



TANK ARMOR® SERIES 322

PRODUCT PROFILE

GENERIC DESCRIPTION	Modified Polyamine Epoxy
COMMON USAGE	An advanced generation, 100% solids, high build epoxy providing protection for the interior of steel storage tanks and vessels from various cargos including but not limited to crude oil and finished fuels. Unique curing mechanisms allow for single leg airless spray application.
COLORS	1234 Blue
FINISH	Semi-Gloss
SPECIAL QUALIFICATIONS	Series 322 conforms to API 652 for lining above ground storage tanks.

COATING SYSTEM

SURFACER/FILLER/PATCHER	Series 215. Note: For steel surfaces with isolated, heavy pitting, resurface the area with Series 215 prior to Series 322 application.
PRIMERS	Self-priming or Series 61, N69F, 161. Note: For surfaces with light to moderate pitting, priming the surface prior to the Series 322 application may help to prevent holidays in the cured film. Note: The following maximum recoat times apply when topcoating with Series 322; Series 61, 14 days; Series N69F and 161, 30 days. If this time limit is exceeded, or if Series N69F or 161 is exterior exposed more than 14 days, the primer must be uniformly scarified prior to topcoating. Note: Series N69F or 161 are for crude oil service only.

SURFACE PREPARATION

STEEL	Immersion Service: SSPC-SP10/NACE 2 Near-White Blast Cleaning or ISO Sa 2 1/2 Very Thorough Blast Cleaning with a minimum angular anchor profile of 3.0 mils. Note: For aggressive cargo exposures or immersion in elevated temperatures, an SSPC-SP5/NACE 1 or ISO Sa 3 Blast Cleaning to Visually Clean Steel with a minimum angular anchor profile of 3.0 mils may be required. Contact Tnemec Technical Services for more information.
WELDS	Remove weld spatter, burrs, or protrusions; remove and/or round sharp edges; and smooth rough welds prior to abrasive blasting. Welds should be ground to remove any irregularities and are considered ready for painting when a minimum finishing level of a C designation, as defined by NACE SP0178 latest revision, has been achieved. Note: A stripe coat of Series 61 or Series 322 should be applied to all welds, crevices, and sharp angles.
ALL SURFACES	Must be clean, dry and free of oil, grease, chalk and other contaminants.

TECHNICAL DATA

VOLUME SOLIDS	100% (mixed) †
RECOMMENDED DFT	16.0 to 40.0 mils (400 to 1015 microns) in one or two coats. Note: For steel surfaces with pitting, recommended DFT is 30 to 40 mils (760 to 1015 microns). Note: Depending on the degree of pitting, a prime coat of Series 61 or resurfacing with Series 215 may help alleviate the potential for holidays in the cured film.

CURING TIME

Temperature	To Touch	Dry Through	Minimum to Recoat	Return to Service	Maximum to Recoat
95°F (35°C)	2 1/2 hours	5 1/2 hours	4 hours	48 hours	7 days
75°F (24°C)	7 hours	18 hours	16 hours	48 hours	7 days
50°F (10°C)	24 hours	27 hours	32 hours	7 days	7 days

Note: These cure times are based on 20.0 mil (500 micron) dry film thickness. Cure time varies with surface temperature, air movement, humidity, and film thickness. **Ventilation:** When used as a tank lining or in enclosed areas, provide adequate ventilation during application and cure.

VOLATILE ORGANIC COMPOUNDS

Unthinned: 0.10 lbs/gallon (12 grams/litre)
Thinned 5%: 0.44 lbs/gallon (52 grams/litre) †

HAPS

Unthinned: 0.0 lbs/gal solids
Thinned 5%: 0.37 lbs/gal solids

THEORETICAL COVERAGE

1,604 mil sq ft/gal (39.4 m²/L at 25 microns). See APPLICATION for coverage rates. †

NUMBER OF COMPONENTS

Two: Part A (polyamine) and Part B (epoxy)

MIXING RATIO

By volume: One (Part A) to one (Part B).

