

Urethane Concrete Trowel Mortar

Description:

Terroxy Urethane Concrete Trowel Mortar (**UC Trowel Mortar**) is a three-component water-based polyurethane concrete system for flooring applications. This system is odorless, and contains no VOC's or HAP's. Properties include excellent chemical resistance against acids, bases, oils, and organic solvents. This product is placed with a flat-edge trowel and back-rolled with nap roller for a sealed finish. This product develops a hard, scratch resistant surface and withstands exposure to thermal shock and moisture vapor transmission. Before application, thoroughly prepare surface by grinding or shot-blasting. UC Trowel Mortar is available in a variety of colors. Pigment options include color packs or pre-pigmented resin.

Product Benefits:

- Up to 99% RH concrete moisture tolerance
- Excellent chemical and stain resistance
- Impact and abrasion resistant
- Rapid cure & hardness development
- Excellent bond strength
- Durable and easy to clean
- Water Based, Zero VOC Formulation
- Low temperature cure
- Can be applied at thicknesses > 3/16"
- Thermal shock and cycling resistant
- High heat resistance

Typical Applications:

- Kitchens & Cafeterias
- Industrial uses especially with heavy traffic
- Processing plants
- Locker rooms and rest rooms
- Clean rooms & laboratories
- Cold storage areas
- Cook/chill areas
- Aerospace
- Areas requiring high performance

Coverage:

Typical coverage for UC Trowel Mortar is 15-20 ft² per blended kit at 1/4" - 3/8" thick.

Concrete Substrate Preparation:

Terroxy UC Trowel Mortar can be applied to a variety of substrates given that the surface is properly prepared. Preparation of surfaces other than concrete will depend on the type of substrate.

1. Concrete slab shall have an efficient moisture/vapor barrier (suggested minimum: 15 mils / 0.4mm thickness) directly under the concrete slab.
2. Allow substrate to cure a minimum of 7 days.
3. Sub-floor should be level - maximum variation not to exceed 1/4" in 10 ft (6.35 mm in 3m).
4. The recommended preparation method is shot blasting to a CSP 3-5.
5. Surface to receive Terroxy Urethane Concrete should have a steel trowel finish.
6. Substrate should not been treated with a curing agent as this may prevent bonding. If curing agent present, surface must be shot blasted.

** For specific preparation guidelines, contact your T&M representative.

Installation Instructions

Mixing:

Terroxy UC Trowel Mortar is a three-component product (with additional color pack when required) and must be properly mixed and applied in order to perform as specified.

Add 8 oz. of Urethane Concrete Colorant to UC Trowel Mortar Part A and blend gently until color is uniform. Be sure to scrape all contents of the colorant into the Part A. Add UC Trowel Mortar Part B to pigmented UC Trowel Mortar Part A and mix with medium agitation for approximately 20 seconds. Pour mixture into a 5-gallon pail and add UC Trowel Mortar Part C powder and mix until uniform. Material has 10-15 minute working time at 72°F.

Mix ratio: Color Pack - 0.65 gal. Part A (with 8 oz. pigment pack), 0.5 gal. Part B, 50 lbs. Part C (neutral)
 Pre-pigmented - 0.65 gal. Part A (pigmented), 0.5 gal. Part B, 50 lbs. Part C (neutral)

Note: Do not split kits or mix off ratio

Application:

Apply UC Trowel Mortar in a temperature controlled environment (ideal temperature range is 60-80°) at a spread rate of 15 ft² to 20 ft² at 1/4" to 3/8" thickness using a flat-edge trowel. Smooth and finish with a flat-edge trowel then back roll with nap roller. This material will cure faster in hot or humid conditions. Very cold temperatures will cause system to be slightly thicker and may make installation more difficult. Care should be taken to apply and level material quickly.

Limitation:

Rapid cure. Do not mix more material than can be applied in 10 - 15 minutes. Slab on grade requires 15mil vapor/moisture poly-barrier. Moisture limits for moisture vapor transmission of Terroxy Urethane Concrete are 20lbs. /1000 sq. ft. /24 hours using the calcium chloride test per ASTM F-1869 or 99% relative humidity using in-situ RH testing per ASTM F-2170.

Do not thin this product. Solvents may prevent proper curing. Substrate temperatures should be 38°F (3.3°C) minimum and rising. For best results, material should be maintained and stored at temperatures between 50° - 80°F (10° - 27°C). Additionally, for installations between 38°-55°F, use of additional catalyst package is necessary for full cure. Please contact technical support for further information.

IMPORTANT: This product is sensitive to liquid epoxy materials. Contamination with liquid epoxy materials will also cause excessive heat and product failure.

