

## CFFS RG-80X™ POLYASPARTIC POLYUREA

### Product Description

CFFS RG-80x is a new and improved version of our popular two-component, 80% solids, VOC Compliant, Aliphatic Polyaspartic Polyurea that was developed for UV stable floor topcoats, chemical resistance and corrosion control. This coating provides reliable performance in a wide range of temperatures and offers 100% UV stability, making it an excellent choice for both interior and exterior applications.

### Product Features

- ❖ Displays fast cure times with excellent adhesion characteristics to a variety of substrates / coatings.
- ❖ Patent-Pending Adjustable Cure Rate Technology™ simplifies installations in all temperatures by maintaining consistent cure times and material pot life.
- ❖ Can be spray or roll applied at temperatures ranging from -20-120°F and in high humidity.
- ❖ Will provide a glossy smooth finish when cured.
- ❖ Extended open times offer better workability while maintaining a fast cure rate.
- ❖ 100% polyurea elastomer displays excellent UV, chemical, and abrasion resistance at a wide range of temperatures.
- ❖ Can be applied indoors with minimal disturbance contributed to high VOC levels that are found in most epoxies and polyurethanes.
- ❖ Versatile topcoat for use on both horizontal and vertical applications.
- ❖ Easy to mix 1:1 ratio.

### Primary Applications

- ❖ UV-stable top coat
- ❖ Residential garage floors and basements
- ❖ Wall coatings
- ❖ Maintenance facilities
- ❖ Industrial shop floors
- ❖ Exterior patios and walkways
- ❖ Secondary containment

### Packaging

Product is sold CLEAR in 4 gallon kits (2A : 2B) and 5 gallon pails. It can be custom colored through the use of tint packs which are sold separately. Contact CFFS for available colors and mixing ratios.

### Typical Physical Properties

Tensile Strength	ASTM D412	6000
Compressive Strength (psi Mpa)	ASTM D695	9400
	*W/ Quartz	13800
	*W/ Chip	12000
Elongation	ASTM D412	100
Tear Strength (PLI)	ASTM 2240	330
Hardness, Shore D	ASTM D2240	78
Flexibility, 1/8" Mandrel	ASTM D1737	Pass
Falling Sand Abrasion Resistance	ASTM D 968	30
	<small>*Liters sand/ 1 dry mil</small>	
Tabor Abrasion mg loss	ASTM D4060	28
CS17-Wheel		1 kg per 1000 cycles
Viscosity B side 75°C		CPS 1400-1500
Viscosity A side 75°C		CPS 700-800
Gloss	ASTM D-523	90+
Radiant Flux (CRF)	ASTM E 648	1.14 W/cm <sup>2</sup>
VOC Content		< 10 g/l

### Typical Processing Properties

1:1 Ratio	Surface dry-30-120 mins.
72°F-54% Relativity Humidity	Hard dry-2-4 hours
	Mar free-4-6 hours

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

Recommended Coverage

Over Solid Color	250-350 sf/gal	@4.3 mils DFT
Over Quartz	80-120 sf/gal	@12.8 mils DFT
Over Chip	150-225 sf/gal	@8.2 mils DFT

### Adhesion Results

ASTM D-4541 Elcometer

Concrete-no primer	concrete failure	>400psi
Concrete-primer	concrete failure	>550psi
Steel - Eco-Prime	primer failure	>2000psi
Wood - no primer	wood failure/shear	>400psi

## Surface Preparation

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### **Concrete**

The concrete should be allowed to cure for a minimum of 30 days unless using a CFFS Ultra-Hydro Stop Primer™. Shot blasting to CSP 2-3 profile or diamond grinding w/30 grit or coarser is required to remove the surface laitance that appeared during the curing process. Acid etching is also a suitable preparation method. Any oils or fats must be removed prior to product application. Do not apply to wet substrates. Chloride, moisture and pH levels should be checked prior to application. The use of a CFFS primer is suggested to reduce outgassing and promote adhesion on most concrete slabs.

### **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. CFFS Eco Primer or CFFS Poly100-SC must be used as the adhesive primer prior to applying any other coatings. CFFS suggests cutting the primer with up to 15% MEK to increase bond strength on metal surfaces.

### **Wood**

Sand the 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 CFFS Fortification Formula prior to coating. Primer will be either CFFS Polyurea-350 or CFFS High Build Primer depending on the desired finish and condition of the substrate.

### **Substrate Repairs**

All spalls and cracks should be chased out and repaired to ICRI standards using CFFS Fortification Formula. Expansion joints should be honored. Horizontal saw-cut control joints can be filled with CFFS Polyflex-93 and coated over using CFFS Eco-Prime and CFFS High Build Primer.

