



# Protective & Marine Coatings

# SEAGUARD® 6100 HIGH SOLIDS LOW TEMPERATURE EPOXY

PART A  
PART B

N11-450 SERIES  
N11V400 (FORMERLY N11V450)

Revised: December 6, 2022

## PRODUCT INFORMATION

9.53

### PRODUCT DESCRIPTION

**SeaGuard 6100 High Solids Low Temperature Epoxy** is a modified high solids epoxy phenalkamine, formulated specifically for immersion and atmospheric service in aggressive coastal, industrial, marine and offshore environments. SeaGuard 6100 is a versatile anti-corrosive coating that can be applied at temperatures as low as 20°F (-7°C). SeaGuard 6100 offers:

- High volume solids provides for high build applications in fewer coats
- Self-priming
- Low temperature application
- Surface tolerant - damp surfaces
- Industrial fabrication, new construction, maintenance and repair
- Provides salt water and fresh water immersion resistance

### PRODUCT CHARACTERISTICS

<b>Finish:</b>	Semi-Gloss
<b>Colors:</b>	Red Oxide, Gray, and Black
<b>Volume Solids:</b>	80% ± 2%, mixed
<b>Weight Solids:</b>	87.5% ± 2%, mixed
<b>VOC (EPA Method 24):</b>	
Unreduced:	<180 g/L; 1.50 lb/gal
Reduced (10%):	<250 g/L; 2.08 lb/gal
<b>Mix Ratio:</b>	4:1 by volume (2 component)

#### Recommended Spreading Rate per coat:

	Minimum	Maximum
<b>Wet mils (microns)</b>	<b>7.5 (188)</b>	<b>15.0 (375)</b>
<b>Dry mils (microns)</b>	<b>6.0 (150)</b>	<b>12.0 (300)</b>
<b>~Coverage sq ft/gal (m<sup>2</sup>/L)</b>	<b>107 (2.6)</b>	<b>213 (5.2)</b>
<b>Theoretical coverage sq ft/gal (m<sup>2</sup>/L) @ 1 mil / 25 microns dft</b>	<b>1280 (31.4)</b>	

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

#### Drying Schedule @ 8.0 mils wet (200 microns):

	@ 40°F/4.5°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
<b>To touch:</b>	4 hours	2 hours	1 hour
<b>To handle:</b>	24 hours	8 hours	2 hours
<b>To recoat:</b>			
<b>minimum:</b>	24 hours	8 hours	2 hours
<b>maximum:</b>	30 days	30 days	30 days
<b>Cure to service:</b>	14 days	7 days	3 days

*If maximum recoat time is exceeded, abrade surface before recoating.  
Drying time is temperature, humidity, and film thickness dependent.*

<b>Pot Life:</b>	4 hours	1.5 hours	30 minutes
<b>Sweat-in-time:</b>	1 hour	N/A	N/A

<b>Shelf Life:</b>	36 months, unopened Store indoors at 40°F (4.5°C) to 100°F (38°C)
<b>Flash Point:</b>	110°F (43°C) Seta Flash
<b>Reducer/Clean Up*:</b>	Above 50°F (10°C): R2K5 Below 50°F (10°C): R6K10

\*See NOTE under Application Equipment section on page 3

### RECOMMENDED USES

For use over properly prepared steel substrates, including:

- Industrial fabrication, new construction, maintenance and repair
- Salt water and fresh water immersion service
- Ballast tanks
- Offshore and marine structures
- Bilges and wet void areas
- Decks and superstructures
- Underwater hulls
- As an anti-corrosive primer when used as part of an underwater hull system with antifouling coatings
- Immersion service in wastewater treatment plants

### PERFORMANCE CHARACTERISTICS

**Substrate\*:** Steel

**Surface Preparation\*:** SSPC-SP10, SP-7, SP-2

**System Tested\*:**

2 cts. SeaGuard 6100 @ 6.0-9.0 mils (150-225 microns) dft/ct  
\*unless otherwise noted below

