

### PRODUCT DESCRIPTION

Stoncrete HSI is a heavy-duty, cementitious lining material when an abrasion resistant, seamless lining is needed. When mixed with water, Stoncrete HSI, a dry, granular material becomes a plastic trowelable mortar.

### USES, APPLICATIONS

- Cyclones
- Precipitators
- Hoppers
- Silos
- Catch Pans
- Exhausters
- Cones
- Bunkers
- Baffles
- Screw Conveyer Troughs
- Beater Tanks
- Storage Tanks
- Classifiers and Separators
- Dust Collectors
- Induced Draft Fans
- Pipes and Elbows
- Impact Boxes
- Chutes and Flumes

### COLOR

Stoncrete HSI is available in Concrete Gray.

### PACKAGING

Stoncrete HSI is available in 650 lb. drums.

### COVERAGE

2.1 m<sup>2</sup> per drum at 50.8 mm thickness.

### STORAGE CONDITIONS

Store all components of Stoncrete HSI between 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.

### SUBSTRATE PREPARATION

#### Concrete

Proper preparation is critical to ensure an adequate bond. The substrate must be free of all wax, grease, oils, fats, soil, loose or foreign material and laitance. Laitance and unbonded cement particles must be removed by mechanical methods, i.e., abrasive blasting or scarifying. Clean the surface to expose base concrete. Securely attach the expanded metal to the surface being lined. Saturate the concrete surface with water just prior to application.

#### Metal

Reinforce metal equipment (if needed) to prevent it from moving or flexing. Stoncrete HSI, when used with expanded metal, will significantly reinforce the surface to which it is applied. There are, however, certain pieces of equipment that may need additional reinforcement. For example, if the sides and bottom of a tank are not adequately supported or reinforced, they may flex enough to crack the lining when the tank is filled. Clean surfaces of such equipment and ensure that they are free from rust, dirt, oil, grease, loose coatings and loose mill scale. Attach expanded metal.

#### Attaching Expanded Metal

Install 0.635 cm x 2.5 cm steel strapping vertically on 30.48 cm centers to the shell of the piece being lined. Next, attach 13 gauge expanded metal on approximately 30.48 cm centers. This strapping will act as a spacer between the expanded metal and the shell, which permits the HSI material to be forced behind the expanded metal during application. Use expanded metal with openings approximately 0.635 cm x 2.5 cm for overhead surfaces.

For vertical, horizontal and sloped surfaces, use openings of approximately 1.905 cm x 4.29 cm.

Use ramset fasteners, 4 pound concrete nails or other anchoring devices to fasten expanded metal to concrete on 40.64 cm or less centers.

**Note:** In some instances, such as in a small diameter cyclone, it may be easier to tack weld small spacers (pieces of 0.635 cm rod) to the surface, then tack weld the expanded metal to spacers.

### MIXING

**Important:** Granular segregation of Stoncrete HSI may have occurred during shipment. When batches smaller than full drums are to be mixed, remove the entire contents from the drum and place onto a clean floor area or into a mortar box. Use a shovel or a mortar hoe to mix dry particles until ingredients are uniformly distributed.

Mechanical mixing in a mortar mixer is preferred over hand mixing in a wheelbarrow or mortar box. The proper ratio of water to product is very important to obtain maximum strength. Refer to the chart below for proper proportions and use either U.S. gallons or Imperial gallons.

### MIXING RATIO

<u>HSI</u>	<u>U.S. Gallons</u>	<u>WATER</u> <u>Imperial Gallons</u>
650 lb. drum	8 gal. maximum	6.5 gal. maximum
100 lb. bag	1.25 gal. maximum	1 gal. Maximum

### APPLYING

#### To Concrete or Metal

Saturate concrete surfaces with water just before applying Stoncrete HSI. The surface to be coated must be wet but free of puddles. Apply Stoncrete HSI using a steel trowel. Use firm pressure to ensure good contact with the substrate. Finish to a smooth, tight surface.

### CURING

Proper curing of HSI is essential if it is to develop its full resistance to abrasion. Wet cure with periodic fine sprays of water by covering with wet burlap or heavy paper kept damp by occasional spraying; or cover with polyethylene sheeting. Curing should be started as soon as the HSI has reached its initial set and is still damp (approximately 1 to 1.5 hours). Where possible, steam curing is recommended.

Allow Stoncrete HSI to cure at least 24 hours at 21°C before placing into service. If the temperature is lower, more time should be allowed.

**Note:** Do not expose Stoncrete HSI to freezing temperatures (0°C) for at least 48 hours after installation, or longer if possible.

## MAKING REPAIRS TO STONCRETE HSI

Should it be necessary to repair Stoncrete HSI, the eroded areas should be cleaned of all debris, dust or other contaminants and the surface should be saturated with water. The surface should be wet but free of puddles. Mix Stoncrete HSI according to the Directions and apply with a steel trowel, making sure that Stoncrete HSI mortar is scratched thoroughly onto the wet surface. Finish to original thickness and cure in the same manner as outlined above.

## RECOMMENDATIONS

- Stonhard's Stonkleen DG9 is recommended as an industrial detergent for the removal of most contaminants from the concrete surface.
- Apply only on a clean, sound and properly prepared substrate.
- DO NOT attempt to install material if the temperature of the Stoncrete HSI components and substrate are not within 16 to 30°C. **The cure time and application properties of the material are severely affected at temperatures outside of this range.**

## NOTES

- For specific information regarding chemical resistance for environments not referenced in the Chemical Resistance Guide, contact Stonhard's Technical Service Department for recommendations.
- Material Safety Data Sheets for Stoncrete HSI are available online at [www.stoncor-europe.com](http://www.stoncor-europe.com) under Tech Info or upon request.
- A staff of technical service engineers is available to assist with installation or to answer questions related to Stonhard's 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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