



**Protective
&
Marine
Coatings**



POLYSILOXANE XLE-80 EPOXY SILOXANE

**PART A
PART B**

**B80-800
B80V800**

**SERIES
HARDENER**

Revised 12/09

PRODUCT INFORMATION

4.70

PRODUCT DESCRIPTION

Polysiloxane XLE-80 is a high performance, two-component, high solids epoxy siloxane that combines the properties of both a high performance epoxy and a polyurethane in one coat. Plus, it is free from isocyanates.

- Replaces a two coat epoxy/polyurethane system
- High-gloss, self-priming coating
- High solids, low VOC
- Long term color and gloss performance
- Corrosion and chemical resistant
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish: Gloss
Color: Wide range of colors available
Volume Solids: 80% ± 2%, mixed
Weight Solids: 86% ± 2%, mixed
VOC (EPA Method 24): <240 g/L; 2.0 lb/gal, mixed
Mix Ratio: 4:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	4.0 100	9.0 225
Dry mils (microns)	3.0 75	7.0 175
~Coverage sq ft/gal (m²/L)	180 4.4	420 10.3
Theoretical coverage sq ft/gal (m²/L) @ 1 mil / 25 microns dft	1288 31.3	

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

Drying Schedule @ 5.0 mils wet (125 microns):

	40°F/4.5°C	50°F/10°C	77°F/25°C 50% RH	100°F/38°C
To touch:	5 hours	2 hours	1 hour	20 minutes
To handle:	20 hours	16 hours	4 hours	2 hours
To recoat:				
minimum:	20 hours	16 hours	4 hours	2 hours
maximum:	14 days	14 days	14 days	7 days
To cure:	10 days	7 days	7 days	7 days

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

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

Pot Life: 4 hours @ 77°F (25°C)

Note: Pot life will be shorter with higher temperatures and larger volumes of material.

Sweat-in-Time: None required @ 77°F (25°C)

Shelf Life: 24 months, Part A (Extra White & Ultradeep) unopened
Factory Blended Colors, 12 Months
Store Tinted Colors, 1 month
12 months, Part B unopened
Store indoors at 40°F (4.5°C) to 100°F (38°C)

Flash Point: 130°F (54°C), PMCC, mixed

Reduction: Not recommended

Clean Up: Xylene, R2K4 or MEK R6K10

RECOMMENDED USES

For use on prepared steel surfaces in industrial environments, including:

- Structural steel
- Tank exteriors
- Piping
- Industrial power plants
- Transportation
- Marine
- Conforms to AWWA D102-03 OCS #5
- Can be applied directly over inorganic zincs.

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP6/NACE 3

System Tested*:

2 cts. Polysiloxane XLE-80 @ 3.0-7.0 mils (75-175 microns) dft/ct

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060, CS17 wheel, 1000 cycles, 1 kg load	80 mg loss
Adhesion	ASTM D4541; ASTM D3359	1018 psi (ASTM D4541); 5A (ASTM D3359)
Corrosion Weathering	ASTM D5894, 10 cycles, 3360 hours	Rating 10 per ASTM D714 for Blistering; Rating 10 per ASTM D610 for Rusting
Dry Heat Resistance	ASTM D2485	250°F (121°C)
Flexibility	ASTM D522, 180° bend, 1/2" mandrel	Passes
Pencil Hardness	ASTM D3363	3H



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RECOMMENDED SYSTEMS

	Dry Film Thickness / ct.	
	Mils	(Microns)
Steel:		
1-2 cts.* Polysiloxane XLE-80	3.0-7.0	(75-175)
Steel:		
1 ct. Zinc Clad II Plus**	2.0-4.0	(50-100)
1-2 cts. Polysiloxane XLE-80	3.0-7.0	(75-175)
*One coat acceptable in "light" industrial environments	5.0-7.0	(125-175)
**Other acceptable primers:		
Corothane I GalvaPac Zinc Primer		
Macropoxy 646		
Recoatable Epoxy Primer		
Zinc Clad Primers		
Dura-Plate 235		
Galvanized:		
1 ct. Macropoxy 646	5.0-7.0	(125-175)
1-2 cts. Polysiloxane XLE-80	3.0-7.0	(75-175)
Aluminum:		
1 ct. Macropoxy 646	5.0-7.0	(125-175)
1-2 cts. Polysiloxane XLE-80	3.0-7.0	(75-175)
Masonry:		
1 ct. Kem Cati-Coat	10.0-20.0	(250-500)
1-2 cts. Polysiloxane XLE-80	3.0-7.0	(75-175)

The systems listed above are representative of the product's use, other systems may be appropriate.

