



**8900 SYSTEM**  
**THERMAKRETE® HP URETHANE CONCRETE**

**DESCRIPTION AND USES**

ThermaKrete® HP is a three component cementitious polyurethane slurry system.

Note: Broadcast Aggregate is not supplied with the kit and must be obtained separately. CPS 480 (sku # 314759) is the recommended aggregate.

This CPS Type II product is typically installed by factory trained contractors. Be sure you are fully aware of all application procedures and have all the required application equipment available prior to beginning application of this product. Please see application instructions for additional information.

**FEATURES AND BENEFITS**

- The essentially odorless and non porous nature of ThermaKrete HP makes it ideal for food and beverage and commercial kitchen applications.
- ThermaKrete is designed to tolerate rapid change in surface temperature typically associated when concrete floors are cleaned by hot water wash. ThermaKrete will withstand the normal expansion and contraction of a concrete floor during a substrate temperature change which can occur during the normal wash down procedures used in the food processing industry.
- Non-porous: Porosity is a common cause of flooring failures. ThermaKrete HP is nonporous and does not require a sealer coat to prevent chemical penetration to the concrete. This slurry system allows the material to completely absorb and flow around the broadcasted aggregate, which eliminates 99% of all porosity. With this benefit and proper application, consistent physical properties will be achieved.
- Not affected by moisture vapor transmission through the concrete.
- Chemical resistance: ThermaKrete HP has excellent resistance to fats, oils, grease, dilute acids and alkalis, and most solvents. Contact your Rust-Oleum representative for additional information.
- Meets USDA requirements for incidental food contact; accepted for use in federally registered Canadian food facilities.

**LEED RATING SYSTEM\***

ThermaKrete HP meets or exceeds the requirements of EQ Credit 4.2 Low-Emitting Paints & Coatings under the LEED New Construction and Major Renovation Standard.\*

**PACKAGING AND COVERAGE**

ThermaKrete HP is available in only one kit size:

- Part A - 1 gal. container, partial fill (121.6 fl oz)
- Part B - 1 gal. container, full (128 fl oz)
- Aggregate - Approximately 51 lb. (23.18 kg.) per bag. Broadcast Aggregate is sold separately. CPS 480 (sku# 314759) is recommended.

**COVERAGE RATE**

- 32 sq. ft. (2.97 m<sup>2</sup>) at 1/4" thickness (250 mils or 6.35 mm).
- 40 sq. ft. (3.72 m<sup>2</sup>) at 3/16" thickness (187 mils or 4.76 mm).

**COLORS**

SKU	Description
337190	Tile Red
337157	Light Gray

**PRODUCT APPLICATION**

**SURFACE PREPARATION**

**NEW CONCRETE:**

All laitance must be removed by muriatic acid etching or shot blasting. On concrete cured with a curing agent or has a hard steel troweled finish, shot blasting or other methods of mechanical preparation will be required.

**EXISTING CONCRETE:** Concrete must be clean and sound. Old coatings and toppings must be removed. Concrete must be clean and free of previous coatings, oil, grease, wax, paint, and other contaminants. The surface of the concrete must be clean and properly profiled to enable the coating to achieve maximum bond. Water soluble contaminants can be hosed off with water. Some water insoluble materials are difficult to remove and may require sandblasting, scabbling, or other methods of removal.

For either new or existing concrete, when preparation is complete, the surface texture should be similar to 40 grit sandpaper. It should have a profile of CSP-4 to 5 as described by the International Concrete Repair Institute. The tensile strength of the concrete should be a minimum of 300 psi (2.07 mpa). Concrete must be visibly dry at time of application.

**MIXING EQUIPMENT**

Use a ½" high-torque drill motor with a CPS #4 mixer.

Important: DO NOT ATTEMPT TO MIX BY HAND STIRRING. Hand mixing will produce inconsistent results and is not an approved method. Bucket mixer not recommended.

**APPLICATION EQUIPMENT**

Cam rake / Spike roller

\* Visit [www.usgbc.org/leed](http://www.usgbc.org/leed) for more information.



## TECHNICAL DATA

# 8900 SYSTEM THERMAKRETE® HP URETHANE CONCRETE

### PRODUCT APPLICATION (cont.)

#### MIXING

Note: Before starting, ensure the concrete surface, and the ambient air are all at 40-85°F (4-29°C), not recommended for relative humidity above 80%.

All material, especially the Aggregate, must be at a minimum of 50°F (10°C) prior to mixing. Allow the aggregate to warm-up above minimum temperature if necessary. Aggregate below this minimum temperature will quickly lower the temperature of the admix and affect application of the coating.

Combine the two liquid components and mix for 30 seconds before adding the Aggregate. Add the entire bag of Aggregate in a smooth uniform flow and continue the mixing until homogenous. Avoid clumps of Aggregate. The total mixing time should not exceed 2½ minutes.

Once mixed, immediately pour onto the floor.

