



ENGINEERED POLYMER
SYSTEMS, LLC

Brute-Top Urethane Concrete Lock Coat (UCLC)

Brute-Top UCLC is a lock coat for saturated broadcast that has been applied to a urethane concrete base. The UCLC is an industrial flooring system developed for areas that have exposure to higher temperatures, thermal shock and impact. The UCLC formulation should be applied with a flat squeegee and then back rolled to level.

The UCLC when applied over a saturation broadcast will leave a non-skid that is dependent on the size of the particles that were broadcast onto the basecoat. The temperature limitation of the floor will be based on the basecoat that was installed. The UCLC will have the higher temperature resistance and then the UCF will be slightly lower. If the Brute-Chem Epoxy Novolac Flexible High Temperature (ENFHT) is being used to seal the broadcast refer to that technical bulletin.

The Brute-Top UCLC was formulated to provide

- Comparable thermal resistance as the basecoat it is applied.
- Smooth or rough non-skid finish.
- Rapid cure with excellent chemical resistance.
- Use of color pack to pigment system (beige, grey, red)

The Brute-Top UCLC will yellow from UV exposure as will the Brute-Chem ENFHT topcoat. The UCLC is typically installed from 14 to 20 mils and will handle temperatures

consistent with the temperature ratings for the basecoat it is applied.

TYPICAL PROPERTIES

Components	UC Polyol	UC Isocyanate
Viscosity (70°F)	50-100 cps	60-90 cps
Flash Point	<290F(143C)	397F (203C)
Weight per gallon	8.1 lb/gal	10.2 lb/gal
VOC mixed	<0.4 lb/gal (47.6 g/l)	

Mixed Components

	50°F	70°F	90°F
Working time (min)	16-18	10-12	8-10
Drying time (hours)			
Set to touch	8-10	5-6	3-4
Floor installation temperature limits	10F to 90F (-12C to 32C)(minimum to max)		
	Consult Engineered Polymer Systems for other temperatures.		

Typical Physical Properties UCLC

Abrasion Resistance ASTM D4060 = 10 mgs (CS17 wheels 1000 gram weight,1000 cycles)
Water absorption ASTM C-413 <0.1 %
Flammability ASTM D-635 –self extinguishing
Adhesion to concrete >400 psi

PACKAGING

Brute-Top UCLC is supplied in kit form. The polyol is available in one gallon cans and five gallon pails. ALWAYS PREMIX THE 5 GALLON PAILS PRIOR TO POURING OFF MATERIAL. The isocyanate is available in one gallon cans, 5 gallon pails and 55 gallon drums.

The mix ratio is one gallon (3.8 L) of polyol to one gallon (3.8 L) of isocyanate to one half pint (0.24 L) of colorant and one 14 pound (6.4 KG) bag of blended aggregate.

ESTIMATING MATERIALS

Brute-Top UCLC is applied with a flat squeegee and back-rolled immediately. The yield per unit will depend on the application

thickness. When applied at 14 mils the typical yield will be 280 SF (26.7 SM) per mix.

APPLICATION INSTRUCTIONS

Surface Preparation – Material is applied over saturation broadcast. The broadcast should be swept clean and should be dry.

Mixing – The materials are packaged either in drum kits, bulk 5 gallon kits or prepackaged units. Contact Engineered Polymer Systems for detailed instructions on how to pour off drums. The prepackaged units should be mixed as follows:

- Open the 5 gallon pail can marked Brute-Top UC Polyol and after premixing the polyol pour off one gallon of polyol. Open the UC Isocyanate and pour off one gallon. Open the can of UC colorant and pour off one-half pint. Have everything ready to go for installation and mixing as the working time is short.
- Pour the one gallon of UC Polyol into an empty, clean 5 gallon pail and then add the one gallon UC Isocyanate and half pint UC Colorant to the pail. Mix for a minimum of one minute with a jiffy type mixer then immediately add the UCLC aggregate and mix for a minimum of two minutes with the jiffy type mixer ensuring that the aggregate is completely wet out. Immediately transport the material to the installation site and follow instructions for placement of material.
- Temperature affects the pot life and working time of the materials. The higher the temperature the shorter the working time. Do not mix more materials than can be installed with-in the pot life period.

Placement of Materials

- Immediately pour the material out onto the floor and level with a flat squeegee. Then immediately back roll with a chemical resistant roller cover – do not roll into partially cured material as this will change the color.
- It is best to pour the freshly mixed material into a wet edge when installing.

This will help minimize any changes in level or appearance from color variations.

Clean-up

Any mixing and application equipment should be cleaned up immediately upon completion of the job. Typically xylene is used to clean all the equipment.

Disposal

All materials should be disposed of in accordance with all Federal, State or Local regulations. Consult with EPA for regulations in your area.

STORAGE / SHELF LIFE

All materials should be stored in original – unopened containers in an enclosed building out of direct sunlight. Ideally the materials should be between 60 – 80°F for 24 hours prior to installation. Installation of materials at temperatures outside of this range may make them difficult to install. The shelf life in unopened containers is a minimum of one year and typically much longer. Consult Engineered Polymer Systems if you have any concern about materials.

SAFETY

CAUTION – READ MATERIAL SAFETY DATA SHEETS BEFORE USING ALL PRODUCTS.

Follow recommendations for ventilation. Avoid contact with eyes or skin. Contact with skin requires washing with soap and water, eye contact requires immediately flushing / consult physician. If clothes become contaminated remove and wash prior to wearing.

These materials are for industrial use only.

WARRANTY / DISCLAIMER

All statements and recommendations are based on experience we believe to be reliable.

The use or application of these products is beyond the control of Engineered Polymer Systems and therefore Engineered Polymer Systems does not make any warranty expressed or implied, as to results or hazards from its use. The suitability, risk and liability whatsoever of this product for any intended use shall be solely up to the user.

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