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.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

- Iron & Steel Atmospheric: SSPC-SP12, WJ-3 (with existing profile) or SSPC-SP 6/NACE 3, 2.0 mil (50 micron) Profile
- *Galvanized: SSPC-SP1 or blast lightly
- *Aluminum: SSPC-SP1 or blast lightly
- *Masonry: SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3
- *Primer required

Surface Preparation Standards				
Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal	Sa 3	Sa 3	SP 5	1
Near White Metal	Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	C St 2	C St 2	SP 2	-
Pitted & Rusted	D St 2	D St 2	SP 2	-
Rusted	C St 3	C St 3	SP 3	-
Power Tool Cleaning	D St 3	D St 3	SP 3	-

TINTING

Tint Part A with Maxitoners at 100% tint strength. Five minutes minimum mixing on a mechanical shaker is required for complete mixing of color.

APPLICATION CONDITIONS

Temperature (air, surface and material):
40°F (4.5°C) minimum, 120°F (49°C) maximum
At least 5°F (2.8°C) above dew point

Relative humidity: 40% minimum, 85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging: 5 gallons (18.9L) mixed
Part A: 1 gallon (3.78L) in a 1 gallon (3.78L) container
4 gallons (15.1L) in a 5 gallon (18.9L) container
Part B: 1 quart (0.94L) and 1 gallon (3.78L)
Weight: 10.10 ± 0.2 lb/gal ; 1.2 Kg/L, mixed

SAFETY PRECAUTIONS

Refer to the MSDS 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.

WARRANTY

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.

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SURFACE PREPARATIONS

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.

Iron & Steel (atmospheric service)

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Ultra High Pressure Water Jetting for Steel per SSPC-SP12/NACE 5, WJ-3⁷ (with existing profile) or SSPC-SP3 Power Tool Clean or SSPC-SP2 Hand Tool Clean. For better performance, use Commercial Blast Cleaning per SSPC-SP6/NACE 3. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Coat any bare steel the same day as it is cleaned or before flash rusting occurs.

Aluminum

Remove all oil, grease, dirt, oxide and other foreign material by Solvent Cleaning per SSPC-SP1 or blast lightly. Primer required.

Galvanized Steel

Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1 (recommended solvent is VM&P Naphtha) or blast lightly. When weathering is not possible, or the surface has been treated with chromates or silicates, first Solvent Clean per SSPC-SP1 and apply a test patch. Allow paint to dry at least one week before testing adhesion. If adhesion is poor, brush blasting per SSPC-SP7 is necessary to remove these treatments. Rusty galvanizing requires a minimum of Hand Tool Cleaning per SSPC-SP2, prime the area the same day as cleaned. Primer required.

Concrete and Masonry

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI 03732, CSP 1-3. Surfaces should be thoroughly clean and dry. Concrete and mortar must be cured at least 28 days @ 75°F (24°C). Remove all loose mortar and foreign material. Surface must be free of laitance, concrete dust, dirt, form release agents, moisture curing membranes, loose cement and hardeners. Fill bug holes, air pockets and other voids with Steel-Seam FT910. Primer required.

Always follow the standard methods listed below:

- ASTM D4258 Standard Practice for Cleaning Concrete.
- ASTM D4259 Standard Practice for Abrading Concrete.
- ASTM D4260 Standard Practice for Etching Concrete.
- ASTM F1869 Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete.
- SSPC-SP 13/Nace 6 Surface Preparation of Concrete.
- ICRI 03732 Concrete Surface Preparation.

Previously Painted Surfaces

If in sound condition, clean the surface of all foreign material. Smooth, hard or glossy coatings and surfaces should be dulled by abrading the surface. Apply a test area, allowing paint to dry one week before testing adhesion. If adhesion is poor, or if this product attacks the previous finish, removal of the previous coating may be necessary. If paint is peeling or badly weathered, clean surface to sound substrate and treat as a new surface as above.

