



Protective & Marine Coatings

MACROPOXY® 920 PRE-PRIME PENETRATING EPOXY PRE-PRIMER

PART A
PART B

B58T101
B58V10

TRANSPARENT
HARDENER

Revised: July 26, 2022

PRODUCT INFORMATION

4.50

PRODUCT DESCRIPTION

MACROPOXY 920 PRE-PRIME is a 100% solids, penetrating epoxy primer designed for use over marginally prepared steel or concrete surfaces.

- A penetrating sealer for tight rusted surfaces
- A penetrating sealer for concrete and masonry surfaces
- Low viscosity
- Barrier coat for hot solvent topcoats

PRODUCT CHARACTERISTICS

Finish: Medium Sheen

Color: Transparent

Volume Solids: 100%, calculated, mixed
70%, ASTM D2697,
(Helium Pycnometer)

VOC (EPA Method 24): <340 g/L; 2.8 lb/gal, mixed

Mix Ratio: 2 components, 3:1 ratio

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	1.5 (40)	2.0 (50)
Dry mils (microns)	1.5 (40)	2.0 (50)
~Coverage sq ft/gal (m ² /L)		
Steel	800 (19.6)	1050 (25.7)
Concrete	400 (9.8)	500 (13.0)
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	1600 (39.2)	

Drying Schedule @ 2.0 mils wet (50 microns):

	@ 40°F/4.5°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	18 hours	9.5 hours	7 hours
Tack-free:	32 hours	17 hours	14 hours
To recoat:			
minimum:	36 hours	12 hours	12 hours
maximum:	30 days	30 days	30 days
<i>Drying time is temperature, humidity, and film thickness dependent.</i>			
Pot Life:	8-10 hours	4 hours	3-4 hours
Sweat-in-Time:	None required		

Shelf Life:	12 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	152°F (67°C), PMCC, mixed
Reducer:	Not recommended
Clean Up:	Reducer #54, R7K54

RECOMMENDED USES

For use as a primer / sealer over prepared steel or concrete surfaces.

- Petrochem exploration and offshore platforms
- Over white rusted and zinc rich coatings
- Chalky surfaces in atmospheric conditions
- Industrial applications
- Marine applications
- Over marginally prepared steel when abrasive cleaning is not possible
- Suitable for use in USDA inspected facilities
- Nuclear Power Plants • DOE Nuclear Fuel Facilities
- Nuclear fabrication shops • DOE Nuclear Weapons Facilities
- This product meets specific design requirements for non-safety related nuclear plant applications in Level II, III and Balance of Plant, and DOE nuclear facilities*.

* Nuclear qualifications are NRC license specific to the facility.

PERFORMANCE CHARACTERISTICS

- Designed for industrial and marine environments
- Penetrates existing, tightly adhered rust to provide a "tight" substrate prior to subsequent coats
- Can also be used as a high performance primer/sealer for masonry surfaces
- Not for immersion service
- Dry heat resistance up to 200°F (93°C)

Test Name	Test Method	Results
Critical Radiant Flux*	NFPA 253	1.02 W/cm ²
Surface Burning**	ASTM E84/NFPA 255	Flame Spread Index 15; Smoke Development Index 55
Surface Burning***	ASTM E84/NFPA 255	Flame Spread Index 20; Smoke Development Index 85

*System tested (Report No. IM54.1157-02-01):
Macropoxy 920 Pre-Prime @ 1 mil (25 microns) dft
Cor-Cote HP Epoxy @ 51 mils (1,275 microns) dft

**System tested (Report No. IM54.1157-02-01):
Macropoxy 920 Pre-Prime @ 1.1 mils (27.5 microns) dft
Macropoxy 646 @ 19.8 mils (495 microns) dft

***System tested (Report No. IM54.1157-02-01):
Macropoxy 920 Pre-Prime @ 1.2 mils (30 microns) dft
Phenicon HS Epoxy Phenolic @ 18.8 mils (470 microns) dft

Epoxy coatings may darken or yellow following application and curing.



