

### PRODUCT DESCRIPTION

Stonclad UR is a four-component, trowel applied, polyurethane mortar system. Stonclad UR consists of a urethane-urea binder, pigments, and graded quartz aggregates. Stonclad UR can be applied at thickness ranging from 1/8 in./3 mm to 1/4 in./6 mm depending on application requirements. Stonclad UR cures to an extremely hard, high impact resistant mortar which exhibits excellent abrasion, wear, temperature and chemical resistance characteristics.

### USES, APPLICATIONS

Stonclad UR is formulated specifically for the food and beverage industry, using a multi-functional urethane-urea resin. This system is specifically designed for surfacing and patching industrial floors exposed to conditions of impact and abrasion at temperatures up to 250°F/121°C. Stonclad UR provides excellent protection against attack from chemicals such as oxidizing agents, organic acids and solvents while maintaining outstanding resistance to thermal shock and thermal cycling.

### SUBSTRATE

Stonclad UR is suitable for application over concrete. Contact Technical Service for recommendations on substrate other than concrete.

### SYSTEM OPTIONS

#### Cove Base

To provide for an integral seal at the joint between the floor and the wall, cove bases in heights from 2 to 6 in./5 to 15 cm may be specified.

#### Waterproofing

Where the total system must be waterproofed, the use of Stonhard's Stonproof ME7 membrane system with texture #3 broadcast to refusal is required with strict adherence to application instructions.

#### Coatings

The system is designed as an uncoated mortar system. Contact Technical Service to discuss possible coating options.

### PACKAGING

Stonclad UR is packaged in units for easy handling. Each unit consists of:

#### Mortar

2 cartons, each containing:

- 6 foil bags of isocyanate (curing agent)
- 6 poly bags of polyol (resin)

12 individual bags of Part C-1 (aggregate)

### PHYSICAL CHARACTERISTICS

<b>Compressive Strength</b> . . . . .	5,000 psi
(ASTM C-579)	after 7 days
<b>Tensile Strength</b> . . . . .	1,000 psi
(ASTM C-307)	
<b>Flexural Strength</b> . . . . .	2,000 psi
(ASTM C-580)	
<b>Flexural Modulus of Elasticity</b> . . . . .	1.1 × 10 <sup>6</sup> psi
(ASTM C-580)	
<b>Hardness</b> . . . . .	80 to 84
(ASTM D-2240, Shore D)	
<b>Bond Strength</b> . . . . .	>400 psi
(ASTM D-7234)	(100% concrete failure)
<b>Impact Resistance</b> . . . . .	>160 in./lbs.
(ASTM D-2794)	
<b>Slip Resistance Index</b> . . . . .	unsealed 0.98 (dry)
(ASTM F-1679)	0.8 (wet)
	sealed 0.93 (dry)
	0.75 (wet)
<b>Flammability</b> . . . . .	Class I
(ASTM E-648)	
<b>Thermal Coefficient of Linear Expansion</b> . . . . .	1.1 × 10 <sup>-6</sup> in./in.°C
(ASTM C-531)	
<b>Water Absorption</b> . . . . .	< 1%
(ASTM C-413)	
<b>Heat Resistance Limitation</b> . . . . .	200°F/93°C
	(continuous exposure)
	250°F/121°C
	(intermittent spills)
<b>Cure Rate</b> . . . . .	8 hours for foot traffic
(@ 77°F/25°C)	24 hours for normal operations

**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.

### Pigment

- 1 carton containing:
- 12 bags of Part C-2 pigment packs (powder)

### COVERAGE

Each unit of Stonclad UR will cover approximately 200 sq. ft./18.58 sq. m at a nominal thickness of 1/4 in./6 mm.

## STORAGE CONDITIONS

Store all components of Stonclad UR between 60 to 85°F/16 to 30°C in a dry area. Avoid excessive heat and do not freeze. The shelf life is one year in the original, unopened container.