Surface Preparation Standards

Condition of Surface	ISO 8501-1 BS7079:A1	Swedish Std. SIS055900	SSPC	NACE
White Metal	Sa 3	Sa 3	SP 5	1
Near White Metal	Sa 2.5	Sa 2.5	SP 10	2
Commercial Blast	Sa 2	Sa 2	SP 6	3
Brush-Off Blast	Sa 1	Sa 1	SP 7	4
Hand Tool Cleaning	Rusted C St 2	C St 2	SP 2	-
Pitted & Rusted	D St 2	D St 2	SP 2	-
Rusted	C St 3	C St 3	SP 3	-
Power Tool Cleaning	Pitted & Rusted D St 3	D St 3	SP 3	-

APPLICATION CONDITIONS

Temperature: 40°F (4.5°C) minimum, 120°F (49°C) maximum (air, surface and material) At least 5°F (2.8°C) above dew point

Relative humidity: 40% minimum, 85% maximum

APPLICATION EQUIPMENT

The following is a guide. Changes in pressures and tip sizes may be needed for proper spray characteristics. Always purge spray equipment before use with listed reducer. Any reduction must be compliant with existing VOC regulations and compatible with the existing environmental and application conditions.

Reduction Not Recommended

Clean Up Xylene, R2K4 or MEK R6K10

Airless Spray

Unit..... 30:1 pump
Pressure..... 2800-3000 psi
Hose..... 3/8" ID
Tip017" - .021"
Filter 60 mesh
Reduction..... Not Recommended

Conventional Spray

Gun Binks 95
Tip and needle 66/65
Air cap..... 65 PR
Atomization Pressure..... 75-95 psi
Fluid Pressure..... 12-20 psi
Reduction..... Not Recommended

Brush

Brush..... Natural bristle
Reduction..... Not Recommended

Roller

Cover 3/8" woven with solvent resistant core
Reduction..... Not Recommended

If specific application equipment is not listed above, equivalent equipment may be substituted.



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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mix contents of each component thoroughly with low speed power agitation. Make certain no pigment remains on the bottom of the can. Then combine four parts by volume of Part A with one part by volume of Part B. Thoroughly agitate the mixture with power agitation.

To ensure that no unmixed material remains on the sides or bottom of the cans after mixing, visually observe the container by pouring the material into a separate container.

Apply paint at the recommended film thickness and spreading rate as indicated below:

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	4.0 100	9.0 225
Dry mils (microns)	3.0 75	7.0 175
~Coverage sq ft/gal (m ² /L)	180 4.4	420 10.3
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NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule @ 5.0 mils wet (125 microns):

	40°F/4.5°C	50°F/10°C	77°F/25°C 50% RH	100°F/38°C
To touch:	5 hours	2 hours	1 hour	20 minutes
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To recoat:				
minimum:	20 hours	16 hours	4 hours	2 hours
maximum:	14 days	14 days	14 days	7 days
To cure:	10 days	7 days	7 days	7 days

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

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

Pot Life: 4 hours @ 77°F (25°C)

Note: Pot life will be shorter with higher temperatures and larger volumes of material.

Sweat-in-Time: None required @ 77°F (25°C)

Application of coating above maximum or below minimum recommended spreading rate may adversely affect coating performance.

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Xylene, R2K4. Clean tools immediately after use with Xylene, R2K4. Follow manufacturer's safety recommendations when using any solvent.

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PERFORMANCE TIPS

Stripe coat all crevices, welds, and sharp angles to prevent early failure in these areas.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross spray at a right angle

Spreading rates are calculated on volume solids and do not include an application loss factor due to surface profile, roughness or porosity of the surface, skill and technique of the applicator, method of application, various surface irregularities, material lost during mixing, spillage, overthinning, climatic conditions, and excessive film build.

Do not apply the material beyond recommended pot life.

Do not mix previously catalyzed material with new.

Shelf life is one month after tinting.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Xylene, R2K4.

Refer to Product Information sheet for additional performance characteristics and properties.

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