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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct.	
		Mils	(Microns)
Steel:			
1 ct.	Macropoxy 920 Pre-Prime	1.5-2.0	(40-50)
2 cts.	Macropoxy HS	3.0-6.0	(75-150)
Steel, zinc rich primer:			
1 ct.	Zinc Clad IV	3.0-5.0	(75-125)
1 ct.	Macropoxy 920 Pre-Prime	1.5-2.0	(40-50)
1 ct.	Macropoxy HS	3.0-6.0	(75-150)
1 ct.	Acrolon 218 HS Acrylic Polyurethane	3.0-6.0	(75-150)
Masonry and Concrete:			
1 ct.	Macropoxy 920 Pre-Prime	1.5-2.0	(40-50)
1-2 cts.	Tile-Clad Hi-Solids	2.5-4.0	(63-100)
Previously Painted Surfaces:			
1 ct.	Macropoxy 920 Pre-Prime	1.5-2.0	(40-50)

Acceptable topcoats:

Acrolon 218 HS
Pro Industrial DTM Acrylic
Epo-Plex Multi-Mil Epoxy
Hi-Solids Polyurethane
Macropoxy 646
Macropoxy HS
Sher-Cryl HPA
Sher-Loxane 800
Tile-Clad HS

FIRETEX M89/02, M90, M90/02, and M93/02:

Steel Substrates being primed for FIRETEX only:

1 ct.	Zinc Clad IV	3.0-5.0	(75-125)
1 ct.	Macropoxy 920 Pre-Prime	1.5-2.0	(40-50)

Steel Substrates being primed for FIRETEX only:

1 ct.	Zinc Clad II	2.0-4.0	(50-100)
1 ct.	Macropoxy 920 Pre-Prime	1.5-2.0	(40-50)

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

DISCLAIMER

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 Information and Application Bulletin.

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: SSPC-SP2
Masonry / Concrete: SSPC-SP13/NACE 6, or ICRI No. 310.2R, CSP 1-3
Previously Painted: SSPC-SP1

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	-

TINTING

May be shaded with up to 2 oz of Maxitoner Colorants per gallon. Not controlled for tint strength.

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: 85% maximum

Refer to product Application Bulletin for detailed application information.

ORDERING INFORMATION

Packaging:

Part A: 3 quarts (2.8L) in a 1 gallon (3.78L) container
3 gallons (11.3L) in a 5 gallon (18.9L) container
Part B: 1 quart (0.94L) and 1 gallon (3.78L)
1 gallon (3.78L) and 4 gallons (15.1L) mixed

Weight: 8.47 ± 0.2 lb/gal ; 1.0 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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APPLICATION BULLETIN

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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

Minimum surface preparation is Hand Tool Clean per SSPC-SP2. Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. 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 (1.0-2.0 mils / 25-50 microns). Prime any bare steel within 8 hours or before flash rusting occurs.

Concrete and Masonry

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI No. 310.2R, 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.

Follow the standard methods listed below when applicable:

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 No. 310.2R 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 products 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.

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: 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 Not recommended

Clean-Up Reducer #54, R7K54

Airless Spray (see note on next page)

Pressure..... 2200 - 2500 psi
Hose..... 1/4" ID
Tip015"
Filter 60 mesh

Conventional Spray

Gun Binks 95
Tip 66
Cap 63 PB
Atomization Pressure..... 50 psi
Fluid Pressure..... 10 psi

Brush

Brush..... Natural Bristle

Roller

Cover 1/4"-3/8" woven with solvent resistant core

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

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
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Hand Tool Cleaning	Rusted D St 2	C St 2	SP 2	-
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APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

Use low speed mechanical agitation to mix Part A and Part B separately, then add 1 part by volume of Part B to 3 parts by volume of Part A. Mix the combined parts using low speed power agitation for at least 5 minutes. Mixed material will generate heat and should be handled appropriately, using all material before pot life expiration, and cleaning lines and equipment immediately after use. Higher temperatures will decrease working pot life, while lower temperatures will increase it.

If reducer solvent is used, add only after both components have been thoroughly mixed.

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

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	1.5 (40)	2.0 (50)
Dry mils (microns)	1.5 (40)	2.0 (50)
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To recoat:			
minimum:	36 hours	12 hours	12 hours
maximum:	30 days	30 days	30 days
<i>Drying time is temperature, humidity, and film thickness dependent.</i>			
Pot Life:	8-10 hours	4 hours	3-4 hours
Sweat-in-Time:	None required		

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Reducer #54, R7K54. Clean tools immediately after use with Reducer #54, R7K54. Follow manufacturer's safety recommendations when using any solvent.

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PERFORMANCE TIPS

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.

No reduction of material is recommended as it can affect film build, appearance, and adhesion.

Do not apply the material beyond recommended pot life.

Do not mix previously catalyzed material with new.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer #54, R7K54.

For better performance in severely corrosive environments, or over heavily rusted/pitted steel or porous concrete and masonry, two coats may be required.

Roll out any puddles.

Airless spray is acceptable for application; however, the product should be back-rolled to eliminate excessive millage and puddles.

Gloss may vary depending on substrate and film thickness.

Can be used as a metalizing sealer. Consult your Sherwin-Williams Representative regarding Product Bulletin: "Sealers for Thermal Spray Metalizing".

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

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