## SUBSTRATE PREPARATION

Proper preparation is critical to ensure an adequate bond. The substrate must be dry and free of all wax, grease, oils, fats, soil, loose or foreign materials and laitance. Laitance and unbonded cement particles must be removed by mechanical methods, i.e., abrasive blasting or scarifying. Other contaminants can be removed by scrubbing with a heavy-duty industrial detergent (Stonklean DG9) and rinsing with clean water. The surface must show open pores throughout and have a sandpaper texture. When applying Stonclad UR over Stonset TG6, the Stonset TG6 must be ground to achieve a surface profile. This profile will offer more surface area at the grout/mortar interface creating a stronger bond. For recommendations or additional information regarding substrate preparation, contact Stonhard's Technical Service Department.

## PRIMING

The use of Urethane Primer is necessary for all applications of Stonclad UR. The Urethane Primer must be tacky during the application of the Stonclad UR. If the primer becomes tack-free, the area must be reprimed prior to continuing the application.

## MIXING

1. Empty the entire contents of polyol (liquid) into a 5 gallon mixing pail.
2. Place the mixing pail on a JB Power Blender and empty the entire contents of isocyanate (liquid) and Part C-2 (pigmented powder) into the mixing pail.
3. Activate the timer to start the 90 second blending cycle.
4. When the blender stops, reactivate the timer and immediately pour the entire contents of one bag of Part C-1 (aggregate) into the pail. Allow the contents to mix for the complete 90 second cycle.
5. When the blender stops, scrape the excess material from the mixing blade, remove the pail and deliver it to the floor area for application.

## POT LIFE

After mixing, Stonclad UR has a working time of approximately 15 minutes at 70°F/21°C. The working time may vary depending upon ambient and surface conditions.

## APPLYING

- Material must be used immediately after mixing.

- A Screed Applicator is used to distribute the mixed Stonclad UR onto the floor.
- Steel finishing trowels are used to compact and smooth the surface of the material to the required thickness. A power trowel can be used in large open areas to finish the Stonclad UR application.
- Detailed instructions on application and installation can be found in the Stonclad UR Directions.

## RECOMMENDATIONS

- DO NOT attempt to install material if the temperature of Stonclad UR components is below 45°F/7°C. **The cure time and application properties of the material are severely affected by temperature.**
- DO NOT use water or steam in the vicinity of the application. **Moisture can seriously affect the working time and other properties.**
- The use of NIOSH/MSHA approved respirators and safety glasses are recommended.
- Avoid contact with all liquid isocyanate and polyol as they may cause skin and/or eye irritation. Applicators should cover hands with impervious gloves.

## NOTES

- Procedures for cleaning and maintenance can be found in the Stonhard Floor Maintenance Guide.
- Specific information regarding chemical resistance is available in the Stonclad Chemical Resistance Guide.
- Material Safety Data Sheets for Stonclad UR are available upon request.
- A staff of technical service engineers is available to assist with installation, or to answer questions related to Stonhard flooring products.
- Requests for technical service or literature 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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### PRODUCT DESCRIPTION

Stonkote GS4 is a two-component, 100% solids, general service, epoxy coating. It is formulated to increase abrasion and chemical resistance while improving cleanability. Stonkote GS4 is easily applied and hardens to an attractive gloss finish.

### USES, APPLICATIONS

Stonkote GS4 is a general service coating designed for use whenever a high solids, corrosion resistant, gloss coating is required. It may be applied on various substrates to both vertical and horizontal surfaces. Some applications of Stonkote GS4 are:

- In conjunction with various Stonhard flooring systems
- Protection of concrete surfaces exposed to abrasive or corrosive environments
- For substrates requiring a protective coating that is easily cleaned and maintained

### PRODUCT ADVANTAGES

- 100% solids
- Long-term abrasion and corrosion resistance
- Excellent bond strength assures good adhesion
- Protects against moisture penetration
- Bonds to many different substrates
- Durable, gloss finish permits easy cleaning and maintenance
- Factory proportioned packaging ensures consistent, high quality, simplified mixing

### PACKAGING

Stonkote GS4 is packaged in units for easy handling. Each unit consists of one carton containing:

- 4 foil bags of Part A (curing agent)
- 4 poly bags of Part B (resin)

### COVERAGE

Approximately 400 sq. ft./37.16 sq. m per unit at 4 mil thickness over a porous substrate (8 mil theoretical/non-porous).

