# POLYUREA

# **TECHNICAL DATA**

# MEDICI<sup>®</sup> DECORATIVE POLYUREA FLOOR COATING

### **DESCRIPTION AND USES**

**RUST-OLEUM**<sup>®</sup>

The Medici<sup>®</sup> Decorative Polyurea Floor Coating is a high gloss, UV stable aliphatic polyurea floor coating for use in industrial and commercial facilities. It combines two different finish colors in a simultaneous roller application to obtain a faux stain finish. It is suitable for both interior and exterior applications.

### PRODUCTS

280938Sierra Sunset280947Terra Cotta280939Brown Slate280950Stone

### **RECOMMENDED PRIMER**

Medici can be applied direct to properly prepared concrete. If a primer is used, then it must allowed to cure for 24 hours and sanded prior to application of the Medici finish. If there is a moisture issue with the floor, then it must be primed with one of the TVB Primers.

- S6511 Penetrating Prime & Seal Primer
- TVB Water Based Topside Vapor Barrier
- TVB 100% Solids Topside Vapor Barrier
- TurboPrime™
- ECO Prime™

### PACKAGING

Each Medici finish is packaged in a kit containing 90 fl oz of coating in a flexible pouch and two 8 fl oz containers of Stabilizer/Tint additives. Each container of Stabilizer/Tint produces a different color.

### APPEARANCE

High Gloss

### **PRODUCT APPLICATION**

#### SURFACE PREPARATION

The concrete surface must be free of all dirt, grease, oil, fats, and other contamination. Remove surface contamination by cleaning with Krud Kutter<sup>®</sup> Cleaner Degreaser, detergent or other suitable cleaner. Rinse thoroughly with clean, fresh water and allowed to dry.

Note: The substrate must be completely dry prior to application of Medici. Polyurea coatings are sensitive to moisture and can affect proper curing of the coating.

NEW, UNCOATED CONCRETE: New concrete must be allowed to cure for a minimum of 30 days before application. In addition to the aforementioned cleaning, the concrete must be further prepared by mechanical grinding or acid etch to remove all laitance and produce a suitable surface profile.

PREVIOUSLY COATED CONCRETE: Previously coated concrete must be in good sound condition with the existing coating tightly adhering to the concrete. In addition to the aforementioned cleaning, the existing coating must be sanded to dull the finish and produce a slight surface profile. Remove all sanding dust by vacuum. Do not wipe the floor with denatured alcohol or other solvent. If wiping is necessary, use only urethane grade Methyl Ethyl Ketone (MEK).

### **PRODUCT APPLICATION (cont.)**

### CONCRETE REPAIR

All spalls and cracks must be chased out and repaired to ICRI standards using an appropriate Concrete Saver patching material.

#### MIXING

Both components should be pre-conditioned to a minimum of  $50^{\circ}$ F ( $10^{\circ}$ C) prior to use. Be sure the air and surface temperatures are at least  $5^{\circ}$  above the dew point. The Medici finish is moisture sensitive, so be sure the outside of the flexible pouch is dry and free of condensation.

Cut off the top of the flexible pouch and divide the material equally into two separate clean pails; 45 flu oz in each pail. Add the entire contents of the stabilizer/tint into each of the pails and mix for 2-3 minutes.

#### APPLICATION

Apply only when air, material and floor temperatures are between 50-90°F (10-32°C). Do not apply in direct Sunlight or when temperature is rising.

The coating is applied using a special Medici $^{\ensuremath{\mathbb{O}}}$  Roller and Medici Roller Pan. Fill each side of the Medici Roller Pan with the different colors.

It is strongly suggested that the Medici Roller be de-linted before use. Use duct tape, but rather than wrapping the duct tape around the roller, wrap a piece of duct tape around your hand, sticky side out, and lightly dab or sweep the roller to pick up and remove loose fibers.

The faux stain affect of Medici finish is achieved by the dual roller application with two colors. The colors will blend and overlay each other in a way which is unique for each application and is very applicator dependent.

If more than one applicator is going to be involved with the application of the coating, then they should not stay in just one location, but move around the area to reduce the appearance of patterns developing in the finish. Have an application plan determined before beginning application. Be sure to have enough material mixed prior to beginning. Having an excess would be best. Each applicator must wear clean, sharp spikes while applying the coating.

Lightly saturate the Medici Roller with the two colors in the roller pan. Do not push down on the roller as this will cause it to thicken up and reduce the texture that can be achieved. Get enough material on the roller to fully color each side. Each load of the roller should provide enough material to cover a 5x5 foot area (25 sq. ft.). So keep this in mind as you begin the application. Start the application by rolling out a 3x3 foot 'W' pattern and a 3x3 foot 'M' pattern adjacent to it. Use light application force on the roller. Once the 'W' and 'M' patterns are down, rotate your position 90° and roll in the opposite direction spreading the coating out and filling in the area. Continue to 'walk in circles' while spreading the coating lightly with the roller.

