CITADEL®
FLOOR FINISHING SYSTEMS

CFFS ECO-PRIME™

Product Description

CFFS Eco-Prime is a single component, 100% solids, aromatic Polyurea that has exceptional adhesion properties to concrete and metal. Due to its unique single component chemistry, this coating exhibits great wetting properties while offering a virtually unlimited pot-life. 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
- Unlimited pot life increases the workability of the coating.
- Displays exceptional adhesion properties to prepared concrete and metal surfaces.
- Single component means no possible mixing errors, thus eliminating the human error factor.
- 100% solids formulation.
- Exhibits rapid cure times to expedite installation processes.

Primary Applications

- Primer under Medici Polyurea Colour Coating System
- Primer under High Build Primer
- Aircraft hangar floors
- Stand-alone sealer for indoor low-traffic areas
- Industrial shop floors
- Bathrooms and Lavatories
- Chemical manufacturing plants
- Residential garages and basements

Packaging

Product is sold CLEAR in 2 gallon pails. Contact CFFS for available colors and mixing ratios.

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	5,200
Compressive Strength (psi Mpa)	ASTM D695	11,500
Elongation	ASTM D412	75
Tear Strength (PLI)	ASTM 2240	740
Hardness, Shore D	ASTM D2240	78
Flexibility, 1/8" Mandrel	ASTM D1737	Pass
Falling Sand Abrasion Resistance *Liters sand/ 1 dry mil	ASTM D968	30
Abrasion Resistance CS17-Wheel (1,000 gm Load)	ASTM D4060	20 mg Loss / 1000 cycles
Viscosity at 77°F (cps)		425

Typical Processing Properties

Single Component	Tack Free - 1-2 hours
72°F - 54% Relativity Humidity	Hard dry - 3-6 hours
	Recoat Maximum – 12 hours

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

Primer (Ground Concrete)	**500-650 sf/gal**	**@2.8 mils DFT**
Primer (Acid Wash Concrete)	**500-700 sf/gal**	**@3.0 mils DFT**
Primer (Metal)	**500-650 sf/gal**	**@2.8 mils DFT**

Adhesion Results

ASTM D-4541 Elcometer

Concrete	concrete failure	>500psi
Steel	shear failure	>2000psi

VOC compliant in all 50 states and Canada

Surface Preparation

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. CFFS Eco Primer should be used 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

CFFS Eco-Prime is **NOT** to be installed over wood

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 Eco-Prime. Wipe surface clean with a tack rag after a thorough vacuuming to perform a final cleaning.

Primer Requirements

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

Installation Recommendations

CFFS Eco-Prime adheres well to several sound substrates and coatings when properly prepared including but not limited to; concrete, steel, 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

Mixing

Material should be pre-conditioned to a minimum of 60°F (16°C) prior to use. The material temperature must be brought to 5ºF above the dew point temperature before opening and agitating the material to prevent condensation from entering the coating. Thoroughly mix the single component material using a paddle mixer and a drill for a minimum of 2 minutes to place the solids content evenly in suspension. Add the **ENTIRE CONTENTS OF THE ECO-PRIME STABILIZER SHOT** to the bucket and mix for an additional minute. Pour into a roller pan and apply to floor. Optional application method is to pour ribbons and spread with a roller to expedite the installation. Seal the container immediately after pouring out desired quantities. It is important to limit the time the container is open. Mix and pour out only what is needed. If material remains in the bucket upon completion, apply a "solvent float" of approximately 5 ounces of MEK over the surface of the coating before resealing the container.

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.

Thinner

CFFS Eco-Prime can be thinned with up to 10% MEK by volume if a thinner coating is required. **DO NOT USE ACETONE.**

Clean Up

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

Limitations

CFFS Eco-Prime is **NOT** to be used for decorative aggregate broadcasts or as a final wear coat for vehicle traffic. Its intended use is as an adhesion promoting, penetrating primer that will seal the floor prior to the application of decorative coatings. The product must be installed at the specified spread rates to perform as described. **DO NOT APPLY IN DIRECT SUNLIGHT OR WHEN TEMPERATURES ARE STEADILY RISING. THIS PRODUCT IS NOT UV-STABLE AND MUST BE COATED OVER WITH UV-STABLE PRODUCTS.**

Repairs and Maintenance

Small repairs to cuts in the coating can be made with CFFS Eco-Prime. 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.

LEED Credits

Most CFFS 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:	110°C (230°F)
Weight/Gallon:	9.9 ±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

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 CFFS are true and accurate to the best of our knowledge. CFFS ECO-PRIME™ 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. CFFS makes no warranty; expressed or implied, of its products and shall not be liable for indirect or consequential damage in any event.

Chemical Resistance

Acetic Acid 100%	RC	Methanol	R	Sugar/H20	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 H20	R	Muriatic Acid 10%	R	Trisodium Phosphate	R
Chlorinated H20	R	NaCl/H20 10%	R	Vinegar/H20 5%	R
Clorox(10%) H20	R	Nitric Acid 20%	RC	H20 14 days at 82° C	R
Diesel fuel	RC	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	RC		
Hydrofluoric Acid 10%	RC	Skydrol	RC		
Hydraulic fluid (oil)	RC	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	RC	Stearic Acid	R		

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