



# CITADEL POLYCURAMINE™

### Product Description

CFFS Polycuramine™ is a two component, 96% solids, cyclo-aliphatic hybrid coating system that has exceptional adhesion properties to concrete substrates. Due to its unique chemistry, this coating exhibits great flexibility, working times and self-leveling properties while offering great chemical resistance as well. Low odor makes it a great choice for both interior and exterior applications.

### Product Features

- ❖ Emits virtually no odors and can be applied indoors with minimal disturbance to surrounding activities.
- ❖ VOC FREE
- ❖ 45 minute pot life
- ❖ Serves as both a primer and basecoat in 1 easy coat.
- ❖ Easy to mix 2 parts A : 1 part B ratio
- ❖ 96% solids formulation.
- ❖ Exhibits great self-leveling properties with a built in shine.
- ❖ 7 day recoat window without sanding

### Primary Applications

- ❖ Primer/Basecoat for Solid Color and Broadcast systems
- ❖ Basecoat for Pearlescent Metallic system
- ❖ Self-Leveling build coat for heavily damaged floors

### Packaging

Product is sold CLEAR in 3 gallon pail kits.

### Temperature

40°F - 120°F (4°C - 49°C)

Optimal installation temperature is 55°F - 90°F (13°C - 32°C).

Extreme cold applications may slow the cure time.

### Shelf Life and Storage

Twelve (12) months in factory delivered unopened buckets. Keep away from extreme heat, cold and moisture. Maintain at a proper storage temperature of 45-90° F. Keep out of direct sunlight and away from fire hazards.

### Typical Physical Properties

Tensile Strength	ASTM D412	N/A
Compressive Strength (psi Mpa)	ASTM D695	N/A
Elongation	ASTM D412	N/A
Tear Strength (PLI)	ASTM 2240	N/A
Hardness, Shore D	ASTM D2240	90
Flexibility, 1/8" Mandrel	ASTM D1737	Pass
Falling Sand Abrasion Resistance	ASTM D968	N/A
<small>*Liters sand/ 1 dry mil</small>		
Abrasion Resistance	ASTM D4060	
CS17-Wheel (1,000 gm Load)	40 mg Loss / 1000 cycles	
Viscosity at 77°F (cps)	500	

### Typical Processing Properties

Two Component	Tack Free - 8-10 hours
72°F - 54% Relativity Humidity	Hard dry - 12-16 hours
	Recoat Maximum - 7 days

Coverage: 1,600 square feet, per gallon, per mil.

Recommended Coverage

Primer/Basecoat (Normal Concrete)	300 sf/gal	@5.3 mils DFT
Primer/Basecoat (Damaged Concrete)	100 sf/gal	@16 mils DFT

### Adhesion Results

ASTM D-4541 Elcometer		
Concrete	Concrete failure	>500psi

VOC compliant in all 50 states and Canada

## Surface Preparation

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**Old concrete** - Sandblasting, shot blasting, diamond grinder w/30 grit or coarser, or water blasting is highly recommended to remove surface contaminants. Any oils or fats must be removed prior to product application. Acid etching may be required (followed by a thorough rinsing) to open the pores of the concrete to accept a primer. Do not apply to wet substrates. Chloride, moisture and pH levels should be checked prior to application.

**New Concrete** - The concrete should be allowed to cure for a minimum of 30 days unless using CITADEL Ultra-Hydro Stop Primer™. Shot-blasting, sand blasting, diamond grinder w/30 grit or coarser or acid etching is required to remove the surface laitance that appeared during the curing process. A primer should be used to reduce out gassing and promote adhesion.

### **Aluminum, Galvanized Steel, Non-Ferrous Metals**

All metals must be prepared to a near white surface that is equivalent to SSPC 10 or NACE 2. For immersion service, a 3 mil blast profile is recommended. A 2 mil profile is generally accepted.

### **Fiberglass**

The gel coat must be abraded to allow a mechanical bond of the coating. Sanding using 40-60 grit sandpaper is generally acceptable. Remove all latent dust and clean the surface to be coated using a solvent such as acetone or xylene.

### **Wood**

Sand entire surface to remove any burs or rough spots that may affect the finish of the coatings. Make sure all nail/screw holes and joints are detailed using either RSP Fast Patch or CITADEL Fortification Formula prior to coating. Cotton mesh may be used to help bridge joints in moving substrates.

### **Substrate Repairs**

All spalls and cracks should be chased out and repaired to ICR1 standards using CITADEL-Fortification Formula. Expansion joints should be honored. Horizontal saw-cut control joints can be filled with CITADEL Polyflex-93. Custom coloring of repair materials is available upon request. Contact CITADEL for available colors and finishes.

### **Existing Coatings**

Cured coatings (beyond their re-coat windows) must be abraded via scuff sanding with 80-120 grit sandpaper prior to the application of CITADEL Polycuramine™. Wipe surface clean with a tack rag after a thorough vacuuming to perform a final cleaning.

## Primer Requirements

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No primer requirements for this product expect for high moisture slabs. In this case use CITADEL Ultra Hydro Stop or Ultra Hydro Stop H2O.

