

## PRODUCT DESCRIPTION

Stonglaze VSR is a high-performance, high solids, high gloss, pigmented wall system. It is formulated to provide long-term protection to vertical surfaces. Stonglaze VSR cures to a hard, tile-like finish that exhibits excellent chemical and abrasion resistance. Stonglaze VSR is a nominal 250 to 300 microns wall system comprised of two coats of Stonglaze E4, with the appropriate primer.

## USES, APPLICATIONS

Stonglaze VSR is specifically designed for use where a hard, smooth, tile-like finish is desired on a vertical surface. Stonglaze VSR is an ideal product for institutional and industrial facilities. Some typical wall applications for Stonglaze VSR include:

- Medical facilities
- Educational facilities
- Pharmaceutical facilities
- Food processing facilities
- Animal holding areas
- Detention facilities

## OPTIONS

### Antimicrobial

Stonplus PROTECT is an antimicrobial, organic thione compound that acts as a permanent bacteriostat and fungistat to protect the floor against a broad range of gram-positive and gram-negative bacteria and fungi. Stonplus PROTECT 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 high-gloss finish that is aesthetically pleasing and easy to clean.
- Long-term chemical resistance.
- Stain resistant.
- Excellent bond strength assures good adhesion to concrete, steel, drywall and masonry surfaces.
- Easily applied by brush, roller or spray application.
- Available in standard and custom colors.

## PACKAGING

Stonglaze VSR 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) 4 Ltr cans of Stonglaze E4 Resin

## COVERAGE

Each unit of Stonglaze VSR will cover approximately 37.16 m<sup>2</sup> at a 250 to 300 micron thickness (DFT) over relatively smooth surfaces.

## STORAGE CONDITIONS

Store all components of Stonglaze VSR 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.

## COLOR

Stonglaze VSR 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 VSR 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 VSR 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 VSR. 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.

## PHYSICAL CHARACTERISTICS

Pot Life	20 to 25 minutes @21 °C
Minimum Dry Film Thickness	250 microns
Cure Rate (@ 25°C)	12 hours for tack-free surface 24 hours minimum for normal operations
Temperature Limitations	60°C (continuous exposure) 93°C (intermittent exposure)
Fire Resistance of Dry Film (ASTM E84)	Class A Flame spread 10 Smoke developed 20
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 floor system, including binder and filler, were used as test specimens.

Previously painted substrates must be inspected to determine the level of drywall finish (for wall boards) and the type of paint. Stonglaze VSR 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**

When 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 m<sup>2</sup> 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 and 37.16 m<sup>2</sup> per unit depending on the condition and porosity of the substrate.

### **MIXING**

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

#### **Stonglaze E4**

- 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 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.

### **APPLYING**

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

#### **Stonglaze E4**

Application of Stonglaze E4 by roller method should be accomplished with two coats of Stonglaze E4 applied at 125 to 180 microns. The second coat can be applied after the first coat is tack-free (6-8 hours at 25°C).

To spray Stonglaze VSR, suitable NIOSH-approved respirators should be worn by all personnel in the area. Stonglaze VSR 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 - c.a. 10 Ltr 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 VSR, contact Stonhard's Technical Service Department.

### **CURING**

The surface of Stonglaze VSR will be tack-free in 6-8 hours at 25°C. The coated area may be put into service in 24 hours. Ultimate physical characteristics will be achieved in 7 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 proper ties of the material.
- Application and curing times are dependent upon ambient and surface conditions.

### **PRECAUTIONS**

- Application time (20 minutes) and curing time (12 hours) are dependent upon ambient conditions.
- 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-approved respirators with organic vapor/acid gas cartridges is required when spray applying this product.
- Material, air and substrate temperatures should be 16 to 30°C during installation.
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### **NOTES**

- For environments not referenced in the Chemical Resistance Guide, consult Stonhard's Technical Service Department for recommendations.
- Safety Data Sheets for Stonglaze VSR are available on line at [www.stonhard.com](http://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 cooperate 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.

**CHEMICAL RESISTANCE GUIDE**

The purpose of this guide is to aid in determining the potential value of StonglazeVSR 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**

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

**ALKALIES AND SALTS**

StonglazeVSR is rated Good to Excellent when exposed to most commonly known alkalies and salts.

**SOLVENTS AND OTHER CHEMICALS**

**RATING**

Acetone	.NR
Alcohol (Methyl)	.OS
Alcohol (Ethyl, Propyl, Isopropyl, Butyl)	.G
Benzene.	.OS
CarbonTetrachloride	.OS
Corn Oil	.E
Cyclohexane	.G
Diacetone Alcohol	.OS
Ethylene Glycol	.G
Ether	.OS
Formaldehyde	.G
Gasoline	.E
Glycerine.	.E
Hydrogen Peroxide - 10%	.G
JP5 Jet Fue	.G

Juices - Fruit..	..E
Juices -Vegetable	..E
Lard.	..G
Linseed Oil	..G
Methyl Ethyl Ketone	..NR
Methylene Chloride	..NR
Milk	..E
Mineral Spirits.	..G
Mustard	..G
Naphtha	..OS
Oils - Cutting	..G
Oils - Mineral	..E
Oils -Vegetable.	..G
Perchloroethylene.	..OS
Skydrol	..G
Sucrose - Sat. (Sugar)	..E
Toluene	..OS
Trichloroethylene.	..NR
Urea	..G
Vinegar (Household)	..G
Water.	..E
Wine.	..E
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:**

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Rev. 8/20  
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