



# Exterior Coating Submittal

## *Tnemec L140F-1211 epoxy shop coating*

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Exterior Coating:	Pota-Pox® Plus Series L140F-1211 Epoxy shop coating
Manufacturer:	Tnemec
Surface Prep:	Remove oil, grease, and other surface contaminants per NAPF 500-03-01 Abrasive blast clean per NAPF 500-03-04 for pipe, NAPF 500-03-05 for cast fittings
Thickness:	3-5 mils Nominal DFT

### Notes:

- C&B Piping applies this coating per the Tnemec recommendations attached on the PDS.
- The shop coating provides some temporary protection during loading, transit, unloading, jobsite handling, and jobsite storage. After shipment from C&B, the shop coat will be subsequently affected by a combination of physical and environmental conditions outside of our control. If products are properly handled and stored on the jobsite, our shop coat may meet the standards to be used as the system primer as long as the application of subsequent field applied coatings are to be performed within 30 days of receipt of products. All subsequent field applied coatings must strictly follow the recommendation of the coatings manufacturer.
- The applicability of the shop coat to be subsequently used as the primer for a paint system, and the extent of testing and surface prep required at that time, is to be determined by the contractor or field paint subcontractor applying the paint system. Please refer to the PDS attached for maximum recoat window based on conditions.
- If the shop coating is not desired, it can be ordered as BARE, or fully removed by field coatings contractor per applicable NAPF 500-03 standards at cost by others.

### Handling & Storage:

- Careful handling and effective storage are critical in limiting physical and environmental damage to the shop coating. Shop coatings exposed to weather and/or chemical exposure will limit the maximum recoat window and potentially cause adhesion issues.



## POTA-POX® PLUS SERIES L140F

## PRODUCT PROFILE

GENERIC DESCRIPTION	Polyamidoamine Epoxy
COMMON USAGE	Versatile epoxy coating (factory accelerated version of L140) for protection and finishing of steel. It has excellent resistance to abrasion and is suitable for immersion service. This product can be used for lining storage tanks that contain demineralized, deionized, distilled, or potable water.
COLORS	<del>1255 Beige, 1211 Red, 158L Tank White.</del> <b>Note:</b> Epoxies chalk with extended exposure to sunlight. Lack of ventilation, incomplete mixing, miscatalyzation or the use of heaters that emit carbon dioxide and carbon monoxide during application and initial stages of curing may cause yellowing to occur.
SPECIAL QUALIFICATIONS	Certified by NSF International in accordance with NSF/ANSI/CAN Std. 61 and the extraction requirements of NSF/ANSI/CAN 600. Series L140F is qualified for interior use on tanks and fittings. Reference Tnemec's certified product listing at <a href="http://www.nsf.org">www.nsf.org</a> for additional details.

## COATING SYSTEM

SURFACER/FILLER/PATCHER	Series 215, 217, 218
PRIMERS	Self-priming, or Series 1, 91-H <sub>2</sub> O, 94-H <sub>2</sub> O, N140, N140F, L140, V140, V140F, 141
TOPCOATS	<b>Interior:</b> Series 21, 22, FC22, L140, L140F, N140, N140F, V140, V140F, 141 <b>Exterior:</b> Series 22, 27, 66, L69, L69F, N69, N69F, V69, V69F, 73, 118, L140, L140F, N140, N140F, V140, V140F, 141, 156, 157, 161, 180, 181, 700, V700, 701, V701, 1026, 1028, 1029, 1078, 1078V, 1080, 1081, 1094, 1095, 1096, 1224. <b>Note:</b> When topcoating with Series 700, V700, 701, or V701, an intermediate coat of Series 73, 1095, or 1096 is required. <b>Note:</b> The following maximum recoat times apply; Series 1094, 1095, 14 days. <b>Note:</b> The following recoat times apply for Series L140F: Immersion Service—Surface must be scarified after 30 days. Atmospheric Service—After 30 days, scarification or an epoxy tie-coat is required. Contact your Tnemec representative for specific recommendations.

