

ThermalCrete

PRODUCT #1030

Polyurethane Cement Flooring System

PRODUCT DESCRIPTION

ThermalCrete is a three (3) component, polyurethane cement flooring system for medium to heavy-duty use interior applications. Its chemical composition of water emulsified polyurethane combined with cement and silica sand, produce properties that exceed those of concrete while delivering the ultimate resistance to thermal shock and the ability to withstand high temperatures up to 260⁰F. These properties when combined with excellent chemical resistance, impact resistance and zero VOC's makes **ThermalCrete** the preferred choice for virtually all heavy-duty industrial floors.

ThermalCrete is applied as a slurry broadcast system or as a trowel system with a topcoat.

USES

Typical uses for the **ThermalCrete** System include:

- Floors subjected to cleaning with high temperature water
- Commercial kitchens
- Floors subjected to impact and abrasion
- Food processing facilities
- Pharmaceutical facilities
- Meat, poultry and dairy processing facilities

- Bakeries
- Laboratories

And, wherever the following flooring properties are a requirement:

- Slip-resistant surface
- Increased ease of maintenance
- Durability and sanitary protection

TYPICAL PHYSICAL PROPERTIES

Physical Characteristics	ThermalCrete 1030
Pot Life Mixed @ 72 ⁰ F	20 Min.
Cure Time @ 72 ⁰ F	
Recoat	3 Hours @ 72 ⁰ F
Foot Traffic	5 Hours @ 72 ⁰ F
Full Service	24 Hours @ 72 ⁰ F
Compressive Strength ASTM C 579	7200
Bond Strength ACI 503	100% Concrete Failure
Tensile Strength ASTM D 638	1040
Density ASTM C 905	130 Lbs.

ADVANTAGES

- Good resistance to many common chemicals
- Excellent resistant to thermal shock

- Fast Cure resulting in minimal downtime
- Provides a highly durable and protective flooring system
- No solvents or offensive odors during installation
- Accepted for use in USDA inspected facilities
- May be installed on moist substrates
- Impact resistant

LIMITATIONS

- Direct sunlight will cause discoloration
- Do not apply below 40° F
- Do not apply to floors with vapor drive greater than 5 lbs per 1,000 sq. ft. per 24 hour period. ASTM F 1869.
- Must precondition materials to 70° F when installing below 55° F

COLOR and TEXTURES

- Available in three (3) standard colors – Tile Red, Pewter Gray (Medium Gray) and Charcoal Gray (Dark Gray) utilizing powder pigment or sixteen (16) colors using universal colorant.
- Various slip-resistant textures available
- Matte and Gloss topcoats available

PRODUCT APPLICATION

ThermalCrete can be applied with varying Part C aggregate loads depending upon the application.

Warning: The amount of Cement and Lime is important to insure designed

physical properties - Use the proper Part C aggregate for each mix. Do not interchange Part C or use more or less than the prescribed amount.

Surface Preparation

- **ThermalCrete** must be applied to clean sound concrete free of oils, fatty acids and old coatings.
- Repair the concrete as required
- Scarify at 1/16” to 1/8” in two directions **OR** aggressively abrasive blast the surface to remove all laitance and surface contaminants and saw-cut a grid of 1/8” deep grooves every 12” over the entire surface.
- Pre-fill all small voids that may trap air and cause bubbles
- Refer to the Thermal-Chem Surface Preparation Guide for additional surface preparation information.

Application

Slurry: Mix One (1) Gallon of part A, one (1) Gallon of part B and 54 lbs. of part **C (Product A111 Crete Slurry # 8A)** aggregate. Each part is pre-measured.

- Slowly premix Part A separately for 1 minute.
- Mix Part A and Part B thoroughly for 1 minute. Mix at slow speed and avoid creating a vortex. Add the premeasured dry pigment packs or universal colorant.
- Then slowly pour Part C into the mixed A and B and mix thoroughly. Mix at a slow speed and avoid a

vortex which incorporates air into the mix.

- Do not mix more material than can be applied in 15 – 20 minutes.
- Apply with a gauge rake, or screed.
- A 2 gallon Slurry mix will cover 40 sq. ft. at 3/16" depth; 30 sq. ft. at 1/4"
- Spike roll to aid self-leveling and to remove air. Do not over roll.
- Broadcast to rejection with TC A-108 silica sand for medium texture or TC A-110 silica sand for an aggressive texture...
- Remove excess silica sand from the surface when cured
- Apply top coat (See Top Coat Installations instructions below)

Trowel Mix: Mix One Gallon of part A, one Gallon of part B and (2) two 64 lb bags of part **C (Product A112 Crete Trowel # 9A)** aggregate. Each part is pre-measured.