### STORAGE CONDITIONS

Store all components of Stonkote GS4 between 60 to 85°F/16 to 29°C in a dry area. Avoid excessive heat and do not freeze. The shelf life is 3 years in the original, unopened container.

### COLOUR

Stonkote GS4 is available in Clear and 14 standard colours. Custom colours are available upon request.

### PHYSICAL CHARACTERISTICS

Percent Solids.....	100%
Pot Life.....	35 minutes
(@ 77 F/25°C)	
Suggested Number of Coats.....	One
Coverage.....	400 sq. ft./37.16 sq. m per unit
(@ 8.0 mil, DFT)	
Cure Rate.....	8 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.....	Self-Extinguishing

**Note:** The above physical properties were measured in accordance with the referenced standards. Samples of the actual coating were used as test specimens.

### SUBSTRATE PREPARATION

#### Preparing Stonhard Flooring Systems

Before coating a Stonhard floor, all trowel marks and surface imperfections must be removed to produce a smooth surface. Grind the floor using a floor grinder with medium stones and vacuum using an industrial wet/dry vacuum to remove all dust particles. The Stonhard floor is now ready to be coated with Stonkote GS4.

#### Preparing Concrete Substrates

Proper preparation is critical to ensure an adequate bond. The substrate must be dry and free of all wax, grease, oils, fats, soil, loose or foreign materials and laitance. Laitance and unbonded cement particles must be removed by mechanical methods, i.e., abrasive blasting or scarifying. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent (Stonkleen DG9) and rinsing with clean water. The surface must show open pores throughout and have a sandpaper texture. For recommendations or additional information regarding substrate preparation, contact Stonhard's Technical Service Department.

## PRIMING

For use over a Stonhard floor, no primer is necessary. For use over a concrete substrate, Stoncrest GS3 or HT Primer are recommended to ensure maximum product performance.

## MIXING

Stonkote GS4 is supplied in factory proportioned quantities. To achieve thorough and proper mixing, the Stonkote GS4 must be mechanically mixed using a heavy-duty, slow-speed drill (400 to 600 rpm) with a Jiffy Mixer. Empty the contents of Part B into a mixing container and pre-mix to assure the suspension of solids. Add Part A and continue to mix to a uniform consistency for 1 to 2 minutes. Avoid high speed mixing that will entrain air into the mix. Thorough mixing of the two components is required.

## POT LIFE

After mixing, Stonkote GS4 has a working time of approximately 35 minutes at 77°F/25°C. The working time may vary depending on ambient and surface conditions.

## APPLYING

Stonkote GS4 can be applied at ambient temperatures of 60 to 85°F/16 to 29°C and humidity below 80%. The GS4 must be applied immediately after mixing the two components. Stonkote GS4 is applied with a rubber squeegee and medium nap roller. The roller is used to remove squeegee lines and smooth out the surface. A brush may be used where necessary. Stonkote GS4 may be applied at variable thicknesses ranging from 4 to 6 mil minimum dry film thickness. Each additional coat may be applied when the surface is tack-free, which is about 8 hours. Any questions regarding the application of Stonkote GS4 should be directed to Stonhard's Technical Service Department.

## CURING

The surface of Stonkote GS4 will be tack-free in 8 hours at 77°F/25°C. The coated area may be put back in service in 24 hours. Ultimate physical characteristics will be achieved in 7 days.

## RECOMMENDATIONS

- Apply only 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

- Toluene and Xylene solvents are recommended for clean up of the unreacted Stonkote GS4 material. Use these materials only in strict accordance with manufacturer's recommended safety procedures. Dispose of waste materials in accordance with government regulations. The reacted material will require mechanical means of removal.