PACKAGING

	PART A	PART B	When Mixed
Large Kit	5 gallon pail	5 gallon pail	10 gallons (37.85 L)
Medium Kit	6 gallons pail (partial fill)	3 gallon can (partial fill)	5 gallons (15.14 L)
Small Kit	1 gallon can (partial fill)	1 gallon can (partial fill)	1 gallon (3.79 L)

Large kit offered for plural component application.

NET WEIGHT PER GALLON

12.70 ± 0.25 lbs (5.76 ± .11 kg) (mixed) †

STORAGE TEMPERATURE

Minimum 20°F (-6°C) Maximum 110°F (43°C)

TEMPERATURE RESISTANCE

Chemical resistance varies depending on chemical exposure and temperature. Contact Tnemec Technical Services for more information.

SHELF LIFE

Part A: 12 months and Part B: 12 months at recommended storage temperature.

FLASH POINT - SETA

Part A and Part B: >200°F (97°C)

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HEALTH & SAFETY Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Material Safety Data Sheet for important health and safety information prior to the use of this product.
Keep out of the reach of children.

APPLICATION

COVERAGE RATES	Dry MILS (MICRONS)	Wet MILS (MICRONS)	Sq Ft/Gal (m ² /Gal)
	16.0 (400)	16.0 (400)	100 (9.3)
	30.0 (760)	30.0 (760)	53 (5.0)
	40.0 (1015)	40.0 (1015)	40 (3.7)

Allow for overspray and surface irregularities. Film thickness is rounded to the nearest 0.5 mil or 5 microns. Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating performance. †

MIXING Mix the entire contents of Part A and Part B separately. Scrape all of the Part A and Part B into a suitable container by using a flexible spatula. Use a variable speed drill with a PS Jiffy blade and mix the blended components for a minimum of two minutes. Apply the mixed material within the spray or pot life limits after agitation. For optimum application characteristics, material temperature should be between 70°F (21°C) and 80°F (27°C). **Note:** A large volume of material will gel quickly if not applied or reduced in volume. **Caution: Do not reseal mixed material. An explosion hazard may be created.**

THINNING May thin up to 5% or 6 fluid ounces per gallon with No. 2 Thinner. DO NOT thin in areas with strict extractable regulations.

SPRAY LIFE **Unthinned:** 25 minutes at 75°F (24°C)
Thinned 5%: 1 hour at 75°F (24°C) 30 minutes at 90°F (32°C)

APPLICATION EQUIPMENT

Airless Spray

Spray Gun	Pump Size	Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
Graco XHF, XTR7 or WIWA 500F	56:1, X50 or X60	0.019"-0.023" (483-585 microns)	5500-6000 psi (379-413 bar)	See Below	N/R

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.
Note: Remove all filters. Material needs to be gravity fed through a material hopper. Material will not feed through a suction tube. **Note:** If mixed material temperature in mass exceeds 150°F (66°C), immediately purge all spray equipment and flush and clean with solvent.
Plural Component Application: Contact Tnemec Technical Service for detailed equipment requirements.
Brush: Recommended for small areas only. Use high quality natural or synthetic bristle brushes.
Roller: Application not recommended.

SURFACE TEMPERATURE Minimum 50°F (10°C) Maximum 130°F (54°C)
 The surface temperature should be at least 5°F (3°C) above the dew point. Coating will not cure below minimum surface temperature. To avoid outgassing, concrete temperature should be stable or in a descending temperature mode.

MATERIAL TEMPERATURE Prior to application, the material temperature should be between 70°F and 80°F (21°C and 27°C). It is suggested the material be stored at these temperatures at least 48 hours prior to use. Temperature will affect the workability. Cool temperatures increase viscosity and decrease workability. Warm temperatures will decrease viscosity and shorten pot life.

HOLIDAY TESTING If required by the project specifications, holiday testing should be performed in accordance with NACE SP0188. Contact Tnemec Technical Service for voltage recommendations and curing parameters prior to testing.

CLEANUP Flush and clean all equipment immediately after use with Tnemec No. 4 Thinner. Use Tnemec No. 68 Thinner when needed to comply with VOC regulations.

† Values may vary with color.

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