



Protective & Marine Coatings
PRODUCT DATA SHEET



MACROPOXY® 400
EPOXY ZINC PHOSPHATE

Revised: March 10, 2020

PRODUCT DESCRIPTION

MACROPOXY 400 is a multi-functional epoxy zinc phosphate coating for the protection of carbon steel.

INTENDED USES

- Suitable for the protection of structural steel in a wide range of environments including marine, heavy industrial, and C1 to C5 as defined in ISO12944
- Primer for structural steel on blast cleaned steel for internal and external environments
- May be used as a high build intermediate coat as well as the final coat where a low sheen industrial and functional finish is required

PRODUCT DATA

Finish: Flat
Colors: Light Gray, Dark Gray, Black, Red Oxide, and White
Volume Solids: 70% ± 3%, mixed
VOC (EPA Method 24): <340 g/L; 2.8 lb/gal, mixed
Mix Ratio: 7:1 by volume

Typical Thickness:

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	5.0 (125)	12.0 (300)
Dry mils (microns)	3.5 (88)	8.4 (210)
~Coverage sq ft/gal (m ² /L)	133 (3.3)	320 (7.9)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1122 (27.5)	

NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Shelf Life: 24 months, unopened
Store indoors at 40°F (4.5°C) to 100°F (38°C).

Flash Point: Part A: 75°F (24°C)
Part B: 78°F (26°C)

Reducer / Clean Up: Xylene

Weight: 13.1 ± 0.2 lb/gal ; 1.57 Kg/L, mixed

Average Drying Times:

	20°F (-7°C)	50°F (10°C)	77°F (25°C)	100°F (38°C)
Touch:	3 hours	1.5 hours	1 hour	45 minutes
Handle:	30 hours	15 hours	7 hours	4 hours
Recoat:				
minimum:	8 hours	5 hours	3.5 hours	2 hours
maximum:			7 days	
Sweat-in-time:	none required			
Pot Life:	not recommended* 2.5 hours 1.5 hours 1 hour			

*It is recommended that the product is kept above 50°F (10°C) for application and mixing.

Pot life is dependent upon temperature and mass.

If maximum recoat time is exceeded, abrade surface before recoating.

Drying time is temperature, humidity, and film thickness dependent.

SURFACE PREPARATION

Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, dirt, loose rust, and other foreign material to ensure adequate adhesion.

Minimum recommended surface preparation:

Iron & Steel: Atmospheric: SSPC-SP6/NACE 3, 2-3 mil (50-75 micron) profile

Stainless & Galvanized Steel: Atmospheric: SSPC-SP16, 1 mil (25 micron) profile



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APPLICATION	APPLICATION CONDITIONS
<p>Airless Spray Pressure.....2200 psi minimum (151 bar) Tip013" (0.33 mm) Reduction.....As needed, up to 5% by volume</p> <p>Conventional Spray Atomization Pressure.....40 psi (2.7 bar) Fluid Pressure.....5 psi (0.3 bar) Reduction.....As needed, up to 5% by volume</p> <p>Brush* Brush.....Natural Bristle Reduction.....As needed, up to 5% by volume Note: Required film thickness may not be achieved in one coat</p> <p>Roller* Cover3/8" woven with solvent resistant core Reduction.....As needed, up to 5% by volume</p> <p><i>*Application of more than one coat may be necessary to give equivalent dry film thickness to a single spray applied coat.</i></p> <p>If specific application equipment is not listed above, equivalent equipment may be substituted.</p>	<p>Temperature: Air & Surface: 20°F (-7°C) minimum, 120°F (49°C) maximum Material: 50°F (10°C) minimum, 95°F (35°C) maximum At least 5°F (2.8°C) above dew point</p> <p>Relative humidity: 90% maximum</p>
APPROVALS	
<ul style="list-style-type: none"> • BS476 Part 7 - Surface Spread of Flame • BS6853 Appendix D - Smoke Emissions - For details of substrate/scheme, consult Sherwin Williams. 	
ADDITIONAL NOTES	
<p>Do not tint.</p> <p>Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.</p> <p>Do not mix previously catalyzed material with new.</p>	
RECOMMENDED SYSTEMS	
Dry Film Thickness / ct.	Mils (Microns)
Steel, Zinc Phosphate/Urethane Topcoat, Atmospheric	
1 Ct. Macropoxy 400	3.0 (75)
1-2 Cts. Acrolon 7300	2.0-4.0 (50-100)
Steel, Zinc Phosphate/Polysiloxane Topcoat, Atmospheric	
1 Ct. Macropoxy 400	3.0 (75)
1 Ct. Sher-Loxane 800	4.0-6.0 (100-150)
Steel, Zinc Phosphate/Epoxy/Epoxy Topcoat, Atmospheric	
1 Ct. Macropoxy 400	3.0 (75)
1 Ct. Macropoxy 646	5.0-10.0 (125-250)
1 Ct. Macropoxy 646	5.0-10.0 (125-250)
Steel, Zinc Phosphate/Epoxy/Urethane Topcoat, Atmospheric	
1 Ct. Macropoxy 400	3.0 (75)
1 Ct. Macropoxy 646	5.0-10.0 (125-250)
1 Ct. Acrolon 7300	2.0-4.0 (50-100)
Steel, Zinc Phosphate/Epoxy/Urethane Topcoat, Atmospheric	
1 Ct. Macropoxy 400	3.0 (75)
1 Ct. Macropoxy 267	4.0-6.0 (100-150)
1 Ct. Acrolon 7300	2.0-4.0 (50-100)
Steel, Zinc Phosphate/Epoxy/Polysiloxane Topcoat, Atmospheric	
1 Ct. Macropoxy 400	3.0 (75)
1 Ct. Macropoxy 646	5.0-10.0 (125-250)
1-2 Cts. Sher-Loxane 800	4.0-6.0 (100-150)
<p>The systems listed above are representative of the product's use, other systems may be appropriate.</p>	
WARRANTY	
<p>The Sherwin-Williams Company warrants our products to be free of manufacturing defects in accord with applicable Sherwin-Williams quality control procedures. Liability for products proven defective, if any, is limited to replacement of the defective product or the refund of the purchase price paid for the defective product as determined by Sherwin-Williams. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY SHERWIN-WILLIAMS, EXPRESSED OR IMPLIED, STATUTORY, BY OPERATION OF LAW OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.</p>	
HEALTH AND SAFETY	
<p>Refer to the SDS sheet before use. Published technical data and instructions are subject to change without notice. Contact your Sherwin-Williams representative for additional technical data and instructions.</p>	
DISCLAIMER	
<p>The information and recommendations set forth in this Product Data Sheet are based upon tests conducted by or on behalf of The Sherwin-Williams Company. Such information and recommendations set forth herein are subject to change and pertain to the product offered at the time of publication. Consult your Sherwin-Williams representative to obtain the most recent Product Data Sheet.</p>	