

RUST-OLEUM®

8900 SYSTEM THERMAKRETE® HP URETHANE CONCRETE

DESCRIPTION AND USES

Rust-Oleum® 8900 System ThermoKrete® HP is a three component cementitious polyurethane slurry system.

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.

PRODUCT FEATURES AND BENEFITS

- The essentially odorless and non porous nature of ThermoKrete HP makes it ideal for food and beverage and commercial kitchen applications.
- ThermoKrete is designed to tolerate rapid change in surface temperature typically associated when concrete floors are cleaned by hot water wash. ThermoKrete 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. ThermoKrete 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: ThermoKrete 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.

PRODUCTS

SKU DESCRIPTION

337190	Tile Red
337157	Light Gray

NOTE: Broadcast Aggregate is sold separately. CPS 480 (sku# 314759) is recommended.

PACKAGING AND COVERAGE

ThermoKrete 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.)
Part C	Approximately 51 lbs. (2.18 kg.) per bag

COVERAGE RATE

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

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

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%.

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PRODUCT APPLICATION (cont.)

MIXING (cont.)

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* (1/2 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.

FREEZER/COOLER APPLICATION

Before returning to service, gradually lower the temperature to 32°F (0°C) and hold for 2 days. Lower temperature in 10°F (5°C) increments. Hold each for 2 days at the temperature before decreasing. Repeat the process until the required temperature is achieved.

PRODUCT APPLICATION (cont.)

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 x 10⁻⁵ in/in /°F

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PHYSICAL PROPERTIES

		8900 SYSTEM THERMAKRETE HP URETHANE CONCRETE
Resin Type		Urethane
Pigment Type		Inorganic Oxides
Solvents		Water
Weight*	Per Gallon	8.83 lbs.
	Per Liter	1.06 kg
Solids*	By Weight	90%
	By Volume	90%
Volatile Organic Compounds*		0 g/l
Recommended Dry Film Thickness (DFT) Per Coat		3/16–1/4" (187-250 mils)
Wet Film to Achieve Recommended Dry Film Thickness		3/16–1/4" (187-250 mils)
Practical Coverage at Recommended DFT		32 sq. ft./kit (0.79 m ² /l) @ 1/4" thickness 40 sq. ft./kit (0.98 m ² /l) @ 3/16" thickness
Mixing Ratio		0.95 : 1 Part A to Part B by volume
Induction Period		None
Pot Life@ 70-80°F (21-27°C) & 50% Relative Humidity		15 minutes. Pour onto floor immediately after mixing
Dry Times at 70-80°F (21-27°C) and 50% Relative Humidity	Foot Traffic	10-16 hours
	Full Cure**	24-48 hours
Shelf Life		2 years , for properly stored material and in original unopened containers
Flash Point		>200°F (93°C)
Safety Information		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.

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

*Activated material

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

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