Test Name	Test Method	Results
<b>Adhesion, over concrete*</b>	ASTM D7234-05	737 psi, minimum
<b>Corrosion Weathering</b>	ASTM D5894, 15 cycles, 5,000 hours	Rating 10 per ASTM D714 for blistering; Rating 10 per ASTM D610 per rusting
<b>Direct Impact Resistance</b>	ASTM D2794	56 in. lb.
<b>Flexibility</b>	ASTM D522, 180° bend, 1" mandrel	Passes
<b>Immersion</b>	1 year fresh and salt water	Passes, no rusting, blistering, or loss of adhesion
<b>Moisture Resistance</b>	ASTM D4585, 5000 hours, 100°F	Rating 10 per ASTM D714 for blistering; Rating 10 per ASTM D610 per rusting
<b>Pencil Hardness</b>	ASTM D3363	5H

\*1 ct. SeaGuard 6100 @ 6.0-9.0 mils (150-225 microns) dft/ct

#### IMMERSION

**(Ambient temperature)**

- Salt Water.....Recommended
- Fresh Water.....Recommended
- Ballast Tank Mix .....Recommended

Epoxy coatings may darken or yellow following application and curing.



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### RECOMMENDED SYSTEMS

	Dry Film Thickness / ct.	
	Mils	(Microns)
<b>Steel, Atmospheric Service, Epoxy</b>		
1-2 cts. SeaGuard 6100	6.0-12.0	(150-300)
<b>Steel, Atmospheric Service, Polyurethane</b>		
1-2 cts. SeaGuard 6100	6.0-12.0	(150-300)
1-2 cts. Hi-Solids Polyurethane	3.0-4.0	(75-100)
<b>Steel, Immersion Service</b>		
2 cts. SeaGuard 6100	6.0-9.0	(150-225)
or		
1 ct. SeaGuard 6100	10.0-12.0	(250-300)
<b>Steel, Underwater Hull with Antifouling</b>		
2 cts. SeaGuard 6100	6.0-9.0	(150-225)
2 cts. SeaGuard Antifouling*		
or		
1 ct. SeaGuard 6100	10.0-12.0	(250-300)
<b>Concrete/Masonry:</b>		
1 ct. SeaGuard 6100,	6.0-9.0	(150-225)
reduce up to 10% with R2K5 or R6K10		
1 ct. SeaGuard 6100	6.0-9.0	(150-225)

\*Consult your Sherwin-Williams Representative for the appropriate antifouling coating

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-SP2
Immersion:	SSPC-SP10/NACE 2, 2.0 mil (50 micron) profile or SSPC-SP-12/NACE No. 5, WJ-2/SC-2
Galvanized, atmospheric:	SSPC-SP1

#### 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	C St 2	SP 2	-
Rusted	D St 2	SP 2	-
Pitted & Rusted	D St 2	SP 2	-
Power Tool Cleaning	Rusted	SP 3	-
Pitted & Rusted	D St 3	SP 3	-

### TINTING

Do not tint.

### APPLICATION CONDITIONS

Temperature:	20°F (-7°C) minimum, 120°F (49°C) maximum (air and surface) At least 5°F (2.8°C) above dew point
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Material should be at least 40°F (4.5°C) for optimal performance.

Relative humidity: 85% maximum

Refer to product Application Bulletin for detailed application information.

### ORDERING INFORMATION

Packaging:	1 gallon (3.78L) and 5 gallon (18.9L) containers
5 gallon (18.9L) mix:	Part A - 4 gal. (15.1L) in a 5 gal. (18.9L) container Part B - 1 gallon (3.78L)
Weight:	12.09 ± 0.5 lb/gal ; 1.45 Kg/L, mixed will vary with color

### 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, Immersion Service:

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Near White Metal Blast Cleaning per SSPC-SP10/NACE 2 or SSPC-SP12/NACE No. 5. For SSPC-SP10/NACE 2, blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (2.0 mils / 50 microns). For SSPC-SP12/NACE No. 5, all surfaces to be coated shall be cleaned in accordance with WJ-2/SC-2 standards. Pre-existing profile should be approximately 2.0 mils. Light rust bloom is allowed. Remove all weld spatters and round all sharp edges. Prime any bare steel the same day as it is cleaned.

#### Iron & Steel, Atmospheric Service:

Minimum surface preparation is Hand Tool Clean per SSPC-SP2 or SSPC-SP12/NACE No. 5. For surfaces prepared by SSPC-SP2, first 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 (2.0 mils / 50 microns). For surfaces prepared by SSPC-SP12/NACE No. 5, all surfaces shall be cleaned in accordance with WJ-3/SC-2. Pre-existing profile should be approximately 2.0 mils (50 microns). Prime any bare steel the same day as it is cleaned.