Due to various raw materials used in Terroxy Urethane Concrete Systems, the finished color of these systems may appear different from samples seen on Terroxy Resinous color charts. For physical color samples of finished Terroxy Urethane Concrete systems, contact your technical representative.

Cure Time:

Allow to cure approximately 6 hours at 72°F (22.2°C) surface temperature before opening to light traffic. Full cure time is 5-7 days. Material cures more slowly at lower temperatures.

Technical Data:

| Property | Method | Results |
|----------------------------------|-------------------------------------|---|
| Flexural Strength | ASTM-C 580 | 2,300 psi (15.9 MPa) |
| Abrasion Resistance | ASTM D-4060 C-S17 Wheel 1000 Cycles | 20-30 mg loss |
| Flammability | ASTM D-635 | Self-extinguishing over concrete |
| Hardness | ASTM D-2240, Shore D | 80-85 |
| Tensile Strength | ASTM C-307 | 1,000 psi minimum (6.9 MPa) |
| Compressive Strength | ASTM C-579 | 7,700 psi (53.1 MPa) |
| Adhesion | ACI 503R | 350 psi (2.4 MPa) 100% Concrete Failure |
| Impact Resistance | MIL D-3134F 4.7.3 | Withstands 16 ft/lbs without cracking, delaminating or chipping |
| Thermal Coefficient of Expansion | ASTM C-531 | 0.89 x 10 ⁻⁵ inches per inch/degrees Fahrenheit maximum (1.6 x 10 ⁻⁵ mm/°C) |
| Fungus & Bacterial Resistance | MIL F-52505 4.4.2.11 | Will not support growth of fungus or bacteria |
| Water Absorption | ASTM C-413 | 0.10% |
| Chemical Resistance | ASTM D-1308 | No deleterious effects when exposed to: Alcohol Ethylene Glycol Fats, Oils & Sugars Gasoline, Diesel & Kerosine Hydrochloric Acid (<35%) Lactic Acid (Milk) Mineral Oils Most Organic Solvents Muratic Acid Nitric Acid (<10%) Nitric Acid (<30%) Slight Softening PM Acetate Phosphoric Acid (<50%) Potassium Hydroxide (<50%) Sodium Hydroxide (<50%) Sulfuric Acid (<50%) Slight Gloss Loss Water Xylene |

Clean Up

Clean up mixing and application equipment immediately after use. Use acetone or denatured alcohol. Observe all fire and health precautions when handling or storing solvents

Maintenance:

After completing the application of UC Trowel Mortar, the installer should provide the owner with proper maintenance instructions. If the floors become slippery due to animal fats, oil, grease, soap or other topical residue, promptly remove contaminants and rinse thoroughly.

Terroxy Urethane Concrete is easily cleaned with neutral pH Balance Cleaners or detergents. Routine hand scrubbing is recommended for all surfaces having a slip resistant texture.

Technical Service:

Terrazzo & Marble Supply Companies, distributor of Terroxy Resin Systems, provides services and consultations on material selection, specifications and troubleshooting concerning proper installation. Contact our **Terrazzo Sales Desk at 800.7.MARBLE** or **T&M Technical Department at 708.385.6633** for questions or assistance.

Precautions:

Refer to cautionary information printed on the product container. For medical emergencies, contact Chemtrec, the Chemical Emergency Transportation Center, at 800.424.9300.

Warranty:

Terrazzo & Marble Supply Companies warrants for a period of one (1) year that Terroxy UC Trowel Mortar will be free of manufacturing defects and will conform to published specification when handled, stored, mixed and applied in accordance to recommendations of Terrazzo & Marble. If Terroxy UC Trowel Mortar fails to meet this warranty, the liability of Terrazzo & Marble will be limited to replacement of any non-conforming Terroxy UC Trowel Mortar only if notice of such non-conformity is given to Terrazzo & Marble within one (1) year from the delivery of materials. Terrazzo & Marble may, according to its discretion, refund the price received by Terrazzo & Marble in lieu of replacing the Terroxy UC Trowel Mortar. No customer, distributor or representative of Terrazzo & Marble is authorized to change or modify the published specification of this warranty in any way. No one is authorized to make oral warranties on behalf of Terrazzo & Marble. In order to obtain replacement or refund, the customer must provide written notice containing full details of the nonconformity. Terrazzo & Marble reserves the right to inspect the non-conforming Terroxy UC Trowel Mortar prior to replacement. Except for the expressed warranty stated above, there is no other warranties, expressed or implied, including without limitation, implied warranty of merchantability or fitness for purpose. Terrazzo & Marble's obligation shall not extend beyond the obligations expressly undertaken above and Terrazzo & Marble shall have no liability or responsibility to the purchaser or any third party for any loss, cost, expense, damage or liability, whether direct or indirect, or for incidental or consequential damages.

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