## Installation Recommendations

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CITADEL Polycuramine™ is designed to be applied over concrete surfaces. The surface should be free of loose particles, rust, oils and contaminants. It is recommended that this product be applied in a multi-directional (north, south, east and west) motion to help ensure proper coating thickness.

## Application Information

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### **Mixing**

Material should be pre-conditioned to a minimum of 70°F (21°C) prior to use. The material temperature must be brought to 5°F above the dew point temperature before opening and agitating the material to prevent condensation from entering the coating. Thoroughly mix both components separately using a paddle mixer and a drill for a minimum of 2 minutes to place the solids content evenly in suspension. Then combine the two components at a mix ratio of 2 parts A : 1 part B and mix well for at least 1 minute.

### **Application**

Pour ribbons and spread with a 1/8" or 1/4" notch squeegee and back roll with a 3/8" nap roller. If working out of a pan, simply dip and roll and spread in an "m" and "w" pattern to the desired spread rate (300 sf per gallon is recommended).

### **Roller**

Use only phenolic core, solvent resistant, natural or synthetic fiber roller covers. 3/8" nap rollers are recommended in order to comply with spread rate requirements.

### **Brush**

Inexpensive natural fiber chip brushes are suggested - 2" to 4" width depending on the application. These will be one-time use items.

### **Thinner**

CITADEL Polycuramine can be thinned with up to 10% Acetone by volume if a thinner coating is required.

### **Clean Up**

Use ACETONE to clean tools, etc. before product cures.

### **Limitations**

The product must be installed at the specified spread rates to perform as described. Do not apply in direct sunlight. Do not apply product when substrate and ambient temperatures are steadily below 40 degrees F (4 degrees C).

## Repairs and Maintenance

Small repairs to cuts in the coating can be made with CITADEL Polycuramine. Re-application of the product after 7 days of initial application requires scuff sanding (80-120 grit) and solvent wiping to achieve optimum adhesion. Contact CITADEL for site specific recommendations.

## LEED Credits

Most CITADEL products contribute to LEED Credits. See our LEED Credit Bulletin for more information.

## Certifications

VOC Compliant in all 50 states, Canada, Australia and Various Countries in Europe (National Standards – IMC)  
USDA and FDA certified food safe for incidental food contact.

## Shipping Information

Flash Point:	Not Applicable
Weight/Gallon:	9.3 ±1.0 lbs.
DOT HAZARD CLASS	9 MISC. Liquid N.D.S.
DOT PACKAGING GROUP	III
DOT LABEL	N / A
DOT SHIPPING NAME	N / A
DOT PLACARD	Limited Quantity

UN / NA NUMBER 3082

## Chemical Resistance

Acetic Acid 10%	R	Methanol	R	Sugar/H <sub>2</sub> O	R
Acetone	R	Methylene Chloride	C	Sulfuric Acid 10%	R
Ammonium Hydroxide 50%	RC	Mineral Spirits	R	Sulfuric Acid >50%	R
Benzene	RC	Motor Oil	R	Toluene	R
Brake Fluid	RC	MTBE	C	1, 1,1-Trichlorethane	C
Brine saturated H <sub>2</sub> O	R	Muriatic Acid 10%	R	Trisodium Phosphate	R
Chlorinated H <sub>2</sub> O	R	NaCl/H <sub>2</sub> O 10%	R	Vinegar/H <sub>2</sub> O 5%	R
Clorox(10%) H <sub>2</sub> O	R	Nitric Acid 20%	RC	H <sub>2</sub> O 14 days at 82° C	R
Diesel fuel	R	Phosphoric Acid 10%	RC	Xylene	R
Gasoline	R	Phosphoric Acid 50%	NR		
Gasoline/5% MTBE	R	Potassium Hydroxide 10%	R		
Gasoline/5% Methanol	R	Potassium Hydroxide 20%	R, Dis		
Hydrochloric Acid 20%	R	Propylene Carbonate	R		
Hydrofluoric Acid 10%	RC	Skydrol	R		
Hydraulic fluid (oil)	RC	Sodium Hydroxide 25%	R		
Isopropyl Alcohol	R	Sodium Hydroxide 50%	R		
Jet Fuel (JP-4)	R	Sodium Hypchlorite 10%	R		
Lactic Acid	RC	Sodium Bicarbonate	R		
MEK	RC	Stearic Acid	R		

## Safety Precautions

**DANGER!!** Vapor and Atomized liquids are harmful. Overexposure may cause lung damage, allergic skin reactions, or respiratory reactions. Effects may be permanent, may affect the brain or nervous system causing dizziness, headaches, or nausea. Use only in well ventilated areas, wear approved respirators when necessary. Keep out of reach of children. See MSDS for First Aid recommendations.

## Warranty

The technical data and any other printed information furnished by CITADEL are true and accurate to the best of our knowledge. CITADEL POLYCURAMINE™ conforms to in house quality control procedures and should be considered free of defects. The data provided is believed to be reliable and is offered solely for evaluation. The use of this product is beyond the control of the seller, therefore the buyer assumes all risks of use and handling whether done in a matter that is in accordance with the provided posted directions or not. CITADEL makes no warranty; expressed or implied, of its products and shall not be liable for indirect or consequential damage in any event.

## Chemical Resistance Key

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