- The use of a NIOSH/MSHA approved respirator, safety goggles and impervious gloves are recommended.
- In case of contact, flush the area with water for 15 minutes and seek medical attention. Wash skin with soap and water.
- Use only with adequate ventilation.

## NOTES

- When applied according to Stonhard's tech line #5, the applied thickness of Stonkote GS4 with textures is as follows:  
TX3 & TX4..... 20 - 25 mils  
TX5 ..... 38 - 42 mils
- For environments not referenced in the Chemical Resistance Guide, consult Stonhard's Technical Service Department for recommendations.
- Material Safety Data Sheets for Stonkote GS4 are available upon request.
- A staff of technical service engineers is available to assist with product application or to answer questions related to Stonhard's products.
- Requests for technical literature or service can be made through local sales representatives and offices, or corporate offices located worldwide.

## CHEMICAL RESISTANCE GUIDE

The purpose of this guide is to aid in determining the potential value of Stonkote GS4 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. ....	.E	Maleic - 40% .....	.OS
Boric - Sat. ....	.E	Nitric - 10% .....	.G
Butyric - 10% .....	.OS	Nitric - 30% .....	.OS
Chromic - 10% .....	.G	Oleic .....	.G
Chromic - 20% .....	.OS	Oxalic - Sat. ....	.E
Citric - 50% .....	.E	Perchloric - 35% .....	.G
Cresylic .....	.OS	Phosphoric - up to 50% .....	.OS
Diglycolic .....	.G	Picric - Sat. ....	.E
Fatty .....	.G	Phthalic .....	.G
Fluoboric .....	.G	Succinic - Sat. ....	.E
Formic - up to 10% .....	.OS	Sulfuric - 20% .....	.E
Heptanoic .....	.OS	Sulfuric - 50% .....	.G
Hydrochloric - 15% .....	.G	Sulfuric - 70% .....	.OS
Hydrochloric - 37% .....	.OS	Tannic - Sat. ....	.G
Hydrofluoric - 10% .....	.OS	Tartaric - Sat. ....	.E

### ALKALIES AND SALTS

Stonkote GS4 is rated Good to Excellent when exposed to most alkalies and salts.

### SOLVENTS AND OTHER CHEMICALS

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

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### PRODUCT DESCRIPTION

Stonproof ME7 is a two-component, liquid applied, urethane membrane for use on horizontal applications as a positive moisture barrier or as a crack bridging isolation layer. It is 100% solids, making it ideal for use in confined areas. Stonproof ME7 can be used as a light traffic bearing membrane and as a membrane under most Stonhard's flooring systems. Both applications provide a positive barrier against water transmission.

### PRODUCT ADVANTAGES

- 100% solids
- Excellent bond strength ensures superior adhesion
- Excellent low temperature property retention
- Seamless and monolithic
- Permanently elastic
- Non-deteriorating
- Easily applied to horizontal surfaces
- Factory proportioned packaging ensures consistent, high quality, and simplified mixing

### PACKAGING

Stonproof ME7 is packaged in units for easy handling. Each unit consists of:

1 carton containing:  
6 foil bags of Isocyanate

1 carton containing:  
6 poly bags of Polyol

### COVERAGE

Approximately 300 sq. ft./27.87 sq. m per unit at an application thickness of 25 mil.

### STORAGE CONDITIONS

Store Stonproof ME7 at 60 to 85°F/16 to 30°C in a dry area. Avoid excessive heat and do not freeze. The shelf life is 2 years in the original, unopened container.

### SUBSTRATE

Stonproof ME7, with the appropriate primer, is suitable for application over properly prepared concrete, wood, brick, quarry tile, metal or Stonhard Stonset grouts. For questions regarding other possible substrates or an appropriate primer, contact your local Stonhard representative or Technical Service.

