

## **HSS-UCM**

### **Urethane Cement Mortar Flooring**

#### ***Self Leveling or Trowel Grade***

#### **PRODUCT PRESENTATION**

HSS UCM Flooring System is an abrasion, chemical resistant, high temperature, impact and thermal shock resistant urethane mortar flooring system. Used in the toughest industrial environments. Based on 100% solids aromatic urethane cementitious blends that are designed for ease of placement, rapid cure, providing fast service return for most industrial floors in under 8 to 10 hours at 75°F (24°C). Recommended uses are for food and beverage processing, commercial kitchens, wet preparation areas as well as many other industrial commercial applications. HSS-UCM Flooring System is designed to be installed at a minimum thickness range of 1/8 inch to 1/4 inch. They can also be used in greater thicknesses when leveling, sloping, coving and patching are required.

#### **ADAVANTAGES**

- Abrasion Resistance: US Systems are designed to withstand heavy abuse from forklift traffic.
- Chemical Resistance: US Systems have excellent chemical resistance to a broad range of chemical reagents, including acids, caustics and solvents, even at elevated temperatures.
- Impact Resistance: US Systems have excellent impact resistance to repetitive blows, even at low temperatures.
- Temperature Resistance: US Systems have excellent high and low temperature resistance ranging from 50°F (-46°C) TO 300°F (150°C).
- Rapid Cure: US Systems are designed for rapid cure and fast return of the industrial floor to normal service in as little as 8 to 10 hours at 75°F (24°C).
- Placement Advantages: US Systems are odorless and non-flammable during installation and can be installed in the presence of other trades and other parts of the plant are in service.
- Thermal Shock Resistance: US Systems due to stress-relieving chemistry have excellent resistance to thermal shock, including high temperature wash downs, without delamination or degradation.

#### **ADDITIONAL CONSIDERATIONS**

UCM SL TG is generally applied as self-leveling slurry at a minimum thickness of 1/8 inch to 1/4 inch in a single lift. Thinner applications may bubble. When applied as a smooth texture final coat the surface maybe easier to clean but slippery when wet. Smooth applications may be used as an underlayment under tile, carpet and other specialty floor applications. It is generally recommended that the final application or lift be broadcast with “job specific” aggregates such as Ceramic Quartz, aluminum oxide, silica and other media.

#### **INSTALLATION CONDITIONS**

- Substrate must be durable, clean and properly prepared. See Bulletin SP-C for additional information on substrate condition.
- It is suggested that the minimum concrete temperature be above 40°F (4.5°C), ambient temperature of 70°F (21°C) to 85°F (29°C) is recommended.
- Maximum concrete substrate temperature should not exceed 95°F (35°C).
- UCM may be applied to green concrete so there is no need for a 28 (twenty eight) day cure. Compressive strength of at least 3,500 psi is recommended.
- Lightweight concrete must be 2,500 psi and free of vesicular (Vermiculite or Perlite or air entrained igneous rocks) aggregates.
- MVE limitation: 18 lbs, per ASTM F1869.
- Product shall be installed only by a approved installer per installation instructions.
- Provide “key ways” at transitions, penetrations and terminations

#### **PREPARATION - APPLICATION**

Concrete substrate must meet ACI 201 Guide to Durable Concrete, sound, clean and free of bond breaking contaminates. Surface preparation must comply with ICRI Guideline No. 03732 Concrete Surface Profile, CSP 2 to CSP 5. All contaminants must be removed from the surface prior to installation.

- Mix thoroughly the parts A and B liquid for 20 to 30 seconds. Add part C filler and mix for an additional 20 to 30 seconds. After thoroughly shaking Part D, add to A.B & C mixture and continue mixing for 20 to 30 seconds.
- Immediately apply to concrete surface.
- Clean mixing tools immediately with appropriate solvent.
- Spread the mixture using a cam screed, pin rake, trowel or other suitable tool.
- Depending on system roll with a spiny roller to release trapped air.
- Broadcast silica sand, alum-oxide or Ceramic Quartz within ten minutes of placement if required for project.

□ Subsequent applications can be installed in approximately 1 to 2 hours or as soon as application spikes will not damage the surface. Always remove loose broadcast aggregate and debris prior to the additional application.

□ If a second application of HSS-UCM is installed repeat the prior directions. If Ceramic Quartz is used as a broadcast media a clear finish coat will be required. Cure time for system will be lengthened. See HSS Application information for specific finish coats.

□ Allow UCM System to cure sufficiently prior to allowing foot traffic generally 6 to 8 hours.

□ The final top coat will determine the length of time required prior to allowing traffic to resume.

□ Ultimate chemical cure may require 7 days for extreme service.

\* Typical Physical Properties @ 73°F +/-2°F (23°C +/-1°C)

Test Procedure*	US – SL/TG
Adhesion to Concrete ASTM D4541 100% Concrete Failure	400 psi
Compressive Strength ASTM C579	6,500 psi
Tensile Strength ASTM C307	1,000 psi
Flexural Strength ASTM C580	2,400 psi
Thermal Compatibility with Concrete ASTM C884, 50 Cycles	Pass, No Delamination
Coefficient of Thermal Expansion ASTM C531	1.3 X 10-5
Impact Resistance Mil D-3134, 16 lbs	Pass
Indentation Mil D-3134	None
Abrasion Resistance, ASTM D4060 CS 17, 1kg load, 1k cycles	0.1 max gm loss
Static Coefficient of Friction ASTM D2047, James Machine	0.8+ Meets OSHA
Water Absorption ASTM C413	<0.1%
Flammability ASTM D635	Self Extinguishing
Microbial (Fungi) Resistance ASTM G21	Pass #1
USDA for Federally Inspected Meat, Poultry and Processing Plants	Meets
MVER Limitations ASTM F1869	18 lbs

## COLORS

Standard Colors: Brick Red and Grey. Other colors are available.

## STANDARD PACKAGING

A 1 gallon, B 1 gallon, C Blended Filler, D Pigment Dispersion Solution

## SAFETY

Material Safety Data Sheets are available from Horizon Surface Systems and should be consulted prior to use of the product. These products are intended for use by professionals only. Keep away from children and those not trained in the use and potential hazards involved. Workers should wear protection, gloves, goggles and body covering clothing during mixing and application. Clean with soap and warm water. Always read and follow label, data sheet and MSDS instructions.

## WARRANTY

HORIZON SURFACE SYSTEMS warrants its products to conform to its manufacturing standards. HSS will replace or refund the purchase price of non-conforming products at the seller's option; such remedy being exclusive of all others and sole remedy available to the buyer. Buyer hereby expressly waives claim to additional damages. Any claim under this warranty must be made in writing within 7 days of discovery of noncompliance and no later than one year from the date of delivery of product.

## IMPORTANT NOTICE

HSS products are sold subject only to the expressed warranties contained herein, unless otherwise authorized by HSS in writing. There are no other warranties by HSS of any nature whatsoever, expressed or implied, including any warranty of merchantability or fitness for a particular purpose in connection with this product. Buyer agrees that seller assumes no liability for remote or consequential damages of any kind which result from the use or misuse of this product. Information contained herein is based on data believed to be reliable; however, it is the Buyer's responsibility to satisfy itself of the suitability of the product for a particular purpose.



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