric is then immediately placed vertically into the wet saturant coating.
2. A one inch overlap should be made at each seam. Using a razor and a straight edge, cut completely through both fiberglass pieces to the drywall. The excess fiberglass should be removed from the overlapped material, leaving a natural seam where the cut was made. Another thin layer of the same saturant material is then immediately applied over the engineering fabric. This step, which results in a total thickness of 10 mil/254 microns wft, will ensure that the engineering fabric is properly saturated.

   Note: It is important that the engineering fabric be completely saturated, NOT FLOODED, with the saturant liquid. The woven fiberglass will still be evident.

3. Once the saturant and fabric layer has cured for 8 hours and is tack-free, lightly sand the surface to remove any imperfections.
4. Apply the first of two 6-8 mils/152-203 microns finish coats. Application of the second of the coats must be performed when the initial coat is tact free (6-8 hours @ 77˚F/25˚C).

CURING

The surface of Stonglaze VSD will be tack-free in 8 hours at 77˚F/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 60˚F/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

- Application time and curing time are dependent upon ambient conditions.
- The use of safety goggles 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 60 to 85˚F/16 to 30˚C during installation.

CHEMICAL RESISTANCE GUIDE

The purpose of this guide is to aid in determining the potential value of Stonglaze VSD 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 VSD is rated *Good* to *Excellent* when exposed to most commonly known alkalies 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.

NOTES

- Procedures for maintenance of the flooring system during operations are described in the Stonkleen Floor Cleaning Procedures Brochure.
- For environments not referenced in the Chemical Resistance Guide, consult Stonhard's Technical Service Department for recommendations.
- Safety Data Sheets for Stonglaze VSD are available on line 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.

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