



Protective & Marine Coatings

TANKGUARD® EPOXY POLYAMIDE

N11-100 SERIES

Revised 6/10

PRODUCT INFORMATION

9.34

PRODUCT DESCRIPTION

TANKGUARD EPOXY POLYAMIDE is an epoxy polyamide coating formulated for application on steel surfaces in shipboard fuel and salt water ballast tanks. This product complies with Military Specification MIL-PRF-23236 Type V, Class 5, Grade C.

PRODUCT CHARACTERISTICS

Finish:	Semi-Gloss
Color:	Primer-Green (No. 1) Finish-Blue (No. 3), Red, Gray, White
Volume Solids:	59% ± 2% minimum, mixed
Weight Solids:	70% minimum, mixed
VOC (EPA Method 24):	<340 g/L; 2.8 lb/gal, mixed
Mix Ratio:	1:1 by volume

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	5.0 125	8.5 212
Dry mils (microns)	3.0 75	5.0 125
~Coverage sq ft/gal (m ² /L)	190 4.6	315 7.7
Theoretical coverage sq ft/gal (m ² /L) @ 1 mil / 25 microns dft	944 23.1	

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):

	35-40°F (1.6-4.5°C)	41-60°F (4.5-16°C)	61-80°F (16-27°C) 50% RH	81-100°F (27-38°C)
Dry to touch:	12 hours	8 hours	6 hours	4 hours
To recoat:				
minimum:	24 hours	18 hours	12 hours	8 hours
minimum (non-epoxy)*:	12 hours	8 hours	6 hours	4 hours
maximum:	14 days	12 days	10 days	7 days
Cure to service:	6 days	5 days	4 days	64 hours
*An anti-foulant topcoat must be applied before the previous epoxy topcoat has hardened and while the epoxy is in a slightly tacky condition. This overcoat period is mainly dependent on the existing environmental conditions. If the epoxy is not tacky, an additional coat of epoxy must be applied to provide the required tacky condition.				
Pot Life:	4 hours at 77°F/25°C, 50% RH			
Sweat-in-Time:	@ 35-60°F (1.6-16°C): 2 hours			
	@ 61-70°F (16-21°C): 1-1.5 hours			
	@ 71-90°F (21-32°C): 30 minutes - 1 hour			
	@ 90°F+ (32°C+): none			

Shelf Life: 36 months, unopened
Store indoors at 40°F (4.5°C) to 100°F (38°C)

Flash Point: 100°F (38°C), SETA Flash, mixed

Reducer/Clean Up: Reducer #130, R7K130

Note: Flash point of reducer must be >100°F (38°C).

RECOMMENDED USES

For use over prepared substrates in marine and industrial environments:

- Complies with Military Specification MIL-PRF-23236, Type V, Class 5, Grade C.
- Marine vessels
- Fuel Tanks
- Ballast Tanks
- Salt Water Tanks

PERFORMANCE CHARACTERISTICS

Color	Product/Rex Number
Primer:	
Matte Green (No. 1), Part A	N11G100
Hardener for Primer, Part B	N11V100
Finishes:	
Blue (No. 3), Part A	N11L100
Hardener for Blue, Part B	N11V101
Red, Part A	N11R100
Hardener for Red, Part B	N11V103
Gray, Part A	N11A100
White, Part A	N11W100
Hardener for Gray and White, Part B	N11V101



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RECOMMENDED SYSTEMS

		Dry Film Thickness / ct.	
		Mils	(Microns)
Steel, immersion*:			
1 ct.	TankGuard Primer (N11G100/N11V100)	3.0-5.0	(75-125)
1-2 cts.	TankGuard Finish (N11 Series)	3.0-5.0	(75-125)
Steel, atmospheric:			
1 ct.	TankGuard Primer (N11G100/N11V100)	3.0-5.0	(75-125)
2 cts.	MIL-PRF-24635	1.5-2.0	(40-50)

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-SP6/NACE 3, 1-3 mil (25-75 micron) profile
Immersion:	SSPC-SP10/NACE 2, 1-3 mil (25-75 micron) profile

Surface Preparation Standards

Condition of Surface		ISO 8501-1 BS709: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

Do not tint.

APPLICATION CONDITIONS

Temperature:	
air and surface:	35°F (1.6°C) minimum, 100°F (38°C) maximum
material:	60°F (16°C) minimum 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:	1 gallon (3.78L) and 5 gallon (18.9L) containers
~Weight:	10.7 ± 0.2 lb/gal ; 1.3 Kg/L, mixed, may vary by color

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.

DISCLAIMER

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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. Blast clean all surfaces using a sharp, angular abrasive for optimum surface profile (1-3 mils / 25-75 microns). Remove all weld spatter and round all sharp edges. Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

Iron & Steel (atmospheric service)

Remove all oil and grease from surface by Solvent Cleaning per SSPC-SP1. Minimum surface preparation is Brush Blast Cleaning per SSPC-SP7. 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 (1-3 mils / 25-75 microns). Prime any bare steel the same day as it is cleaned or before flash rusting occurs.

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.

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

APPLICATION CONDITIONS

Temperature:

air and surface: 35°F (1.6°C) minimum, 100°F (38°C) maximum

material: 60°F (16°C) minimum
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 #130, R7K130

Note: Flash point of reducer must be >100°F.

Airless Spray

Pump.....30:1 minimum
Hose.....3/8" ID
Tip0.015"
Filter30 mesh
Reduction.....As needed up to 5% by volume

Conventional Spray

GunDeVilbiss MBC
Air Cap64°
Needle.....D
Atomization Pressure.....70 psi
Fluid Pressure.....30 psi
Reduction.....As needed up to 5% by volume

Brush

Brush.....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. Make certain 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. Allow the material to sweat-in as indicated below 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)	5.0 125	8.5 212
Dry mils (microns)	3.0 75	5.0 125
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minimum:	24 hours	18 hours	12 hours	8 hours
minimum (non-epoxy)*:	12 hours	8 hours	6 hours	4 hours
maximum:	14 days	12 days	10 days	7 days
Cure to service:	6 days	5 days	4 days	64 hours

*An anti-foulant topcoat must be applied before the previous epoxy topcoat has hardened and while the epoxy is in a slightly tacky condition. This overcoat period is mainly dependent on the existing environmental conditions. If the epoxy is not tacky, an additional coat of epoxy must be applied to provide the required tacky condition.

Pot Life:	4 hours at 77°F/25°C, 50% RH
Sweat-in-Time:	@ 35-60°F (1.6-16°C): 2 hours
	@ 61-70°F (16-21°C): 1-1.5 hours
	@ 71-90°F (21-32°C): 30 minutes - 1 hour
	@ 90°F+ (32°C+): none

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 #130, R7K130. Clean tools immediately after use with Reducer #130, R7K130. 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.

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 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 #130, R7K130.

For low atmospheric temperature application, material temperature should be at least 60°F (16°C).

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

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