

WATER BASED MATTE FINISH URETHANE

Top Coat, High Performance Water-Based Aliphatic Polyurethane

Description

The WATER BASED MATTE FINISH URETHANE is a two-component low odor water-based aliphatic polyurethane floor coating system which has near zero VOC. The product has a matte finish and is non-yellowing. It can be applied directly on the concrete or as a protective and decorative layer over ResinTek epoxies (ResinTek Series). The WATER BASED MATTE FINISH URETHANE formulation is based on advanced aliphatic water-based polyol technology displaying superior aesthetic finish and excellent UV stability.

Uses

The chemical and mechanical properties of WATER BASED MATTE FINISH URETHANE provide excellent results for a number of applications:

- + Commercial centers
- + Office buildings
- + Retail stores
- + Manufacturing facilities
- + Food processing and preparation plants
- + Public facilities including hospitals and schools
- + Pharmaceutical companies
- + Other industrial, commercial and residential uses

Advantages

- + VOC-exempt, potential for LEED eligibility
- + Low odor formulation
- + Excellent UV (non-yellowing) and very good abrasion resistance
- + Long pot life
- + Application-friendly with low viscosity and auto-leveling properties reducing the risk of roll marks
- + Protects epoxy coatings by providing superior abrasion resistance and a UV barrier that will slow down the yellowing process of epoxies
- + Interior and exterior applications
- + High chemical resistance
- + Impermeability / low moisture sensitivity
- + Matte finish masks surface imperfections
- + High density of the product prevents dirt penetration resulting in low maintenance post application

Application Data

Mix Ratio	5A:1B		
Packaging	1 US gallon kits (3,78L)		
Color	Clear		
Finish	Matte		
Coverage / US GAL	Mils (wet)	Mils (solids)	Sq. Ft.
	2	0,8	800
	2,7	1,1	600
	3	1,3	533

Shelf Life and Transport Six months, in original unopened factory pails under normal storage conditions. Protects from freezing. Avoid exposure below 10°C. Do not use if product temp. is below 15°C.

Substrate temp. Min 15°C, Max 30°C

Cure Time		
Pot Life	3 hours	22°C and 55% rel. hum
Working Time	20 min	22°C and 55% rel. hum
Tack Free	1 hour	22°C and 55% rel. hum
Dry Through	9 hours	22°C and 55% rel. hum
Foot Traffic	24 hours	22°C and 55% rel. hum
Light Traffic	1 week	22°C and 55% rel. hum

Technical Properties

Hardness, Pendulum	24 hours	~130s	
	48 hours	~160s	
	7 days	~165s	
Abrasion	ASTM D4060	61	mg
VOCs	VOC-Exempt		
Coefficient of Friction	ASTM D4060	37	Degrees
Δ Gloss 0-500 hours	ASTM G155	0.6	
Solids Content	42%		

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Surface Preparation

If applied directly on concrete, the slab should be clean, dry and free of grease, oil, paint, curing agents or any contaminants that may inhibit proper adhesion. Concrete should be cured at least 28 days before applying the coating system.

Proper testing procedures should be practiced with regards to soil acidity and moisture vapor transmission. Take a pH reading to ensure concrete is neutral (a reading between 5 and 9 is acceptable). Use a calcium chloride test to measure moisture vapor transmission. Readings of 3.5 lbs/1000 sq. ft. during a 24-hour period or less are acceptable for applying coatings. Higher results should receive a moisture mitigation system.

Surface must be shot blasted or prepared with an equivalent mechanical means in line with CSP-2. Ensure the surface is free of contaminants, and the pores are open to allow the product to penetrate.

The product can be applied over ResinTek's epoxies without a mechanical bounding if the epoxy has been applied in less than 24 hours. If the product is applied over an epoxy from another manufacturer, it is imperative to do proper tests prior applying the WATER BASED MATTE FINISH URETHANE. When applied over an epoxy, a mechanical preparation of the epoxy will improve the adhesion of the WATER BASED MATTE FINISH URETHANE. The epoxy coating should be sanded with a proper floor machine. Vacuuming and wiping properly prepared surface will ensure no loose dust particles from the sanding process are present.

Mixing

Before final mixing, pre-mix parts A and B individually at low speed. Then, mix five parts of A and one part of B together at low speed in a separate container. The mixing container must be clean and free of any outside particle. Mix thoroughly for three minutes using a low speed drill (300-450 rpm) to minimize the entrapping of air. It is recommended to activate the mixer in the reverse mode after the first minute in order for the liquid to mix from the bottom of the mixing can to the top. Make sure to scrap sides and bottom of mixing container so no unmixed material remains. Mix only the necessary quantity to be used according to the specified pot life / working time.

Application

Best results will be obtained between 20-25°C and with a relative humidity of less than 80%. It is recommended to apply between 2 and 3 mils per coat (wet). Allowed up 15% of additional water per gallon to improve application. Two coats are recommended to assure a uniform finish. Test sections are recommended prior full installations as adjustments may be required depending on surface porosity and field conditions. Dip and roll method is recommended using a 6 or 10 mm low nap lint-free roller. It is recommended to apply the product in a multidirectional manner (north-south, east-west) to ensure that the coating is uniform. Always end in the same direction of rotation of the North-South example above and never do North South / South North (never come and go) without applying pressure on the roll. Once the desired thickness is reached make sure the wet product is uniform (use an instrument to measure the thickness of the wet film). The milky/blue tint color will disappear during the curing process.

Recoat

A second coat of WATER BASED MATTE FINISH URETHANE can be installed 9 hours (at 22°C) after the first coat. It is recommended to sand the product prior applying the next coat. Do not recoat without sanding if last coating of the product has been applied for more than 24 hours (at 22°C). Beyond 24 hours, the floor surface should be sanded/abraded. It is recommended to use water with a clean cloth to eliminate all the dust after vacuuming prior applying the additional coat.

Clean up

Excess liquid A and B material should be mixed together and allowed to cure. Cured product may be disposed of without restriction. Uncured material should be stored in a suitable and sealed container and may be disposed in accordance with provincial and federal regulations.

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Limitations

Requires a dry substrate. This product should not be applied to concrete substrates that show high levels of moisture vapor transmission (see “Surface Preparation” section). Moisture content of the substrate must be <4% prior to application. This product will take more time to cure in a high humidity environment. Although this product may be applied in a certain range of thickness, limitations may apply when taking into consideration curing time. Everything else being equal, thicker is the film, longer is the curing time. Do not exceed suggested thickness levels since the product may cure with a cloudy finish. Temperature will also impact curing time. Curing time may extend significantly at lower temperature levels. Keeping the product stored at room temperature will make the application easier and dry times shorter.

It should be noted that the variation of the thickness of the coating when installed on unsealed concrete and / or with a spreading rate lower than recommendations and / or application on a hot surface, then the gloss may be affected.

ResinTek stands behind the quality of its products. However, ResinTek cannot guarantee final results since ResinTek has no control over surface preparation, operating conditions and application procedures. Clients are solely responsible to test ResinTek’s products to determine if they perform as expected. In order to meet our strict requirements, we are continuously testing our coatings and on occasion, formulations may be modified to improve certain properties within each coating. Information and data included in this reference document may not be up to date as of the date of reference. Contact ResinTek for further information regarding the limitations of this product.

Available Colors

Matte Clear

Refer to the most recent Material Safety Data Sheet prior using this product

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