



Protective & Marine Coatings

MACROPOXY® 4600 CORROSION INHIBITIVE EPOXY PRIMER

PART A
PART B

B58-730
B58V730

SERIES
HARDENER

Revised: June 12, 2025

PRODUCT INFORMATION

1106-1

PRODUCT DESCRIPTION

MACROPOXY 4600 is a high solids corrosion inhibitive epoxy primer that uses Zinc Phosphate as the inhibitor. Provides superior corrosion protection in atmospheric and heavy industrial environments.

- Cures down to -5°F (-21°C)
- Extremely fast recoat
- Outstanding application properties

PRODUCT CHARACTERISTICS

Colors: Gray, Red Oxide, White and Tan
Volume Solids: 80% ± 3%, mixed
VOC (EPA Method 24): <250 g/L; 2.1 lb/gal, mixed
Mix Ratio: 4:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	4.0 (100)	13.0 (325)
Dry mils (microns)	3.0 (75)	10.0 (250)
~Coverage sq ft/gal (m ² /L)	125 (3.1)	417 (10.2)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1267 (31.1)	

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

Drying Schedule:

23°F (-5°C) 50°F (10°C) 77°F (25°C) 100°F (38°C)

To touch:	10 hours	2 hours	30 minutes	15 minutes
To handle:	30 hours	8 hours	3 hours	40 minutes
To recoat:				
minimum:	24 hours	5.5 hours	2 hours	45 minutes
maximum:	6 months	6 months	6 months	6 months
Cure to service:	14 days	14 days	7 days	7 days

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

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

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

Pot life: >3 hours >2 hours 1.5 hours 45 minutes

Pot life is dependent upon temperature and mass.

Sweat-in-time: none required

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

Flash Point: Part A: 93°F (34°C)
Part B: 88°F (31°C)

Reducer*: VOC restricted areas (≤250 g/L): use Global Core Epoxy Reducer R7K119 up to 2% by volume.

Clean Up:** VOC restricted areas (≤25 g/L, or ≤3%): use Acetone. Other areas (>25 g/L, or >3%): use Acetone or MEK.

*Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

**Choose a solvent that is compliant in your area. Confirm compliance with state and local air quality rules before use.

RECOMMENDED 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 ISO12944-6:2018
- Shop and field applied primer for structural steel on blast cleaned steel for internal and external environments
- ISO 12944-6:2018 C1-C5
- Suitable for use in USDA inspected facilities for incidental food contact
- Acceptable for use in Canadian Food Processing facilities, incidental food contact
- Meets Class A requirements for Slip Coefficient

PERFORMANCE CHARACTERISTICS

Substrate*: Steel

Surface Preparation*: SSPC-SP10/NACE 2, 2.5-3.5 mil (63-88 micron) profile

1 ct. Macropoxy 4600 @ 3.0-4.0 mils (75-100 microns) dft

*unless otherwise noted below

Test Name	Test Method	Results
Abrasion	ASTM D4060	87 mg
Adhesion	ISO 4624	>1,450 psi (>10 Mpa)
Cathodic Disbondment	ASTM G8	0 disbondment
Dry Heat Resistance	ASTM D2485	250°F (121°C)
Edge Retention	MIL-PRF-23236D	>90%
Flexibility	ASTM D522, 180° bend, 1/2" mandrel	Passes, 4%
Impact Resistance Direct	ASTM G14	60 in lbs (3.0 Joules)
Pencil Hardness	ASTM D3363	4H



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RECOMMENDED SYSTEMS

Dry Film Thickness / ct.
Mils (Microns)

Steel, Zinc Phosphate/Urethane Topcoat, Atmospheric

1 Ct. Macropoxy 4600 3.0-10.0 (75-250)
1-2 Cts. Approved Polyurethane topcoat 2.0-4.0 (50-100)

Steel, Zinc Phosphate/Polysiloxane Topcoat, Atmospheric

1 Ct. Macropoxy 4600 3.0-10.0 (75-250)
1 Ct. Sher-Loxane 800 4.0-6.0 (100-150)

Steel, Zinc Phosphate/Epoxy/Urethane Topcoat, Atmospheric

1 Ct. Macropoxy 4600 3.0-10.0 (75-250)
1 Ct. Macropoxy 2600 4.0-6.0 (100-150)
1-2 Cts. Approved Polyurethane topcoat* 2.0-4.0 (50-100)

*DFT as specified by topcoat PDS

Approved Mid Coats, Top Coats:

Mid Coats:

Dura-Plate 235
Macropoxy 646 (series)

Top Coats:

Acrolon 218 HS
Acrolon 7300
Acrolon 7700
Acrolon Ultra
Corothane II
Envirolastic 840 DTM
Envirolastic 940 LV
Hi-Solids Polyurethane
Hi-Solids Polyurethane 250
Sher-Loxane 800

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

DISCLAIMER

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SURFACE PREPARATION

All surfaces to be coated should be clean, dry and free from contamination. Prior to coating application, surfaces should be assessed and treated in accordance with ISO 8504:2000. Oil and grease should be removed in accordance with SSPC-SP1 solvent cleaning.