- Slowly premix Part A separately for 1 minute
- Mix Part A and Part B thoroughly for 1 minute. Do not mix at high speed and incorporate air into the mix. Add the premeasured dry pigment packs or the universal colorant... Then slowly pour Part C into mixed A and B and mix thoroughly. Mix at a slow speed and avoid creating a vortex which incorporates air into the mix.
- Do not mix more material than can be applied in 15 – 20 minutes
- Pour out some mixed Part A and B (before adding Part C) and prime at 200 sq. ft. per gallon.
- Screed material and hand trowel at 1/4".

- A Trowel mix will cover 46 sq. ft. at 1/4".
- Apply topcoat. (See Top Coat Installations)

Top Coat: Mix one (1) Gallon of part A, one (1) Gallon of part B and 12 lbs of part **C (Product A113 Crete Top Coat # 10)** aggregate. Each part is pre-measured.

- Slowly premix Part A separately for 1 minute
- Mix Part A and Part B for 1 minute. Do not mix at high speed which incorporates air into the mix. Add the premeasured dry pigment packs or the universal colorant. Then slowly pour Part C into Mixed A and B and continue mixing.
- Mix at slow speed and avoid creating a vortex.
- Do not mix more material than can be applied in 15-20 minutes.
- Apply the Two (2) gallons and 12 lb. mix at approx 190 - 200 sq. ft. per kit
- Apply aluminum oxide and back roll if additional texture is required.

A finished floor using a Thermal-Crete top coat will exhibit a matte finish. Should a gloss finish be required, apply Thermal-Chem ArmorTop # 789, a Novalac epoxy, at 100 sq. ft. per gallon.

Maintenance

- Inspection and proper cleaning will extend the useful service life to the floor system. The floor may be cleaned using hot water and most cleaning chemicals.

Chemical Resistance

Thermal-Crete is resistant to most sugars, acids, alcohols and other ingredients use in food products and by products of animal processing.

PRODUCT AVAILABILITY

Products are manufactured and available through the Thermal-Chem Corporation, 2120 Roberts Drive, Broadview, IL 60155 U.S.A.

Tel: 800/635-3773 ■ 847/288-9090
Fax: 847/288-9091

E-Mail: sales@thermalchem.com
Website: www.thermalchem.com

TECHNICAL/SPECIFICATION SERVICES

Additional Product Data and complete Technical Support and Product Specifications are all available through Thermal-Chem or their representatives.

Every reasonable precaution and effort has been taken in the manufacture of all Thermal-Chem products to comply with the published product data. Actual product performance may vary slightly due to environmental influences and/or job site conditions.

PRODUCT HANDLING

Read the Material Safety Data Sheet thoroughly before use.

Warning: For professional use only. Avoid contact of uncured material with skin and eyes. Contact with skin may result in irritation. Wash skin with soap

and water. If contact with eyes should occur, flush with water for 15 minutes and seek immediate medical attention.

LIMITED WARRANTY

Thermal-Chem Corporation warrants its product to be of good quality and will, at Thermal-Chem's sole discretion, replace or refund the original purchase price (if payment was made in accordance with Thermal-Chem's payment and credit terms) of any product proved defective or non-conforming. Satisfactory results depend not only upon quality products but also upon many factors beyond our control. **THE PARTIES AGREE THAT THE REPLACEMENT OR REFUND OF PRODUCT PAYMENT FOR DEFECTIVE PRODUCT OR NON-CONFORMING GOODS IS THE SOLE AND EXCLUSIVE REMEDY.** Therefore, except for such replacement, **THERMAL-CHEM CORP. MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY, RESPECTING ITS PRODUCTS,** and Thermal-Chem Corporation shall have no other liability with respect thereto, including without limitation, liability for incidental or consequential damages. Any claim regarding product defect must be received in writing within ninety (90) days from the date of shipment. No claim will be considered without such written notice or after the specified time interval. The user shall determine the suitability of the products for the intended use and assume all risks and liability in connection therewith.