



Protective & Marine Coatings



COPOXY SHOP PRIMER

PART A
PART B

B62Y110
B62V110

GOLD
HARDENER

Revised 9/09

PRODUCT INFORMATION

4.74

PRODUCT DESCRIPTION

COPOXY SHOP PRIMER is an epoxy polyamide primer designed specifically for immersion service under immersion grade epoxies and polyurea. It is a fast drying, low VOC coating with an extended recoatability.

- Low temperature, 40°F (4.5°C), cure
- Corrosion resistant
- Chemical resistant
- Abrasion resistant
- NSF approved to Standard 61 for potable water (tanks of 1,000 gallons and larger)
- Outstanding application properties

PRODUCT CHARACTERISTICS

Finish:	Flat
Color:	Gold
Volume Solids:	72% ± 2%, mixed
Weight Solids:	85% ± 2%, mixed
VOC (EPA Method 24):	Unreduced: <240 g/L; 2.00 lb/gal Reduced 12½%: <320 g/L; 2.67 lb/gal
Mix Ratio:	1:1 by volume

Recommended Spreading Rate per coat:

	Standard		AWWA	
	Min.	Max.	Min.	Max.
Wet mils (microns)	4.5	112	7.0	125
Dry mils (microns)	3.0	75	5.0*	125*
~Coverage sq ft/gal (m²/L)	230	5.6	385	4.4
Theoretical coverage sq ft/gal (m²/L) @ 1 mil/25 micron dft	1152 (28.2)			

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

NOTE: When using as a hold primer under a laminate or polyurea system, apply at 1.0 - 1.5 mils (25 microns - 40 microns) dft maximum. Additional reduction of up to 25% may be required to achieve the recommended film thickness.

*See Recommended Systems on reverse side

Drying Schedule @ 5.0 mils wet (125 microns):

	@ 40°F/4.5°C	@ 55°F/13°C	@ 77°F/25°C	@ 120°F/49°C
To touch:	12 hours	4 hours	2 hours	15 minutes
To handle:	72 hours	8 hours	4 hours	1 hour
To recoat - minimum atmospheric service:	72 hours	8 hours	4 hours	1 hour
*To recoat - minimum immersion service:	72 hours	48 hours	24 hours	6 hours
*To recoat - maximum:	12 months	12 months	12 months	12 months
To cure:	14 days	10 days	7 days	3 days

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

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

Pot Life: 3 hours 2.5 hours 2 hours 1 hour

Sweat-in-time: 20 minutes 20 minutes none none

* Maximum recoat interval may be shorter when using polyurea topcoats. Refer to topcoat data page.

For Potable Water Service, allow a minimum cure time of 7 days at 77°F (25°C) prior to placing in service. Sterilize and rinse per AWWA C652.

PRODUCT CHARACTERISTICS (CONT'D)

Shelf Life:	12 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C).
Flash Point:	110°F (43°C) Seta Flash, mixed
Reducer/Clean Up:	Reducer #104, R7K104

RECOMMENDED USES

For use as a fast dry shop or field applied epoxy primer where an extended recoat window is desired due to construction schedules, distribution logistics and environmental considerations.

- Conforms to AWWA D102 OCS #5, ICS #1, ICS #2, ICS #4
- For immersion service with recommended topcoat
- When an extended recoat window is required
- As a holding primer under laminate systems
- Acceptable for use as part of a system with cathodic protection systems
- Acceptable for use as a primer on prepared concrete

PERFORMANCE CHARACTERISTICS

Test Name	Test Method	Results
Abrasion Resistance	ASTM D4060 CS17 wheel, 1000 cycles, 1 kg load	90 mg loss
Adhesion	ASTM D4541; ASTM D3359	800 psi (ASTM D4541); 5A (ASTM D3359)
Corrosion Weathering	ASTM D5894, 3 cycles, 1008 hours	Rating 10 per ASTM D610 for rusting; Rating 10 per ASTM D714 for blistering; Rating 9 per ASTM D1654 for corrosion
Direct Impact Resistance	ASTM D2794	40 in. lbs.
Dry Heat Resistance	ASTM D2485	250°F (121°C)
Flexibility	ASTM D522, 180° bend, 1.5" mandrel	Passes
Immersion	18 months fresh and salt water	Passes, no rusting, blistering, or loss of adhesion
Pencil Hardness	ASTM D3363	2H
Salt Fog Resistance	ASTM B117, 1000 hours	Rating 10 per ASTM D714 for blistering; Rating 10 per ASTM D610 for rusting