### **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 CFFS RG-80x. Wipe surface clean with a solvent such as MEK or Acetone after a thorough vacuuming to perform a final cleaning.

## Primer Requirements

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Please consult your product supplier for job specific recommendations. In most cases the suitable primer will be CFFS Eco Prime, CFFS Poly100-SC, CFFS High Build Primer, CFFS Level-Hard, or CFFS Polyurea-350.

## Installation Recommendations

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CFFS RG-80x adheres well to several sound substrates and coatings when properly prepared including but not limited to: concrete, epoxy, urethanes, and polyureas. All surfaces 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 50°F (10°C) prior to use. Thoroughly mix both the A and B side components using separate paddle mixers and a drill for a minimum of 2 minutes to place the solids content evenly in suspension. This should be done prior to every use before combining the two components. Following the mix ratio of 1A:1B, combine the two components in a calibrated mixing container and blend together with a paddle style mixer and drill for at least 1 minute. CFFS recommends a maximum batch size of 1-2 gallons, however larger quantities can be mixed depending on the scope of the project. Never mix more material than can be placed and finished in 20-25 minutes.

### **Roller**

Use only phenolic core, solvent resistant, natural or synthetic fiber roller covers. 1/4" to 3/8" nap are acceptable, thicker nap may cause bubbling of the coating.

### **Brush**

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

### **Spray or Squeegee Application**

Contact a CFFS representative for recommendations.

### **Thinner**

CFFS RG-80x contains a solvent to ease in the application process. If necessary, you may thin RG-80x by post adding up to 20% by volume of mixed product.

### **Clean Up**

Use Acetone or Xylene before product cures.

### **Repairs and Maintenance**

Small repairs to cuts in the coating can be made with CFFS RG-80x. This material can be caulked or brushed on the surface after scuffing. Re-application of the product after 12 hours of initial application requires scuff sanding (80-120 grit) and solvent wiping to achieve optimum adhesion. Contact CFFS for site specific recommendations.

## Application Conditions

### Temperature

-20°F - 120°F (-29°C - 49°C)

CFFS Patent Pending Adjustable Cure Rate Technology™ makes it possible to apply this material and have reliable cure times at any temperature. Extreme cold ambient and substrate temperature may slow the cure time and effect spread rates, so plan accordingly. **DO NOT LET FREEZE.**

### Shelf Life and Storage

Twelve (12) months in factory delivered unopened drums and 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.

### LEED Credits

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

### Coverage Calculations

General Coating Thickness (@100% Solids)	Sq.Ft./gal
1 mils	1600
5 mils	320
10 mils	160

### 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  
Radiant Flux Tested and Certified.

### 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.

### Shipping Information

Flash Point	47°C (117°F)
Weight/Gallon:	9.0 ±1.0 lbs.
DOT HAZARD CLASS	N / A
DOT PACKAGING GROUP	II
DOT LABEL	N / A
DOT SHIPPING NAME	Paint Related Material
DOT PLACARD	N / A
UN / NA NUMBER	1263

## Chemical Resistance

Chemical (25°C)	Result
Acetic Acid 100%	C
Acetone	C
Ammonium Hydroxide 50%	RC
Benzene	C
Brine saturated H2O	R
Chlorinated H2O	R
Clorox(10%) H2O	R
Diesel fuel	RC
Gasoline	RC
Gasoline/5% MTBE	RC
Gasoline/5% Methanol	RC
Hydrochloric Acid 20%	R
Hydrofluoric Acid 10%	NR
Hydraulic fluid (oil)	RC
Isopropyl Alcohol	R
Lactic Acid	RC
MEK	RC
Methanol	R
Methylene Chloride	C
Mineral Spirits	RC
Motor Oil	R
MTBE	C
Muriatic Acid 10%	R
NaCl/H2O 10%	R
Nitric Acid 20%	NR
Phosphoric Acid 10%	R
Phosphoric Acid 50%	NR
Potassium Hydroxide 10%	R
Potassium Hydroxide 20%	R, Dis
Propylene Carbonate	RC
Skydral	C
Sodium Hydroxide 25%	R
Sodium Hydroxide 50%	R, Dis
Sodium Hypochlorite 10%	R
Sodium Bicarbonate	R
Stearic Acid	R
Sugar/H2O	R
Sulfuric Acid 10%	R
Sulfuric Acid >50%	RC
Toluene	R
1,1,1-Trichlorethane	C
Trisodium Phosphate	R
Vinegar/H2O 5%	R
Xylene	RC

### Chemical Resistance: Chart 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

### Warranty

The technical data and any other printed information furnished by CFFS are true and accurate to the best of our knowledge. CFFS RG-80x™ 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 accordance with the provided posted directions or not. CFFS makes no warranty, expressed or implied, of its products and shall not be liable for indirect or consequential damage in any event.