### PHYSICAL CHARACTERISTICS

Tensile Strength	.....1,200 psi
(ASTM D-412)	
Elongation	.....200%
(ASTM D-412)	
Hardness	.....70
(ASTM D-2240, Shore A)	
Pot Life	.....30 to 35 minutes
(@ 70°F/21°C)	
Cure Rate	.....8 to 10 hours
(@ 70°F/21°C)	for tack-free surface
	12 to 48 recoat window
VOC Content	.....10 g/l
(ASTM D-2369, Method E)	

**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. All sample preparation and testing is conducted in a laboratory environment, values obtained on field applied materials may vary and certain test methods can only be conducted on lab made test coupons.

#### Note:

1. Passes ANSI A 118.10-1999 required by the



### PATCHING

For proper membrane application, all cavities and voids in the concrete should be filled with a patching compound (Stonset PM5 is recommended) prior to priming to make the surface as smooth as possible.

### PRIMING

Stonhard's Standard Primer/SL Primer system must be applied to the prepared floor surface before installing Stonproof ME7 for all waterproofing applications. For all other applications, apply HT Primer only. Allow the primer to cure before applying Stonproof ME7.

## MIXING STONPROOF ME7

Stonproof ME7 is supplied in pre-measured quantities. Mixing must be achieved by mechanical means. Mechanical mixing should be done using a heavy-duty, slow-speed drill (400 to 600 rpm) with a mixing blade. Open the polyol and pre-mix to ensure the suspension of solids. Add the isocyanate and continue to mix for approximately 3 minutes. Avoid high-speed mixing that will entrain air into the mix. Thorough mixing of the two components is required.

## APPLYING STONPROOF ME7

Stonproof ME7 can be applied at ambient and surface temperatures of 60 to 85°F/16 to 30°C. This membrane must be applied immediately after mixing the two components. Stonproof ME7 may be applied by using a 30 mil notched squeegee. Backrolling with a spiked roller will aid in air release.

**Note:** In thermal shock areas or under a urethane mortar (UT, UR or TG6) The Stonproof ME7 should be broadcasted to refusal with Texture 3. This will ensure a mechanical bond between the Stonproof ME7 and the overlayment.

## CURING

The surface of Stonproof ME7 will be tack-free in 8 to 10 hours at 77°F/25°C. Ultimate physical characteristics will be achieved in 7 days.

## RECOMMENDATIONS

- Apply only 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

- Solvents are recommended for clean up of unreacted material. The reacted materials must be removed by mechanical means. Use these materials only in strict accordance with the manufacturer's recommended safety procedures.
- Dispose of waste materials in accordance with federal, state and local regulations.
- The use of NIOSH/MSHA approved respirators are required.
- The selection of proper protective clothing and equipment will significantly reduce the risk of injury. Body covering apparel, safety goggles or safety glasses and impermeable 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 cold water.
- Use only with adequate ventilation.

## NOTES

- Material Safety Data Sheets for Stonproof ME7 are available on line at [www.stonhard.ca](http://www.stonhard.ca) under Architects or upon request.
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### PRODUCT DESCRIPTION

Stonset TG5 is a three-component, fast-setting, trowelable, epoxy based grout designed for permanent horizontal repairs to concrete foundations, decks, floors and structural surfaces. Stonset TG5 exhibits exceptional strength and excellent chemical resistance.

### USES, APPLICATIONS

Stonset TG5 may be used for repairing deep holes, ruts and erosions in concrete floors and for changing the level or pitch of floors in preparation for coating or overlayment. Production floors, workshops, loading docks and ramps are among a few of the typical applications for this solvent-free, rapid hardening, durable, epoxy grout.

### PRODUCT ADVANTAGES

- 100% solids, solvent-free
- Excellent mechanical strengths
- Minimal shrinkage
- Rapid hardening
- Excellent bond strength assures superior adhesion
- Easy to use, fast-setting, labour saving system
- Factory proportioned packaging ensures consistent, high quality and simplified mixing

### PACKAGING

Stonset TG5 is packaged in units for easy handling. Each unit consists of:

- 1 carton containing:
  - 6 foil bags of Part A (curing agent)
  - 6 poly bags of Part B (resin)
- 6 individual bags of Part C (aggregate)

### COVERAGE

Approximately 2.0 cu. ft./0.06 cu. m per unit (0.33 cu. ft./0.01 cu. m per mix).

