

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 sandblast 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 Hardener

Exempt Solvents

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

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

	<u>MBE-200/221</u> <u>(3:1)</u>	<u>MBE-200/221</u> <u>/Q30 (3:1:1/2)</u>	<u>MBE-200/221</u> <u>/TFS321-50 (3:1:1/2)</u>	<u>MBE-200/221</u> <u>/OXSOL (3:1:1/2)</u>
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^o F Q30 = 4^oF MBE-221 = 90^o F Oxsol = 109^o F TFS321-50 = 4^oF

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Surface 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 Ratios:

Primer	Catalyst
MBE-200	MBE-221
3	1



Pot Life @ 77°F (25°C):

4 hours, after mixing

Spray Viscosity Range:

25-28 Sec #2 Zahn, 12-15 seconds, #3 Zahn Cup @ 77° (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

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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 @ 1 mil no loss: 777 ft² per gallon (3 : 1 : ½)

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 Recoat: 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*

BONDERITE®1000
MBE-200/MBE-221

Test	ASTM Method	Result
		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:

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.*

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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 Minutes		
Recovery Adhesion	D3359	5B
1 Hour		
Recovery Adhesion	D3359	5B
24 Hours		
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.

Health and 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 Have label information available.

Material Safety Data Sheets for the PPG products mentioned in this publication are available through your PPG Distributor.



For Additional information regarding this product, see the MSDS AND LABEL information.



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