

STONGLAZE® VSR

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 10 to 12 mil/250 to 300 microns wall system comprised of one coat of Stonglaze Topcoat EPX and two coats of Topcoat URE.

Basecoat

A two-component, high performance, high solids, epoxy base layer.

Urethane Topcoat

Stonglaze Topcoat URE is a high performance, UV resistant, polyurethane finish.

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 maintenance 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

SUBSTRATES

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

PHYSICAL CHARACTERISTICS

Impact Resistance	Exceeds 80 in. lbs. (ASTM D-2794)
Pot Life	20 to 25 minutes @ 70°F/21°C
Suggested Number of Coats	Spray - 1 Roller - 2
Minimum Dry Film Thickness	10 mil/250 microns
Cure Rate	12 hours (@ 77°F/25°C) for tack-free surface 24 hours minimum for normal operations
Temperature Limitations	140°F/60°C (continuous exposure) 200°F/93°C (intermittent exposure)
Fire Resistance of Dry Film	Class A (ASTM E84) Flame spread 10 Smoke developed 20
Hardness80 to 85 (ASTM D-2240, Shore D)
V.O.C.06 lbs./gal./ (ASTM D-2369) Basecoat - 70 grams/liter (ASTM D-2369) Urethane Topcoat < 5 grams/liter

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.

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 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.

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.

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:

Basecoat

- 1 cartons of Stonglaze Topcoat EPX each containing:
 - 2 foil bags of Stonglaze Topcoat EPX amine
- (2) 1 gallon cans of Stonglaze Topcoat EPX resin

Stonglaze Topcoat URE

- 1.25 carton containing:
 - 2 foil bags of isocyanate curing agent
- (2) 1 gallon pails of polyol resin

COVERAGE

Each unit of Stonglaze VSR will cover approximately 500 sq. ft./46.45 sq. m at a 10 to 12 mil/250 to 300 micron thickness (DFT) over relatively smooth surfaces.

STORAGE CONDITIONS

Store all components of Stonglaze VSR 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 VSR is available in 6 dynamic colors. Refer to the Stonglaze Color Sheet. Custom colors are available upon request.

SUBSTRATE PREPARATION

Proper preparation is critical to ensure an adequate bond. The existing walls must be free of wax, grease, oils, fats, soil, and loose or foreign materials. Laitance, unbonded cement particles, and existing latex, oil based, and acrylic paints must be removed by mechanical methods, i.e., abrasive blasting or sanding. Other contaminants can be removed using heavy duty industrial detergent (Stonkleen TD9) and rinsing with clean water.

PRIMING

Priming for wall board applications, including sheetrock, green board, and paperless drywall, HT Primer should be used to ensure proper adhesion and serve as a sealer coat between the Stonglaze coating and the substrate. The coverage for HT Primer 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 Topcoat EPX should be used as a primer. The coverage for Stonglaze Topcoat EPX will fall between 250 to 500 sq.ft./23.23 to 46.45 sq. m 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:

Basecoat

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.

Topcoat

1. Using a heavy-duty, slow speed drill (400 to 600 rpm) with a mixing paddle or Jiffy mixer; premix the polyol for 30 seconds to ensure the suspension of solids.
2. Slowly pour the contents of the bag of isocyanate directly into the 1 gallon bucket of polyol.
3. Mix the polyol and Iso for a minimum of 90 seconds until well blended.
4. Pour the contents into a 5 gallon/18.93 liter bucket, paint tray or suitable container for application.

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.

Basecoat

Application of Stonglaze VSR basecoat by roller method should be accomplished with one coat of Topcoat EPX applied at 5 to 7 mil/125 to 180 microns. Application of the first Topcoat URE must be performed when the Topcoat EPX is tack-free (8 hours at 77°F/25°C).

Topcoat

Two layers of Stonglaze Topcoat URE are required to ensure proper coverage and hiding of the basecoat. Stonglaze Topcoat URE must be applied immediately after mixing the two components. The Topcoat may be applied using a 1/4 in. to 3/8 in. /6 mm to 10 mm nap roller. Dip and roll the Topcoat onto the wall surface at a thickness of 2 to 4 mils/50 to 100 microns (wft). Immediately after rolling the coating on the wall, a saturated nap roller should be used to remove roller lines and drips. Finish roll on one direction only, picking the roller up between passes.

Application of the second coat of Topcoat can begin once the first layer is cured. Installing the Topcoat thicker than 4 mils in one coat is not recommended and may result in drips and runs. For a smooth finish sand between coats.

To spray Stonglaze VSR, suitable NIOSH/MSHA 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 10 to 15 mil/250 to 380 microns (WFT.) Spray applying this material should be done using the Graco King System or comparable equipment with the following specifications:

CHEMICAL RESISTANCE GUIDE

The purpose of this guide is to aid in determining the potential value of Stonglaze VSR 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 VSR 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.

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 is recommended that the spray equipment be purged with Xylene every 30 minutes of use to avoid potential line damage. It should also 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 12 hours at 77°F/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 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 (20 minutes) and curing time (12 hours) are dependent upon ambient conditions.
- The use of safety glasses and impervious gloves are recommended.
- 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 vapour/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.

NOTES

- For environments not referenced in the Chemical Resistance Guide, consult Stonhard's Technical Service Department for recommendations.
- Material Safety Data Sheets for Stonglaze VSR are available on line at www.stonhard.ca under Tech Info 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.

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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