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Certified to
NSF/ANSI 61

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RECOMMENDED SYSTEMS		
	Dry Film Thickness / ct.	
	Mils	(Microns)
Steel, immersion service:		
*AWWA D102: Inside Coating System No. 1 minimum AWWA		
1 ct. Copoxy Shop Primer	8.0	(200)
1 ct. Copoxy Shop Primer	3.0	(75)
1 ct. Macropoxy 646 PW	5.0	(125)
*AWWA D102: Inside Coating System No. 2 minimum AWWA		
1 ct. Copoxy Shop Primer	12.0	(300)
1 ct. Copoxy Shop Primer	3.0	(75)
1 ct. Macropoxy 646 PW	4.0	(100)
1 ct. Macropoxy 646 PW	5.0	(125)
*AWWA D102: Inside Coating System No. 4 minimum AWWA		
1 ct. Copoxy Shop Primer	25	(625)
1 ct. Copoxy Shop Primer	1.0-1.5	(25-40)
1 ct. EnviroLastic AR520 PW	40.0-100.0	(1,000-2,500)
*Note: tank size restrictions may vary by topcoat		
Steel, atmospheric service:		
*AWWA D102: Outside Coating System No. 5 minimum AWWA		
1 ct. Copoxy Shop Primer	6.0	(150)
1 ct. Copoxy Shop Primer	2.0	(50)
1 ct. Macropoxy 646 PW	2.0	(50)
1 ct. Acrolon 218HS	2.0	(50)
Steel, atmospheric service:		
1 ct. Copoxy Shop Primer	3.0-5.0	(75-125)
2 cts. Hi-Solids Polyurethane	3.0-4.0	(75-100)
Concrete, immersion service:		
Non-Potable:		
1 ct. Copoxy Shop Primer	3.0-5.0	(75-125)
2 cts. TarGuard Epoxy	8.0-16.0	(200-400)
Laminate System:		
1 ct. Copoxy Shop Primer	1.0-1.5	(25-40)
(Additional reduction of up to 25% may be required to achieve the recommended film thickness.)		
1 ct. Recommended fairing and sealing putty		
1 ct. Recommended laminate resin with 1.5 oz. fiberglass mat	40.0-45.0	(1,000-1,125)
1 ct. Recommended flood coat/gel coat (wax solution added to polyester and vinyl ester systems only)	10.0-20.0	(250-500)

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:					
Atmospheric:	SSPC-SP6/NACE 3, 2 mil (50 micron) profile				
Immersion:	SSPC-SP10/NACE 2, 2 mil (50 micron) profile				
Concrete & Masonry					
Immersion:	SSPC-SP13/NACE 6-4.3.1 or 4.3.2, or ICRI 03732, CSP 1-3				
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	DC St 2	DC St 2	SP 8	-
	Pitted & Rusted	DC St 2	DC St 2	SP 8	-
Power Tool Cleaning	Rusted	DC St 3	DC St 3	SP 9	-
	Pitted & Rusted	DC St 3	DC St 3	SP 9	-

TINTING	
Do not tint.	

APPLICATION CONDITIONS	
Temperature:	40°F (4.5°C) minimum, 120°F (49°C) maximum (air, surface, and material)
Relative humidity:	At least 5°F (2.8°C) above dew point 85% maximum
Refer to product Application Bulletin for detailed application information.	

ORDERING INFORMATION	
Packaging:	
Part A:	5 gallon (18.9L) containers
Part B:	5 gallon (18.9L) containers
Weight:	13.43 ± 0.2 lb/gal ; 1.6 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.