Refer to product Application Bulletin for detailed surface preparation information.

Minimum recommended surface preparation:

Iron & Steel: SSPC-SP6/NACE 3, Sa 2.5 (ISO 8501-1:2007),
2-3 mil (50-75 microns) profile

Stainless &

Galvanized Steel: SSPC-SP16, 1 mil (25 microns) profile

Surface Preparation Standards

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

TINTING

Do not tint.

APPLICATION CONDITIONS

Temperature:

Air & Surface: 23°F (-5°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.

Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:

Part A: 0.72 gallons (2.7L) in a 1 gallon (3.8L) can and
4 gallons (15L) in a 5 gallon (19L) pail

Part B: 0.18 gallons (0.7L) in a quart (0.9L) can and
1 gallon (3.8L) filled containers

Weight: 13.0 ± 0.2 lb/gal ; 1.6 Kg/L, mixed

SAFETY PRECAUTIONS

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.

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

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Commercial Blast Cleaning per SSPC-SP6/NACE 3. For better performance, use Near White Metal Blast Cleaning per SSPC-SP10/NACE 2. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2 mils / 50 microns). Prime any bare steel the same day as it is cleaned.

For shop applications to new steel, with an SSPC-VIS 1 rust grade of A or B, the minimum surface prep is SSPC-SP2/3 Hand or Power tool cleaning.

Stainless & Galvanized Steel

Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1. 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-SP16 is necessary to remove these treatments.

Surface Preparation Specification SSPC-SP16 must be followed obtaining a surface profile of minimum 1.5 mils (38 microns). Optimum surface profile will not exceed 2.0 mils (50 microns).

APPLICATION CONDITIONS

Temperature:

Air & Surface: 23°F (-5°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.

Relative humidity: 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.

Reducer* VOC restricted areas (≤ 250 g/L): use Global Core Epoxy Reducer R7K119 up to 2% by volume.

Clean Up** VOC restricted areas (≤ 25 g/L, or $\leq 3\%$): use Acetone. Other areas (> 25 g/L, or $> 3\%$): use Acetone or MEK.

*Choose a reducer that is compliant in your area. Confirm compliance with state and local air quality rules before use.

**Choose a solvent that is compliant in your area. Confirm compliance with state and local air quality rules before use.

Airless Spray

Pressure 2200 psi minimum (151 bar)
Tip013"-.019" (0.33-0.48 mm)
Reduction as needed up to 2% by volume with Global Core Epoxy Reducer

Conventional Spray

Atomization Pressure 40 psi (2.7 bar)
Fluid Pressure 5 psi (0.3 bar)
Reduction as needed up to 2% by volume with Global Core Epoxy Reducer

Brush*

Brush Natural Bristle
Reduction as needed up to 2% by volume with Global Core Epoxy Reducer

Roller*

Cover 3/8" woven with solvent resistant core
Reduction as needed up to 2% by volume with Global Core Epoxy Reducer

*Application of more than one coat may be necessary to give equivalent dry film thickness to a single spray applied coat.

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

Surface Preparation Standards

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



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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Mixing Instructions: Material is supplied in two containers as a pack. Always mix a complete unit in the proportions supplied. Once the unit has been mixed it must be used within the working pot life specified.

1. Agitate Base (Part A) and Curing Agent (Part B) with a power agitator until homogenous.
2. Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator.

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)	13.0 (325)
Dry mils (microns)	3.0 (75)	10.0 (250)
~Coverage sq ft/gal (m ² /L)	125 (3.1)	417 (10.2)
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NOTE: Brush or roll application may require multiple coats to achieve maximum film thickness and uniformity of appearance.

Drying Schedule:

	23°F (-5°C)	50°F (10°C)	77°F (25°C)	100°F (38°C)
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To recoat:				
minimum:	24 hours	5.5 hours	2 hours	45 minutes
maximum:	6 months	6 months	6 months	6 months

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

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

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

Pot life: >3 hours >2 hours 1.5 hours 45 minutes

Pot life is dependent upon temperature and mass.

Sweat-in-time: none required

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 Acetone*. Clean tools immediately after use with Acetone*. Follow manufacturer's safety recommendations when using any solvent.

*Use Acetone in VOC restricted areas. In other areas, use Acetone or MEK. Choose a cleaning solvent that is compliant in your area. Confirm compliance with state and local air quality rules before use.

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PERFORMANCE TIPS

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

Do not mix previously catalyzed material with new.

Do not use in immersion service.

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

SAFETY PRECAUTIONS

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