New Guard Coatings Group

A global reputation to protect.

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This information is not exhaustive and it is the user's responsibility to ensure that this data sheet is the most current by contacting their local New Guard Coatings Group branch prior to using the coating/product.

Protective & Marine Coatings
PRODUCT DATA SHEET

NOVA-PLATE® 325
HIGH TEMPERATURE, HIGH PRESSURE RESISTANT TANK LINING

Revised: June 9, 2023

PRODUCT DESCRIPTION

NOVA-PLATE 325 is a plural applied ceramic and glass flake novolac-phenolic coating which has been tested and approved via 3rd party testing for NORSOK M-501, System No. 7C up to 356°F (180°C). As a lining, Nova-Plate 325 has high build and fast return to service capabilities with high temperature, pressure and superior tolerance to aggressive chemicals making this product suitable for service up to 300°F (149°C) in Oil and Gas and Mining applications.

INTENDED USES

Process vessels, operating at higher temperatures and pressures, for crude oil and produced water service. Suitable for mining and mineral processing where superior abrasion and acid resistance is required. Suitable for new construction and maintenance. Recommended for external girth welds and repair coating for high operating, fusion bonded systems.

PRODUCT DATA

Finish: Gloss

Colors: White

Volume Solids: 100% mixed

VOC (EPA Method 24): <100 g/L; 0.83 lb/gal, mixed

Mix Ratio: 2:1 by volume

Typical Thickness:

Recommended Spreading Rate per coat:

	Minimum	Maximum
Wet mils (microns)	**20.0** (500)	**40.0** (1000)
Dry mils (microns)	**20.0** (500)	**40.0** (1000)
~Coverage sq ft/gal (m^2/L)	**40** (1.0)	**80** (2.0)
Theoretical coverage sq ft/gal (m^2/L) @ 1 mil / 25 microns dft	**1604** (39.4)	

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

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

Flash Point: 201°F (94°C), PMCC, mixed

Reducer: Not recommended

Clean Up: M.E.K. or Reducer #104
In California: Reducer #111 or Acetone

Weight: 10.80 ± 0.3 lb/gal ; 1.29 Kg/L, mixed

Average Drying Times:

	50°F (10°C)	77°F (25°C) *50% RH*	90°F (32°C)
Touch:	6.5 hours	2.5 hours	1.5 hours
Dry hard:	26 hours	7 hours	5 hours
Recoat:			
minimum:	6.5 hours	2.5 hours	1.5 hours
maximum:	21 days	21 days	9 days
Cure to service:	5 days	24 hours	24 hours
Pot Life:	40 minutes	20 minutes	15 minutes
Sweat-in-time:		none required	

If maximum recoat time is exceeded, mechanically abrade film prior to applying additional coat.

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

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.

Minimum recommended surface preparation:

Iron & Steel: Immersion: SSPC-SP10/NACE 2, 2.0-4.0 mil (50-100 micron) sharp and angular profile [Medium (G) (ISO 8503-2)]

Concrete & Masonry: Secondary Containment: SSPC-SP13/NACE 6-4.3.1 or 4.3.2, or ICRI No. 310.2R, CSP 2-3

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HIGH TEMPERATURE, HIGH PRESSURE RESISTANT TANK LINING

APPLICATION

Plural Component Equipment

Pump	WIWA DUOMIX 2:1, Graco Extreme Mix, Graco XM, or Graco XP
Pressure	4000 psi minimum (276 bar)
Hose	3/8" ID (9.5 mm)
Tip	.021"-.025" (0.53-0.64 mm)
Pump heater setting	110°F-130°F (43°C-54°C) do not exceed 140°F (60°C)
Material temperature at gun tip	110°F-130°F (43°C-54°C) vary as needed

Brush ..... For stripe coating and repair only
Brush ..... Nylon/Polyester or Natural Bristle

Roller ..... For stripe coating and repair only
Cover ..... 3/8" woven with solvent resistant core

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

RECOMMENDED SYSTEMS

Dry Film Thickness / ct.		Mils	(Microns)
Steel, Immersion			
1 Ct.	Nova-Plate 325	20.0-40.0	(500-1000)
Steel, Non-Pressurized Immersion			
With hold primer			
1 Ct.	Macropoxy 240	1.0-1.5	(25-40)
	(as required for blast hold primer)		
1 Ct.	Nova-Plate 325	20.0-40.0	(500-1000)
Steel, Non-Pressurized Immersion			
Where brush applied Novolac Epoxy stripe coat required			
1 Ct.	Epo-Phen FF	2.0-3.0	(50-75)
1 Ct.	Nova-Plate 325	20.0-40.0	(500-1000)

NOTE: It is inevitable that film thickness in excess of that specified will be applied. In the case of Nova-Plate 325, spot-areas of 60 mils (1,500 microns) are acceptable, providing the 80:20 rule* is met.

*80% of all thickness measurements shall be greater than, or equal to the nominal dft and none of the remaining 20% measurements shall be below 0.8 x nominal dft.

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

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.

APPLICATION CONDITIONS

Temperature:	
Air & Surface:	50°F (10°C) minimum, 110°F (43°C) maximum
Relative humidity:	85% maximum

APPROVALS

- Meets the requirements of the API 652 guideline as a thick film reinforced lining when applied in accordance with API 653 inspections
- Tested and approved via 3rd party testing for NORSOK M-501, System No. 7C up to 180°C/356°F

ADDITIONAL NOTES

Repair of Pitted Tank Bottoms
Extensive, deep pitting:
Options:
Option 1 ... Apply a full wet coat, by spray application, of Nova-Plate 325. If necessary, follow with rubber squeegee to work material into and fill the pitted areas. After recommended drying time, apply a full coat of Nova-Plate 325 at recommended film thickness.
Option 2 ... Weld new steel plates, or use puddle welds, as required to repair pitted areas. Coat areas as recommended.
Shallow pitting, isolated areas: Same as number 1 above.

When using spray application, use a 50% overlap with each pass of the gun to avoid holidays, bare areas, and pinholes. If necessary, cross-coat 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 this can affect film build, appearance, and adhesion.

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 apply the material beyond recommended pot life.

Remove and solvent clean tip housing every 20-30 minutes.

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

Final cure must be confirmed in accordance with ASTM D5402, "Assessing the Solvent Resistance of Organic Coatings Using Solvent Rubs". Test shall consist of 50 double rubs with MEK. Test shall confirm no loss of DFT, and no coating residue on rubbing cloth.

Additional packaging available: 300 x 150 mL cartridges for repair.

HEALTH AND SAFETY

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.

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 Sheet.