Once the 5x5 foot area is completed, re-load the roller and repeat the procedure for another 5x5 foot area adjacent to the previous area.



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### **PRODUCT APPLICATION (cont.)**

Begin in the center of the new area and spread out the coating blending it back into the previous area. Maintain the same coverage rate for each section to ensure a uniform appearance. Repeat the process until the entire floor is coated.

It is strongly suggested the Medici Roller is changed out after an hour of use, otherwise the nap can begin to stiffen and this can affect the appearance of the application. Cut in along walls and other areas with a 3" chip brush blending the colors to achieve the same appearance.

Allow the coating to dry for at least 4 hours before applying a clear finish.

If slip resistance is desired, apply a clear finish coat of FastKote $^{\ensuremath{\mathbb S}}$  UV with the durability additive.

#### THINNING

Not normally required.

#### **CLEAN-UP**

Acetone.

#### EQUIPMENT RECOMMENDATIONS

ROLLER: Use Medici Roller and Roller Pan only.

BRUSH: Use a disposable natural fiber chip brush, 2-4 inch wide for cut in work.

### PERFORMANCE CHARACTERISTICS

Tensile Strength (ASTM D412)	5,500
Compressive Strength (ASTM D695)	12,000
Elongation (ASTM D412)	75
Hardness, Shore D (ASTM D2240)	84
Gloss (ASTM D523) @ 60°	91+
Abrasion Resistance (ASTM D4060) CS-17 Wheel, 1,000 g load, 500 cycles	43



### PHYSICAL PROPERTIES

Resin Type		Aliphatic Polyurea		
Weight	Per Gallon	10.0 lbs/gal - Clear (finish colors are slightly higher and varies with color)		
	Per Liter	1.2 kg/l - Clear (finish colors are slightly higher and varies with color)		
Solids by Volume		90%		
Volatile Organic Compounds**		50 g/l		
Practical Coverage at Recommended DFT		400 sq.ft./gal. Coverage rate can vary depending on the texture and porosity of the concrete		
Dry Times @ 72º F and 50% Relative Humidity <sup>†</sup>	Recoat	4-12 hours*		
	Light Traffic	3-6 hours		
	Full Traffic	24 hours*		
Shelf Life		2 years		
Safety Information		See SDS		

Calculated values are shown and may vary slightly from the actual manufactured material.

<sup>†</sup> Dry times will be increase if temperatures are less than 65° F (18°C) and/or the Relative Humidity is less than 50%.

\* If 12 hour recoat time has elapsed, the coating must be sanded prior to recoating.

\*\* Calculated Applied VOC

# **CHEMICAL RESISTANCE**

Acetic Acid 100%	RC	Methanol	R	Sugar/H20	R	
Acetone	R	Methylene Chloride	С	Sulfuric Acid 10%	R	
Ammonium Hydroxide 50%	RC	Mineral Spirits	R	Sulfuric Acid >50%	R	
Benzene	RC	Motor Oil	R	Toluene	R	
Brake Fluid	R	MTBE	С	1, 1, 1-Trichlorethane	С	
Brine saturated H2O	R	Muriatic Acid 10%	R	Trisodium Phosphate	R	
Chlorinated H2O	R	NaCI/H2O 10%	R	Vinegar/H2O 5%	R	
Diesel fuel	R	Nitric Acid 20%	RC	H2O 14 days at 82° C	R	
Ethanol	R	Phosphoric Acid 10%	R	Xylene	R	
Gasoline	R	Phosphoric Acid 50%	NR			
Gasoline/5% MTBE	R	Potassium Hydroxide 10%	R	<b>Chemical Resistance Key</b> R=recommended/little or no visible damage RC=recommended conditional/some effect, swelling or discoloration C=Conditional/Cracking- wash within one hour of spillage to avoid affects NR=Not recommended Dis=Discolorative		
Gasoline/5% Methanol	R	Potassium Hydroxide 20%	R, Dis			
Hydrochloric Acid 20%	R	Propylene Carbonate	RC			
Hydrofluoric Acid 10%	RC	Skydrol	RC			
Hydraulic fluid (oil)	R	Sodium Hydroxide 25%	R			
Isopropyl Alcohol	R	Sodium Hydroxide 50%	R. Dis			
Jet Fuel (JP-4)	R	Sodium Hypchlorite 10%	R			
Lactic Acid	RC	Sodium Bicarbonate	R			
MEK	R	Stearic Acid	R			

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