### STORAGE CONDITIONS

Store all components of Stonset TG5 between 60 to 85°F/16 to 29°C in a dry area. Avoid excessive heat and do not freeze. The shelf life is 3 years in the original, unopened container.

### PHYSICAL CHARACTERISTICS

<b>Compressive Strength</b> . . . . .	7,600 psi
(ASTM C-579)	after 7 days
<b>Tensile Strength</b> . . . . .	1,800 psi
(ASTM C-307)	
<b>Flexural Strength</b> . . . . .	3,300 psi
(ASTM C-580)	
<b>Flexural Modulus of Elasticity</b> . . . . .	8.5 x 10 <sup>5</sup> psi
(ASTM D-790)	
<b>Hardness</b> . . . . .	86-88
(ASTM D-2240, Shore D)	
<b>Bond Strength</b> . . . . .	>400 psi
(ASTM D-7234)	(100% concrete failure)
<b>Pot Life</b> . . . . .	30 minutes
(@ 75°F/24°C)	
<b>Initial Set</b> . . . . .	2 to 4 hours
(ASTM C-308)	(@ 70°F/21°C)

**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.

### SUBSTRATE PREPARATION

Proper preparation is critical to ensure an adequate bond. The substrate must be dry and free of all wax, grease, oils, fats, soil, loose or foreign materials and laitance. Laitance and unbonded cement particles must be removed by mechanical methods, i.e., abrasive blasting or scarifying. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent (Stonkleen DG9) and rinsing with clean water. The surface must show open pores throughout and have a sandpaper texture. For recommendations or additional information regarding substrate preparation, contact Stonhard's Technical Service Department.

### PRIMING

Standard Primer must be used in all applications of Stonset TG5. The prepared substrate should be primed with Standard Primer prior to applying the grout. After initial set, the top surface of Stonset TG5 must be primed with Stonset Primer prior to the application of any other coating or Stonhard flooring system.

## MIXING

**Note:** Do not start mixing until the surface is properly prepared and dry, with the temperature of both the Stonset TG5 and the surface at least 60°F/16°C or higher.

1. Empty the contents of Part A (curing agent) and Part B (resin) into a five gallon pail. Utilizing a JB Power Blender, mix the liquids for one minute.
2. Add the contents of one bag of Part C (aggregate). Mix for one minute or until a homogeneous mortar is achieved.

## APPLYING

The mixed Stonset TG5 must be placed before the Standard Primer has cured. Spread and compact Stonset TG5 with a steel finishing trowel. Stonset TG5 must be well compacted prior to smoothing the surface. Deep areas must be placed and compacted in 2 in./50.8 mm layers. Material will not be compacted properly if lift thicknesses exceed 2 in./50.8 mm.

- When filling holes and ruts, use the surrounding floor level as a guide for the trowel.
- For larger areas or changing floor levels, use screeds and a straight-edge to obtain the desired thickness.
- To maintain physical properties, do not place Stonset TG5 at less than 0.5 in./12 mm.

## CURING

The initial set time for Stonset TG5 is 3 to 4 hours. Overlayment may begin at this time. The grouted area may be put back into service in 12 hours. Ultimate physical characteristics will be achieved in 7 days. The curing time may vary depending upon ambient and surface conditions.

## RECOMMENDATIONS

- Minimum ambient and surface temperature is 60°F/16°C at the time of application.
- Apply only on a clean, sound, and properly prepared surface.
- Material must be mixed to a uniform consistency. **Do not mix over 3 minutes.**
- Application and curing times are dependent upon ambient and surface conditions.
- Clean tools immediately with either scouring pads and water, or mineral spirits. Hardened material will require mechanical removal.