Carbon Steel, Immersion Service:

Clean and degrease the surface prior to abrasive blasting per SSPC-SP 1 Solvent Cleaning. Methods described in SSPC-SP 1 include solvents, alkali, detergent/water, emulsions, and steam. The surface shall be abrasive blasted to SSPC-SP10/NACE No. 2 Near-White Blast Cleaning with a 2-3 mil (50-75 micron) profile. The anchor pattern shall be sharp with no evidence of a polished surface. The finished surface shall be free of all visible oil, grease, dust, dirt, mill scale, rust, coating, oxides, corrosion products, and other foreign matter with no more than 5% staining. After blasting, all dust and loose residue should be removed from the surface by acceptable means. Coat steel the same day as it is prepared and prior to the formation of rust.

Iron & Steel, Atmospheric Service:

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 (2 mils / 50 microns). Prime any bare steel within 8 hours or before flash rusting occurs.

Ductile Iron, Immersion Service:

Refer to National Association of Pipe Fabricators Surface Preparations Standard NAPF 500-03 as follows:

- NAPF 500-03-01 "Solvent Cleaning"
- NAPF 500-03-02 "Hand Tool Cleaning"
- NAPF 500-03-03 "Power Tool Cleaning"
- NAPF 500-03-04 "Abrasive Blast Cleaning of Ductile Iron Pipe".

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.

Concrete, Immersion Service:

For surface preparation, refer to SSPC-SP13/NACE 6, Section 4.3.1 or 1.3.2 or ICRI 03732, CSP 1-3.

Previously Painted Surfaces:

If in sound condition, clean the surface of all foreign material. Scarify the surface to create the desired surface profile. Apply coatings on 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.

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 1	Sa 1	SP 7	3
Brush-Off Blast	C St 1	C St 1	SP 7	4
Hand Tool Cleaning	Rusted	C St 2	SP 2	-
Pitted & Rusted	D St 2	D St 2	SP 2	-
Power Tool Cleaning	Rusted	C St 3	SP 3	-
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: 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/Clean Up:Reducer #104, R7K104

Airless Spray

Pressure.....2400 psi
 Hose.....1/4" ID
 Tip017"
 Filter60 mesh
 Reduction.....As needed up to 12½% by volume

Brush

Brush.....Nylon/Polyester or Natural Bristle
 Reduction.....Not recommended

Roller

Cover3/8" 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, making sure no pigment remains on the bottom of the can. Then combine one part by volume of Part A with one part by volume of Part B. Thoroughly agitate the mixture with power agitation. Re-stir before using.

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

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

Recommended Spreading Rate per coat:

	Standard		AWWA	
	Min.	Max.	Min.	Max.
Wet mils (microns)	4.5	112	7.0	125
Dry mils (microns)	3.0	75	5.0*	125*
~Coverage sq ft/gal (m ² /L)	230	5.6	385	4.4
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil/25 micron dft	1152 (28.2)			

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

NOTE: When using as a hold primer under a laminate or polyurea system, apply at 1.0 - 1.5 mils (25 microns - 40 microns) dft maximum. Additional reduction of up to 25% may be required to achieve the recommended film thickness.

*See Recommended Systems on reverse side

Drying Schedule @ 5.0 mils wet (125 microns):

	@ 40°F/4.5°C	@ 55°F/13°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	12 hours	4 hours	2 hours	15 minutes
To handle:	72 hours	8 hours	4 hours	1 hour
To recoat - minimum atmospheric service:	72 hours	8 hours	4 hours	1 hour
*To recoat - minimum immersion service:	72 hours	48 hours	24 hours	6 hours
*To recoat - maximum:	12 months	12 months	12 months	12 months
To cure:	14 days	10 days	7 days	3 days

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

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

Pot Life: 3 hours 2.5 hours 2 hours 1 hour

Sweat-in-time: 20 minutes 20 minutes none none

* Maximum recoat interval may be shorter when using polyurea topcoats. Refer to topcoat data page.

For Potable Water Service, allow a minimum cure time of 7 days at 77°F (25°C) prior to placing in service. Sterilize and rinse per AWWA C652.

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

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.

Excessive reduction of material 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 Immersion Service: (if required) Holiday test in accordance with ASTM D5162 for steel, or ASTM D4787 for concrete.

Adequate ventilation is necessary to promote proper cure.

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

CLEAN UP INSTRUCTIONS

Clean spills and spatters immediately with Reducer #104, R7K104. Clean tools immediately after use with Reducer #104, R7K104. Follow manufacturer's safety recommendations when using any solvent.

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