#### APPLICATION

After mixing, immediately pour the material onto the floor. Use a cam rake set at either 3/16" or 1/4" (6.35 - 4.78mm.) to spread the material over the required area, then immediately back roll using a spike roller to level and deaerate.

The Broadcast Aggregate (supplied separately, CPS 480 is recommended) is applied **immediately after back rolling**. Broadcast to refusal\* (¼ lbs./sq. ft). The application of the Broadcast Aggregate must be done before 15 minutes has elapsed since the application began.

Allow the coating to cure, then sweep or vacuum away the excess aggregate.

\*A sparse broadcast may be done, **only on the 1/4" thickness**, if less texture is desired; however some Broadcast Aggregate is required. Failure to do any degree of broadcast may result with the formation of pinholes in the finish.

NOTE: An optional glaze coat can be applied over a full broadcast to aid cleaning and washdown. Use OverKote 8200S. A glaze coat can only be applied over a full broadcast.

NOTE: A 1/4" thickness with a full broadcast of Broadcast Aggregate will provide optimal thermal shock properties. Less coating thickness may result with reduced thermal shock resistance.

NOTE: ThermaKrete HP is a colored polyurethane concrete and batch to batch color consistency cannot be completely guaranteed. It is recommended installations in a continuous area use all kits with the same batch number.

#### CLEAN UP

Xylene can be used to remove material from equipment if it is cleaned before the material has started to set up. Otherwise, stronger solvents will be necessary.

#### STORAGE

Store material in a dry location at temperatures between 40-90°F (4-32°C).

### PERFORMANCE CHARACTERISTICS

#### COMPRESSIVE STRENGTH

METHOD: ASTM C579

RESULT: 7,000 psi (48.26 mpa)

#### FLEXURAL STRENGTH

METHOD: ASTM C580

RESULT: 2,500 psi (17.24 mpa)

#### TENSILE STRENGTH

METHOD: ASTM C307

RESULT: 900 psi (6.20 mpa)

#### BOND STRENGTH TO CONCRETE

METHOD: ASTM D4541

RESULT: Exceeds Tensile Strength of Concrete

#### TABER ABRASION1/4

METHOD: ASTM 4060, CS 17, 1000 Cycles

RESULT: 49 mg. loss

#### COEFFICIENT OF THERMAL EXPANSION

METHOD: ASTM C531

TYPICAL VALUE:  $2.2 \times 10^{-5}$  in/in/°F



**TECHNICAL DATA**

**8900 SYSTEM THERMAKRETE® HP URETHANE CONCRETE**

**PHYSICAL PROPERTIES**

		8900 SYSTEM THERMAKRETE HP URETHANE CONCRETE
<b>Resin Type</b>		Urethane
<b>Pigment Type</b>		Inorganic Oxides
<b>Solvents</b>		Water
<b>Weight*</b>	Per Gallon	8.83 lbs.
	Per Liter	1.06 kg
<b>Solids*</b>	By Weight	90%
	By Volume	90%
<b>Volatile Organic Compounds*</b>		0 g/l
<b>Recommended Dry Film Thickness (DFT) Per Coat</b>		3/16 – 1/4" (187-250 mils)
<b>Wet Film to Achieve Recommended Dry Film Thickness</b>		3/16 – 1/4" (187-250 mils)
<b>Practical Coverage at Recommended DFT</b>		32 sq.ft./kit (0.79 m <sup>2</sup> /l) @ 1/4" thickness 40 sq.ft./kit (0.98 m <sup>2</sup> /l) @ 3/16" thickness
<b>Mixing Ratio</b>		0.95 : 1 Part A to Part B by volume
<b>Induction Period</b>		None
<b>Pot Life@ 70-80°F (21-27°C) &amp; 50% Relative Humidity</b>		15 minutes. Pour onto floor immediately after mixing
<b>Dry Times at 70-80°F (21-27°C) and 50% Relative Humidity</b>	Foot Traffic	10-16 hours
	Full Cure**	24-48 hours
<b>Shelf Life</b>		6 months , for properly stored material and in original unopened containers
<b>Flash Point</b>		>200°F (93°C)
<b>Safety Information</b>		<b>CAUSES NOSE, THROAT, EYE AND SKIN IRRITATION. CAUSES EYE AND SKIN BURNS. HARMFUL IF SWALLOWED. MAY CAUSE ASTHMA, SKIN SENSITIZATION OR OTHER ALLERGIC RESPONSES. FOR INDUSTRIAL OR COMMERCIAL USE ONLY. KEEP OUT OF REACH OF CHILDREN. SEE THE PRODUCT SAFETY DATA SHEET (SDS) AND LABEL WARNINGS FOR ADDITIONAL SAFETY INFORMATION.</b>

\*Activated Material

\*\* Coating achieves its full physical and chemical resistant properties.

Calculated values are shown and may vary slightly from the actual manufactured material.

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