



MBE 2.1 VOC Epoxy Primer

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MBE epoxy primer is a heavy metals free primer designed where medium film build requirements are needed. It can be used to fill minimal sanding or sand-blast profile (2 mils or less) and will provide corrosion resistance when applied over properly prepared steel, galvanized steel and aluminum.

Features and benefits:

- Excellent filling properties for blast substrate
- Excellent corrosion and chemical resistance
- Excellent adhesion
- Easy to mix and spray

Associated Products:

- MBE-200 High Build Epoxy Primer – Dark Gray
- MBE-221 High Build Epoxy Catalyst – White

Exempt Solvents

- Q30 Acetone
- TFS321-50 Exempt Blend
- OXSOL® Solvent

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

	MBE-200/221 (3:1)	MBE-200/221 /Q30 (3:1:1/2)	MBE-200/221 /TFS321-50 (3:1:1/2)	MBE-200/221 /OXSOL (3:1:1/2)
Percent solids (by weight)	67.3	62.8	61.7	60
Percent solids (by volume)	54.5	48.4	48.4	48.4
Volume Ratio:	3 : 1	3 : 1 : 1/2	3 : 1 : 1/2	3 : 1 : 1/2
Applicable Use Category	Primer	Primer	Primer	Primer
VOC Actual (g/L)	192.9	171.4	171.4	171.4
VOC Actual (lbs/gal)	1.61	1.43	1.43	1.43
VOC Regulatory (less water less exempt) (g/L)	250.4	250.4	250.4	250.4
VOC Regulatory (less water less exempt) (lbs/gal)	2.09	2.09	2.09	2.09
Density (g/L)	1379	1313	1338	1375
Density (lbs/gal)	11.51	10.96	11.17	11.48
Volatiles wt. %	32.7	37.2	38.3	40
Water wt. %	0.04	0.1	0.1	0.04
Exempt wt. %	18.6	24.1	25.5	27.5
Water vol. %	0.1	0.1	0.1	0.05
Exempt vol. %	23.1	31.6	31.6	31.6
Photo-chemically reactive	Yes	Yes	Yes	Yes
HAPS	< 1.2 lbs/gal	< 1.0 lbs/gal	0.96	0.96

Flashpoint


MBE-200 = 25°F Q30 = 4°F MBE-221 = 90°F Oxsol = 109°F TFS321-50 = 4°F

2.1 VOC Primer

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 (MBE-200) to 1 part component B (MBE-221); Apply material in one wet coat overlapping each pass 50%.	
	Thinning:	Up to 25% (1/2 part) with Solvent. Using non-exempt solvent will result in VOC greater than 2.1 lbs/gal.	
	Blend Ratio:	<u>Primer</u> MBE-200 3	<u>Catalyst</u> MBE-221 1
	Pot Life @ 77°F (25°C):	4 hours, after mixing	
	Spray Viscosity Range:	25-28 seconds #2 Zahn, 12-15 seconds, #3 Zahn Cup @ 77°F (25°C)	
	Shelf Life: (each component)	MBE-200 Gallons - 4 years unopened MBE-221 Quarts - 2 years unopened	

Application Equipment:

	Conventional (with or without pressure pot):	1.4 – 1.8 needle/nozzle, 45 – 60 psi at the gun 1.0 – 1.4 needle/nozzle on pressure pot
	HVLP (with or without pressure pot):	1.3 – 1.6 needle/nozzle, 10 psi at the cap or per manufacturer 1.0 – 1.4 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 temperatures are above 50°F (10°C) and when surface temperature is at least 5°F (3°C) above the dew point.
	Recommended Wet Film Build:	3.0 – 6.0 mils (3 : 1 : ½)
	Recommended Dry Film Build:	1.5 – 3.0 mils
	Square Foot Coverage @ 1mil no loss:	777 ft ² per gallon (3 : 1 : ½)

2.1 VOC Primer

Directions for Use (continued)

Dry Times:



Air Dry @ 77°F (25°C) 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: 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
MBE-200/MBE-221

Test	ASTM Method	Results MBE-200/221
Gloss @ 60° Angle	D523	30 - 40
Conical Mandrel	D522	Pass
Adhesion	D3359	5B
Gravelometer	D3170	7
In Service Temperature Limit		300°F (148°C)

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

Chemical Resistance:

System:
Bonderite 1000
MBE-200/MBE-221

Chemical ASTM D1308	MBE-200/221
Toluene	Slight ring
10% NaOH	Pass
10% HCl	Medium ring
10% H ₂ SO ₄	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
MBE-200/MBE-221
AUE-370

	ASTM Method	MBE-200/221
Salt Spray – 1000 hours	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.

2.1 VOC Primer

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; 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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