

UNI-CRETE

POLYMER-MODIFIED CONCRETE
SURFACING & REPAIR MATERIAL

Technical Data & Application Instructions

PRODUCT DESCRIPTION

UNI-CRETE is a pure acrylic polymer that, when mixed at the jobsite with Portland Cement and a small amount of water, provides an economical alternative to the replacement of existing concrete, asphalt and wood substrates. It trowels easily, filling and leveling irregular surfaces, yielding a durable, flexible finish at thicknesses from 1/16" to 1/2" (.2 cm to 1.3 cm). Thicker repairs can be accomplished by adding pea gravel to the mixture. As an overlay system, it will not delaminate, even at a feather edge. UNI-CRETE can be used to regrade, relevel, renovate, re-surface, add slip-resistance and create spatter-coat and other decorative patterns and designs on horizontal or vertical surfaces. It can also be used to provide below-grade waterproofing on foundation walls, planter boxes, etc. UNI-CRETE is an excellent alternative to "sacking" rough or porous concrete surfaces prior to topcoating with UNITED'S roof, wall and deck coatings systems. It achieves a superior bond and cures more rapidly than typical sacking compounds, and eliminates the need for a sweep-blast prior to application of the subsequent topcoat. This durable finish will resist gas, oils, water, salts and ultraviolet rays. Standard color is gray, however, UNI-CRETE can be tinted or can also be topcoated with **Canyon Tone Stain** to achieve a wide range of pastel and earth-tone shades.

SURFACE PREPARATION

Surfaces must be structurally sound. Remove any loose, soft or contaminated materials completely from areas to be repaired or resurfaced. Any existing coatings, sealers, curing agents, etc., must be cleaned from the surface, providing direct contact with the original substrate to assure tight adhesion. Remove dirt, grease, oil and other contaminants from the surface using **United Cleaning Concentrate (UCC)** reduced with 10 parts clean water, followed by a high pressure water rinse. Acid etch with 10% Muriatic Acid solution to remove glossy areas on concrete. Rinse thoroughly with clean water.

TYPICAL PROPERTIES

Initial Set Time	5 to 10 minutes [ASTM C191]
Final Set Time	1 Hour [ASTM C191]
Tensile Strength	500 psi (3.5 MPa) (± 50) [ASTM C109]
Flexural Strength	1,300 psi (9.0 MPa) (± 100) [ASTM C109]
Shearbond Adhesion	150 psi (1.0 MPa) (± 15) [ASTM C109]
Compressive Strength @ 28 days	5,700 psi (39.3 MPa) (± 100) [ASTM C109]
Adhesive Strength (over concrete)*	200 psi (1.08 MPa) [ASTM D4541]
Adhesive Strength (with Uni-Tile Sealer)*	300 psi (2.07 MPa) [ASTM D4541]
Volatile Organic Content (VOC)	0.02 lb./gal. [EPA RM-24]
Flash Point	105°F (96°C) [ASTM D56]
Pot Life	~ 2 Hours at 75°F (24°C), 50% Relative Humidity
Shelf Life	One (1) Year from date of shipment

*Adhesive strength greater than cohesive strength of the concrete substrate.

PACKAGING & MIXING

UNI-CRETE is packaged in 5-gallon (19 liter) plastic pails containing 60 lbs (27 kgs) of acrylic polymer. To use pour ½ of the contents (30 lbs / 13.6 kgs) into a second, clean 5-gallon (19 liter) container. To each container add approximately 1/3 bag (31 lbs / 14 kgs) of Type I or Type II Portland Cement, mixing constantly. Once blended, allow the mixture to stand for approximately five (5) minutes to allow the viscosity to stabilize. Mix once again to break the initial set, then slowly add water or cement as necessary until the desired consistency is achieved. Consistency can be varied from a paste for vertical walls and patches, to a self-leveling slurry for flooring applications. Do not add more than 1 gallon (3.8 liters) of water, as excess water will decrease the strength and vertical hold of the **UNI-CRETE**. Likewise, do not add more than 33 pounds (15 kgs) of Portland Cement to the acrylic polymer in either container, as additional cement will decrease the water resistance and flexibility properties, as well as the working time of the mixture. Small amounts of material can be mixed manually or mechanically, while a mortar mixer is most efficient for large batches.

UNI-CRETE must always be double-mixed prior to use to achieve the true consistency. After remixing the material, the working pot life will be approximately 2 hours at 75°F (24°C). **UNI-CRETE** should be protected from rain or other adverse weather conditions for a period of 24 hours or until thoroughly dry. Complete cure will require approximately 14 days.

APPLICATION

Surfaces to be repaired shall be pre-dampened with clean water. Wipe away any standing water prior to application. Spall repairs, as well as vertical and horizontal repairs, should be hand-packed and finished with a damp brush or trowel. Do not apply at temperatures below 50°F (10°C). The final physical properties of the **UNI-CRETE** will be enhanced by keeping the surface damp using a water mist during the initial hour of cure.

UNI-CRETE may be applied using a trowel or squeegee to achieve the desired thickness. A wide variety of finish textures can also be created by using a hopper gun to spatter-spray a topcoat of **UNI-CRETE**. The spatter can be “knocked-down” or left as is depending on the desired finish.

At an average consistency, each pail of **UNI-CRETE** will yield a combined volume of 9 gallons (34 liters), resulting in a total coverage of 1960 cubic inches (32,132 cubic cm). This translates into a coverage rate of 34 sq. ft. (3.2 m²) at .4" (1 cm) thickness. For repairs over ½" (1.3 cm) in depth, add pea gravel at the rate of 25% by volume (3 parts **UNI-CRETE** to 1 part pea gravel).

UNI-CRETE is designed to be primed with **UNITED’S Uniseal** prior to topcoating with **UNITEDS’** water-based roofing, wall or decking systems, and **Uni-Tile Sealer LV** when using our solvent-based or 100% solids coatings. Apply **Uniseal** or reduced **Uni-Tile Sealer LV** at the rate of 300 sq. ft. per gallon (7.3 m²/l) after allowing the **UNI-CRETE** to cure a minimum of 24 hours. Apply topcoat within 48 hours of primer application, or within 24 hours if surface is exposed to direct sunlight or high temperatures.

Clean tools and equipment, as well as any adjacent areas to which the **UNI-CRETE** is inadvertently applied, with water while the material is still wet.

PRECAUTIONS

UNI-CRETE will freeze and become unusable at temperatures below 32°F (0°C). Do not ship or store without protection from freezing. Do not apply at ambient temperatures below 40°F (4°C) or when the surface temperature is below 40°F (4°C).

Avoid contact with eyes and skin. For additional information, refer to OSHA guidelines and **UNI-CRETE** Material Safety Data Sheet (MSDS).



Our products are guaranteed to meet established quality control standards. Information contained in our technical is based on laboratory and field testing, but is subject to change without prior notice. No guarantees of accuracy are given or implied, nor does UNITED assume any responsibility for coverage, performance or injuries resulting from storage, handling or use of our products. Liability, if any, is limited to product replacement or, if applicable, to the terms stated within the executed project warranty.