Commercial Performance Coatings

CPCPB441

Epoxy Primer

ULE-083 0.8 VOC Gray Primer

ULE-083 is a medium build gray epoxy primer designed for outstanding performance on multiple substrates. This primer will exceed the most stringent VOC requirements in the United States and Canada today and is geared for compliance with future regulations in mind.

It can be used to fill minimal sanding or sandblast profile (2 mils or less) and will provide excellent corrosion resistance when applied over properly prepared steel, galvanized steel and aluminum. ULE-083 is heavy metal and HAP free.

Features and Benefits:

- Excellent filling properties for blasted substrates
- Excellent corrosion and chemical resistance
- Excellent adhesion
- Easy to mix and spray

Associated Products:

- ULE-083 Medium Build Epoxy Primer - Gray
- ULE-080H Medium Build Epoxy Hardener
- **Exempt Solvents:**
  Q30 Acetone
  TFS321-50 Exempt Blend
  OXSOL®

Physical Constants:

All values are theoretical, depend on color and are Ready-to-Spray. Actual values could vary slightly due to manufacturing variability.

	ULE-083/080H (3:1)	ULE-083/080H/Q30 (3:1:1/2)	ULE-083/080H/Q30 (3:1:1)
Percent solids (by weight)	69.7	65.6	61.9
Percent solids (by volume)	60.5	53.8	48.4
Volume Ratio:	3 : 1	3:1:1/2	3:1:1
Applicable Use Category	Primer	Primer	Primer
VOC Actual (g/L)	60	53	48
VOC Actual (lbs/gal)	0.50	0.44	0.40
VOC Regulatory (less water less exempt) (g/L)	89	89	89
VOC Regulatory (less water less exempt) (lbs/gal)	0.74	0.74	0.74
Density (g/L)	1581	1492	1423
Density (lbs/gal)	13.19	12.45	11.87
Volatiles wt. %	30.3	34.4	38.1
Water wt. %	0.0	0.0	0.1
Exempt wt. %	26.5	30.8	34.7
Water vol. %	0.0	0.0	0.1
Exempt vol. %	32.4	39.7	45.6
Photo-chemically reactive	No	No	No
HAPS	0.0	0.0	0.0

Flashpoint: ULE-083 - 25°F (3.9°C), Q30 - 4°F (15.5°C), Oxsol - 109°F (42.8°C), TFS321-50 - 4°F (15.5°C)

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Directions for Use

Substrate Preparation:

The surface to be coated must be abraded or sandblasted and free of all contamination (including dust, dirt, oil, grease, and oxidation). A chemical treatment (or conversion coating) on non-sandblasted substrates will improve adhesion and performance properties of the finished coat. Variability can occur with substrates, preparation, application method or environment. We recommend that adhesion and system compatibility be checked prior to full application.

Metal	Direct to Substrate
Cold Rolled Steel	Excellent
Hot Rolled Steel	Excellent
Galvaneal	Excellent
Galvanized	Excellent
Aluminum	Excellent
Plastic / Fiberglass	The surface should be free of all contamination. Because of the variability of plastic/fiberglass, coating performance should be confirmed on the actual plastic/fiberglass substrate being used.

** It is recommended that the substrate be cleaned with SSPC-SPC2 Hand Tool or SSPC-SPC3 Power Tool clean minimum. For best performance, a minimum blast of SSPC-SP6 (NACE#3), Commercial Blast Cleaning is recommended.*

Note: *For compatibility between this primer and CPC topcoats please see the CPC Primer/Topcoat compatibility chart (CPCTB01).*

Mix Directions:

Mix Directions:	Mix 3 parts component A (ULE-083) to 1 part component B (ULE-080H) to ½ - 1 part component C (Exempt Solvent)
Thinning:	Up to 1 part with Solvent. Using non-exempt solvent will result in VOC greater than 0.8 lbs/gal.

Blend Ratio:	Primer ULE-083	Catalyst ULE-080H	Solvent Q30/*Oxsol*
	3	1	½ - 1

Pot Life @ 77°F (25°C):	6 hours after mixing

Spray Viscosity Range: @ 77°F (25°C):	#2 EZ Zahn 25 – 28 seconds	#3 EZ Zahn 12 – 15 seconds
Shelf Life: (each component)	ULE-083 Gallons – 4 years unopened ULE-080H Quarts – 2 years unopened	

Application Equipment:

Conventional/Compliant (with or without Pressure Pot):	1.4 – 1.8mm needle/nozzle with 45 – 60 psi at the gun 1.0 – 1.4mm needle/nozzle on pressure pot
HVLP (with or without Pressure Pot):	1.3 – 1.6mm needle/nozzle with 10 psi at the cap or per manufacturer 1.0 – 1.4mm needle/nozzle on pressure pot
Airless:	1400 – 2000 psi fluid pressure with a .013" - .017" tip
Air-Assisted Airless:	850 psi fluid pressure with a .011" - .015" tip
Brush:	Not recommended
Roll:	Not recommended