## PRECAUTIONS

- Both liquid Parts A and B are skin and eye irritants – avoid contact. Safety glasses and impervious gloves are recommended when handling this material.

### 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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- In case of contact, flush the area with water for 15 minutes and seek medical attention. Wash skin with soap and water.
- Use only with adequate ventilation.

## NOTES

- Material Safety Data Sheets for Stonset TG5 are available upon request.
- A staff of technical service engineers is available to assist with application, or to answer questions related to Stonhard's products.
- Requests for technical literature or service can be made through local sales offices, or corporate offices located worldwide.

### Worldwide Offices:

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Asia (86)21.5466.5118



**STONHARD**  
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An RPM Company

### PRODUCT DESCRIPTION

Stonclad GS is a three-component, troweled, epoxy mortar system. The system consists of an epoxy resin, amine curing agent and selected, graded aggregates blended with inorganic pigments. Stonclad GS can be applied at thickness ranging from 1/8 in./3 mm to 1/4 in./6 mm depending on application requirements. Stonclad GS cures to an extremely hard, impact resistant mortar which exhibits excellent abrasion, wear and chemical resistance.

### USES, APPLICATIONS

Stonclad GS is formulated as a general service epoxy system for applications requiring superior impact and abrasion resistance with good chemical resistance. Stonclad GS may be used as a protective overlay on new floors, or to repair and restore old, worn surfaces.

### SUBSTRATE

Stonclad GS, with the appropriate primer, is suitable for application over concrete, wood, brick, quarry tile or metal. Not recommended for use on asphalt, mastic, gypsum based products or painted surfaces. These must first be removed by mechanical means to expose the substrate prior to priming and overlayment.

### SYSTEM OPTIONS

#### Coatings

To improve cleanability and increase the resistance to damage from abrasion and chemical spillages, the following coatings are recommended: Stonkote GS4, Stonkote HT4, Stoncrest GS3, Stonseal GS6 and Stonseal GS7.

#### Waterproofing

Where the total system must be waterproof, use of Stonhard's Stonproof ME7 membrane system is required, with strict adherence to application instructions.

#### Cove Base

To provide for an integral seal at the joint between the floor and the wall, cove bases in heights from 2 to 6 in./5 to 15 cm may be specified.

#### Fiberglass Reinforcement

To provide additional surface strength to the system, a surface veil of fiberglass reinforcement should be installed for areas exposed to instantaneous temperature changes of greater than 100°F/38°C.

### PACKAGING

Stonclad GS is packaged in units for easy handling. Each unit consists of:

2 cartons, each containing:

- 6 foil bags of Part A (curing agent)
- 6 poly bags of Part B (resin)

12 individual bags of Part C (aggregate)

### PHYSICAL CHARACTERISTICS

<b>Compressive Strength</b> . . . . .	10,000 psi
(ASTM C-579)	after 7 days
<b>Tensile Strength</b> . . . . .	1,750 psi
(ASTM C-307)	
<b>Flexural Strength</b> . . . . .	4,000 psi
(ASTM C-580)	
<b>Flexural Modulus of Elasticity</b> . . . . .	$2.0 \times 10^5$ psi
(ASTM C-580)	
<b>Hardness</b> . . . . .	85 to 90
(ASTM D-2240, Shore D)	
<b>Bond Strength</b> . . . . .	>400 psi
(ASTM D-7234)	(100% concrete failure)
<b>Impact Resistance</b> . . . . .	>160 in./lbs.
(ASTM D-2794)	
<b>Abrasion Resistance</b> . . . . .	0.1 gm max. weight loss*
(ASTM D-4060, CS-17)	
<b>Coefficient of Friction (Dry)</b> . . . . .	0.83*
(ASTM F-1679)	
<b>Slip Resistance Index (Wet)</b> . . . . .	0.66*
(ASTM F-1679)	
<b>Flammability</b> . . . . .	Class I
(ASTM E-648)	
<b>Thermal Coefficient of</b>	
<b>Linear Expansion</b> . . . . .	$1.5 \times 10^{-5}$ in./in.°C
(ASTM C-531)	
<b>Water Absorption</b> . . . . .	0.2%
(ASTM C-413)	
<b>Heat Resistance Limitation</b> . . . . .	140 F/60°C
	(continuous exposure)
	200 F/93°C
	(intermittent spills)
<b>Cure Rate</b> . . . . .	24 hours for normal operations
(at 75°F/25°C)	

