

Selection & Specification Data

Product Description	UniFloor 6 is a 100% solids, high performance, epoxy coating designed for concrete. UniFloor 6 is a selfleveling coating which may be applied as a neat, aggregate filled and/or reinforced coating system. UniFloor 6 is specially formulated to withstand some of industry's most aggressive chemicals.
Uses	<ul style="list-style-type: none"> • Process Areas • Tank Farm Floors • Production Areas • Spill Containment Areas • Light Manufacturing
Product Advantages	<ul style="list-style-type: none"> • Excellent resistance to chemical attack • Excellent abrasion and impact resistance • Exceptional thermal shock resistance • Superior bonding qualities • High cohesive strength • Low permeability • Low odor
Chemical Resistance	UniFloor 6 is formulated to resist a variety of chemical solutions. Please consult chemical resistant chart or Union Compound Technical Service Department for specific recommendations.
VOC	0.02 lbs/gal (2 grams/liter)
Packaging	<p>UniFloor 6 has a 2.2:1 mix ratio by volume and is available in 1 gallon and 5 gallon units.</p> <p>1 gallon unit consists of:</p> <ul style="list-style-type: none"> 1 gallon (partial) can of Part A (resin) 1 gallon (partial) can of Part B (hardener) <p>5 gallon unit consists of:</p> <ul style="list-style-type: none"> 5 gallon (partial) pail of Part A (resin) 5 gallon (partial) pail of Part B (hardener)
Coverage	One gallon of UniFloor 6 will cover 64 sq. ft./5.96 sq. m at a thickness of 25 mils/0.63 mm. Application thickness may vary from 30-150 mils/0.75-3.8 mm, depending on expected service conditions (i.e., chemical exposure, temperature, traffic load and other mechanical abuse, splash-spill, etc.). Normally applied a minimum of 20 mils in one or two coats. Consult Union Compound's Technical Service Department for specific thickness recommendations. In addition, coverage rates will be affected by the condition of the surface being coated (degraded vs. smooth, steel vs. concrete, etc.).
Storage Conditions	Store all components between 40-110°F/4-43°C in a dry area. Keep out of direct sunlight. Avoid excessive heat and do not freeze. The shelf life is minimum one year in the original, unopened container.

PHYSICAL CHARACTERISTICS

Compressive Strength	13,500 psi (ASTM C-579: AFC)
Tensile Strength (ASTM D-638)	Neat: 5,500 psi Reinforced: 7,800 psi
Flexural Strength (ASTM D-790) (ASTM C-580)	Neat: 7,200 psi Reinforced: 13,000 psi Aggregate Filled: 5,300 psi
Flexural Modulus of Elasticity (ASTM D-790) (ASTM C-580)	Neat: 3.5 x 10 ⁵ psi Reinforced: 6.1 x 10 ⁵ psi Aggregate Filled: 9.7 x 10 ⁵ psi
Hardness	Neat: 70 (ASTM D-2240, Shore D)
Bond Strength (ASTM D-4541)	> 400 psi (100% concrete failure)
Water Vapor Transmission	0.0120 grams/hr./ft ² (ASTM E-96)
Permeability	0.0042 perm. -in. (ASTM E96)
Weight per Mixed Gallon	9.9 lbs.
Pot Life @ 75°F	45 to 60 min.*
Cure Times @ 75°F	Dry to Touch: 12 hrs Foot traffic: 24 hrs Vehicular traffic or Chemical Service: 36 hrs
Flammability	Non-flammable

* Significantly less at elevated temperatures
Warming the materials (components A and B, aggregate) to 70- 85°F/21-29°C twenty-four hours before application will facilitate handling.

Substrate Preparation

General:

Proper preparation is critical to ensure an adequate bond. The substrate must be dry and free of all wax, grease, oils, fats, soil, loose or foreign materials and laitance. Laitance and unbonded cement particles must be removed by mechanical methods, i.e., abrasive blasting or scarifying. Other contaminants may be removed by scrubbing with a heavy-duty industrial detergent and rinsing with clean water.

Concrete:

Concrete should be properly cured for 28 days and have the following characteristics:

- Substrate tensile strength of at least 300 psi.
- pH in the range of 7 to 11.

The surface must show open pores throughout and have a sandpaper texture.

Steel:

Equipment base plates, etc. to be coated along with the concrete should be abrasive blasted to a near white metal finish (SSPC-10 or NACE-2) with a 1 to 2 mils anchor profile.

Masking:

Mask surfaces that are not to be coated. This material is difficult to remove once applied.

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Preparation

Before mixing and applying any material, make sure environmental conditions are satisfactory for application. For optimal working conditions, substrate temperature must be between 60-80°F/15-27°C. Measure the surface temperature with a surface thermometer. Cold areas must be heated until the slab temperature is above 50°F/10°C. This will allow the material to achieve a proper cure. Also, a cold substrate will make the material stiff and difficult to apply. Warm areas or areas in direct sunlight must be shaded or arrangements made to work during evenings or at night. A warm substrate (60-80°F/15-27°C) will aid in the material's workability; however, a hot substrate (80-100°F/27-37°C) or a substrate directly in the sun will shorten the material's working time and can cause other phenomenon such as pinholing and bubbling. Substrate temperature should be greater than 5°F/3°C above dew point.

Application

Priming:

UniFloor 1 should be used to prime concrete prior to the application of UniFloor 6. Apply primer at a rate of 200 ft²/gal.

Note: For substrates with out-gassing concerns, primer should be applied while the substrate temperature is decreasing for best results.

NOTES:

- . Material Safety Data Sheets are available on request.
- . A staff of technical service engineers is available to assist with product application or to answer questions related to Union Compound products.
- . Requests for technical literature or service can be made through local sales representatives and offices.

Blended Application:

Pre-mix Part A (resin) for 30 seconds using a Jiffy Mixer. Pour Part B (hardener) into Part A and thoroughly mix for 2 minutes. After mixing Part A and Part B, split the mix into two 5 gallon buckets. While continuing to mix with a Jiffy Mixer, slowly add the aggregate.

Note: A 2:1 sand to liquid weight ratio will produce a trowel-like consistency. A 3:1 sand to liquid weight ratio will produce a grout-like consistency.

Note: The use of a 20/40 mesh silica aggregate is highly recommended. One gallon of 20/40 mesh silica weighs 13-14 lbs.

Apply the mixture at the desired thickness using a notched trowel.

Note: The surface must be sanded prior to re-coating after an initial cure of 24 hours.

For vertical applications contact Union Compound's Technical Service Department.

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