Application:

Apply:	1 – 2 medium coats with a 10 – 15 minute flash between coats. Apply only when air, product and surface temperature is above 50°F (10°C) and the surface temperature is at least 5°F (3°C) above the dew point.
Recommended Wet Film Build:	3.0 – 5.0 mils (3 : 1 : 1)
Recommended Dry Film Build:	1.5 – 3.0 mils
Coverage:	777 sq. ft. @ 1 mil, no loss per U.S. gallon (3 : 1 : 1)

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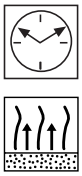
Directions for Use (continued)

Dry Times:



Air Dry @ 77°F 50% RH*:

To Touch:	45 minutes
To Handle:	3 hours
To Sand:	16 hours
Dry to Topcoat:	After 1 hour and up to 7 days, air dry or force dry
To Topcoat:	After 1 hour and up to 7 days, air dry or force dry
Force Dry @ 140°F (60°C):	Allow 10 minutes flash then 30 minutes @ 160°F (71°C)

** Paint film is not fully cured for 7 days. Drying time listed may vary, depending upon film build, color selection, temperature, humidity and degree of air movement.*

Technical Data*

Performance Properties:

System:
BONDERITE® *1000*
ULE-83 / ULE-080H

Test	ASTM Method	Result ULE-083/080H
Gloss @ 60º Angle	D523	85 - 90
Conical Mandrel	D522	Pass
Adhesion	D3359	5B
Gravelometer	D3170	7
In Service Temperature Limit*		300°F (148°C)

*As you approach 300ºF (148°C) depending on the pigmentation, the color may change, but the film's integrity will be maintained up to 300ºF (148°C).

Chemical Resistance:

System:
ULE-083 / ULE-080H

Chemical ASTM D1308	ULE-083/080H
Toluene	Slight ring
10% NaOH	Pass
10% HCl	Medium ring
10% H2SO4	Mild blisters
Gasoline	Medium ring
Isopropanol	Slight ring
Water**	Pass

** Although resistant to intermittent exposure, not recommended for immersion.

Weather Resistance:

Salt Spray and Humidity System:
Blasted HRS
ULE-083 / ULE-080H

	ASTM Method	ULE-083/080H
Salt Spray – 3500 hours with Select Topcoats	B117	
Corrosion Creep	D1654	6A – 8A
Scribe Blisters	D714	4 – 6F
Face Blisters	D714	None
Humidity – 96 hours	D2247	
5 Minute Recovery Adhesion	D3359	5B
1 Hour Recovery Adhesion	D3359	5B
24 Hour Recovery Adhesion	D3359	5B

All tests results assume proper cure and preparation of test substrates. Unless otherwise stated, all results were obtained spraying product direct to metal on *Bonderite* 1000.

* The application and performance property data above are believed to be reliable based on laboratory findings. It is for the buyer to satisfy itself on the suitability of the product for its particular use. Variation in environment, procedures of use, or extrapolation of data may cause unsatisfactory results.

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Safety:

These materials are designed for application only by professional, trained personnel, using proper equipment under controlled conditions and are not intended for sale to the general public. Safe application of paints and coatings requires knowledge of equipment, materials and individual training. Directions and precautionary information on both equipment and products should be carefully read and strictly observed for personal safety and property protection. Consideration must be given to eliminate conditions, which may generate hazardous atmospheres during spray application or subject operators or bystanders to injury or illness. Special precautions must be taken when utilizing spray equipment, particularly airless equipment. High-pressure injection of coatings into the skin by airless equipment may cause serious injury requiring immediate medical attention at a hospital. Treatment advice may also be obtained from Poison Centers. Air quality should be maintained with adequate ventilation; applicators can achieve additional protection by wearing respirators and other protective garments such as gloves and overalls. In all cases, wear protective eye equipment. During the application of all coatings materials, all flames, welding and smoking must be prohibited. Explosion proof equipment must be used when coating these materials in confined areas.

PRECAUTIONARY INFORMATION

Before using the products listed herein, carefully read each product label and follow directions for its use. Please read and observe all warnings and precautionary information on all product labels. Prevent all contact with skin and eyes and breathing of vapors and spray mist. Repeated inhalation of high vapor concentrations may cause a series of progressive effects including irritation of the respiratory system, permanent brain and nervous system damage and possible unconsciousness and death in poorly ventilated areas. Eye watering, headaches, nausea, dizziness and loss of coordination are indications that solvent levels are too high. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

KEEP OUT OF THE REACH OF CHILDREN

MEDICAL RESPONSE

Emergency Medical or Spill Control Information (412) 434-4515; IN CANADA (514) 645-1320 AND IN MEXICO 01-800-00-21-400. Have label information available.

Safety Data Sheets (SDS) for the PPG products mentioned in this publication are available through www.ppgcommercialcoatings.com (Safety, SDS Search) or your PPG Distributor.

For additional information regarding this product, see the SDS and label information.

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