\*Test samples finished with one coat of high solids epoxy coating

**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.

### COVERAGE

Each unit of Stonclad GS will cover approximately 200 sq. ft./18.58 sq. m of surface at a nominal 1/4 in./6 mm thickness.

### STORAGE CONDITIONS

Store all components of Stonclad GS between 60 to 85°F/16 to 30°C in a dry area. Avoid excessive heat and do not freeze. The shelf life is 3 years in the original, unopened container.

## COLOR

Stonclad GS is available in 12 standard colors. Refer to the Stonclad Color Sheet.

## SUBSTRATE PREPARATION

Proper preparation is critical to ensure an adequate bond. The substrate must be dry and free of all wax, grease, oils, fats, soil, loose or foreign materials and laitance. Laitance and unbonded cement particles must be removed by mechanical methods, i.e., abrasive blasting or scarifying. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent (Stonkleen DG9) and rinsing with clean water. The surface must show open pores throughout and have a sandpaper texture. For recommendations or additional information regarding substrate preparation, contact Stonhard's Technical Service Department.

## PRIMING

The use of Standard Primer is necessary for all applications of Stonclad GS over all substrates except Stonset grouts. Over Stonset grouts, Stonhard's Stonset Primer is used. The Standard or Stonset Primer must be tacky during the application of Stonclad GS. If the primer becomes tack-free, the area must be re-primed prior to continuing the application.

## MIXING

- Empty the entire contents of one foil bag of Part A (liquid) and one poly bag of Part B (liquid) into a mixing pail.
- Place the mixing pail on a JB Power Blender and activate the timer to start the one minute blending cycle.
- When the blender stops, reactivate the timer and immediately pour the entire contents of one bag of Part C (aggregate) into the rotating pail. Allow the contents to mix for the complete one minute cycle.
- When the blender stops, scrape off excess from the mixing blade and remove the pail, delivering it to the floor area for application.

## POT LIFE

After mixing, Stonclad GS has a working time of approximately 25 minutes at 70°F/21°C. The working time will vary depending upon temperature.

## APPLYING

- Material must be used immediately after mixing.
- A Screed Applicator is used to distribute the mixed Stonclad GS onto the floor.
- Steel finishing trowels are used to compact and smooth the surface of the material to the required thickness.
- Detailed instructions on application and installation can be found in Stonhard's Stonclad GS Directions.

## RECOMMENDATIONS

- DO NOT attempt to install material if the temperature of Stonclad GS components and substrate are not within 60 to 85°F/16 to 30°C. **The cure time and application properties of the material are severely affected at temperatures outside of this range.**
- DO NOT use water or steam in the vicinity of the application. **Moisture can seriously affect the working time and other properties.**
- The use of NIOSH/MSHA approved respirators and safety glasses is recommended.
- Avoid contact with all liquid Parts A and B as they may cause skin and/or eye irritation. Workmen should cover hands with rubber gloves.
- Use only with adequate ventilation.

## NOTES

- Procedures for maintenance of the flooring system during operations are described in the Stonclad Cleaning Procedures.
- Specific information regarding chemical resistance is available in the Stonclad Chemical Resistance Guide.
- Material Safety Data Sheets for Stonclad GS are available upon request.
- A staff of technical service engineers is available to assist with installation or to answer questions related to Stonhard flooring products.
- Requests for technical service or literature can be made through local sales representatives and offices, or corporate offices located worldwide.

### IMPORTANT:

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