#### Galvanized Steel:

Allow to weather a minimum of six months prior to coating. Solvent Clean per SSPC-SP1 (recommended solvent is VM&P Naphtha). When weathering of the steel is not possible, or the steel surfaces have been treated with chromates or silicates, 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.

#### Concrete and Masonry

For surface preparation, refer to SSPC-SP13/NACE 6, or ICRI 310.2R, CSP 2-3. 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 310.2R 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 310.2R, CSP 2-3.

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	CS St 2	SP 2	-
	Pitted & Rusted	CS St 2	SP 2	-
	Rusted	CS St 3	SP 3	-
Power Tool Cleaning	Pitted & Rusted	DS St 3	SP 3	-

### APPLICATION CONDITIONS

Temperature: 20°F (-7°C) minimum, 120°F (49°C) maximum (air and surface)  
At least 5°F (2.8°C) above dew point

Material should be at least 40°F (4.5°C) for optimal performance.

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 .....Above 50°F (10°C), R2K5  
Below 50°F (10°C), R6K10

NOTE: R7K104 is the required reducer for SeaGuard 6100 Epoxy when used in conjunction with SeaGuard Tie Coat.

#### Airless Spray

Unit.....30:1 Pump  
Pressure.....3000 - 3600 psi  
Hose.....1/4" - 3/8" ID  
Tip .....0.017" - .021"  
Filter .....60 mesh  
Reduction.....As needed, up to 10% by volume

#### Conventional Spray

Gun .....DeVilbiss MBC-510  
Fluid Tip .....E  
Air Nozzle.....704  
Atomization Pressure.....60-65 psi  
Fluid Pressure.....5-15 psi  
Reduction.....As needed, up to 10% by volume

#### 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 BULLETIN

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### APPLICATION PROCEDURES

Surface preparation must be completed as indicated.

**Mixing Instructions:** Mix contents of each component thoroughly using low speed power agitation. Make certain no pigment remains on the bottom of the can. Then combine 4 parts by volume of Part A with 1 part by volume of Part B. Thoroughly agitate the mixture with power agitation. Allow the material to sweat-in as indicated prior to application. 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:

	Minimum	Maximum
Wet mils (microns)	7.5 (188)	15.0 (375)
Dry mils (microns)	6.0 (150)	12.0 (300)
~Coverage sq ft/gal (m <sup>2</sup> /L)	107 (2.6)	213 (5.2)
Theoretical coverage sq ft/gal (m <sup>2</sup> /L) @ 1 mil / 25 microns dft	1280 (31.4)	

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

#### Drying Schedule @ 8.0 mils wet (200 microns):

	@ 40°F/4.5°C	@ 77°F/25°C 50% RH	@ 120°F/49°C
To touch:	4 hours	2 hours	1 hour
To handle:	24 hours	8 hours	2 hours
To recoat:			
minimum:	24 hours	8 hours	2 hours
maximum:	30 days	30 days	30 days
Cure to service:	14 days	7 days	3 days
<i>If maximum recoat time is exceeded, abrade surface before recoating.</i>			
<i>Drying time is temperature, humidity, and film thickness dependent.</i>			
Pot Life:	4 hours	1.5 hours	30 minutes
Sweat-in-time:	1 hour	N/A	N/A

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 Reducer R2K5 (above 50°F) / R6K10 (below 50°F). Clean tools immediately after use with Reducer R2K5 (above 50°F) / R6K10 (below 50°F). Follow manufacturer's safety recommendations when using any solvent.

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### PERFORMANCE TIPS

Stripe coat 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.

Excessive film build, poor ventilation, and cool temperatures may cause solvent entrapment and premature coating failure.

**For Immersion Service:** (if required) Holiday test in accordance with ASTM D5162 for steel, or ASTM D4787 for concrete.

Do not mix previously catalyzed material with new.

Do not apply the material beyond recommended pot life.

In order to avoid blockage of spray equipment, clean equipment before use or before periods of extended downtime with Reducer R2K5.

Anti-slip additives may be added to the coating to provide some slip resistance.

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

### SAFETY PRECAUTIONS

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### WARRANTY

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