## SURFACE PREPARATION

STEEL	<del><b>Immersion Service:</b> 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 1.5 mils.</del> <del><b>Non-Immersion Service:</b> SSPC SP6/NACE 3 Commercial Blast Cleaning or ISO Sa 2 Thorough Blast Cleaning with a minimum angular anchor profile of 1.5 mils. <b>Note:</b> Commercial Blast Cleaning generally produces the best coating performance for this exposure. If conditions will not permit this, in moderate exposures Series L140F may be applied to SSPC SP2 or SP3 Hand or Power Tool Cleaned Surfaces (SSPC Rust Grade Condition C).</del>
CAST/DUCTILE IRON	All external surfaces of ductile iron pipe and fittings shall be delivered to the application facility without asphalt or any other protective lining on the exterior surface. All oils, small deposits of asphalt paint, grease, and soluble deposits should be removed and uniformly abrasive blasted using angular abrasive in accordance with NAF 500-03-04: External Pipe Surface condition. When viewed without magnification, the exterior surfaces shall be free of all visible dirt, dust, loose annealing oxide, rust, mold coating and other foreign matter. Any area where rust reappears before application shall be reblasted. The surface shall contain a minimum angular anchor profile of 1.5 mils (38.1 microns) (Reference NACE RP0287 or ASTM D 4417, Method C).
CONCRETE	<del>Allow new cast in place concrete to cure a minimum of 28 days at 75°F (24°C). Verify concrete dryness in accordance with ASTM F 1869 "Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride" (moisture vapor transmission should not exceed three pounds per 1,000 square feet in a 24 hour period), F 2170 "Standard Test Method for Determining Relative Humidity in Concrete using in-situ Probes" (relative humidity should not exceed 80%), or D 4263 "Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method" (no moisture present). Prepare concrete surfaces in accordance with NACE No. 6/SSPC SP13 Joint Surface Preparation Standards and ICRI Technical Guidelines. Abrasive blast, shot blast, water jet or mechanically abrade concrete surfaces to remove laitance, curing compounds, hardeners, sealers and other contaminants and to provide an ICRI CSP 2-3 surface profile. Large cracks, voids and other surface imperfections should be filled with a recommended filler or surfacer.</del>
PAINTED SURFACES	<b>Non-Immersion Service:</b> Ask your Tnemec representative for specific recommendations.
PRIMED SURFACES	<b>Immersion Service:</b> Scarify the Series L140F prime coat surface by abrasive-blasting with a fine abrasive before topcoating if the Series L140F prime coat has been in exterior exposure for 30 days or longer and Series 66, L69, L69F, N69, N69F, V69, N69 or 161 is the specified topcoat.
ALL SURFACES	Must be clean, dry and free of oil, grease and other contaminants.

## TECHNICAL DATA

VOLUME SOLIDS	66.0 ± 2.0% (mixed) †
RECOMMENDED DFT	2.0 to 10.0 mils (50 to 255 microns) per coat. <b>Note:</b> Reference the NSF website at <a href="http://www.nsf.org">www.nsf.org</a> for details on the maximum allowable DFT. <b>Note:</b> Number of coats and thickness requirements will vary with the substrate, application method, and exposure. Contact your Tnemec representative.

## CURING TIME AT 5 MILS DFT

Temperature	To Handle	To Recoat	Immersion
75°F (24°C)	4 hours	5 hours	7 days
65°F (18°C)	7-8 hours	9-11 hours	8 days
55°F (13°C)	12-14 hours	16-20 hours	9-10 days
45°F (7°C)	18-22 hours	28-32 hours	12-13 days
35°F (2°C)	28-32 hours	46-50 hours	16-18 days

Curing time varies with surface temperature, air movement, humidity and film thickness. **Ventilation:** When used in enclosed areas, provide adequate ventilation during application and cure. **Note:** Refer to product listings on [www.nsf.org](http://www.nsf.org) for specific potable water return to service information.

# POTA-POX® PLUS | SERIES L140F

## VOLATILE ORGANIC COMPOUNDS

**Unthinned:** 0.75 lbs/gallon (90 grams/litre) (TBAC exempt)  
**Unthinned:** 1.02 lbs/gallon (122 grams/litre)  
**Thinned 5% (No. 49 Thinner):** 0.75 lbs/gallon (90 grams/litre) (TBAC exempt)  
**Thinned 5% (No. 49 Thinner):** 1.01 lbs/gallon (122 grams/litre) †

## HAPS

**Unthinned:** 0.1 lbs/gal solids  
**Thinned 5% (No. 49 Thinner):** 0.1 lbs/gal solids

## THEORETICAL COVERAGE

1,059 mil sq ft/gal (26.0 m<sup>2</sup>/L at 25 microns). See APPLICATION for coverage rates. †

## NUMBER OF COMPONENTS

Two: Part A (amine) and Part B (epoxy) — One (Part A) to one (Part B) by volume.

## PACKAGING

	Part A	Part B	Yield (mixed)
Large Kit	5 gallon pail	5 gallon pail	10 gallons (37.9 L)
Small Kit	1 gallon can	1 gallon can	2 gallons (7.6 L)

## NET WEIGHT PER GALLON

14.62 ± 0.25 lbs (6.63 ± 0.11 kg) (mixed) †

## STORAGE TEMPERATURE

Minimum 20°F (-7°C) Maximum 110°F (43°C)  
 For optimum application properties, material temperature should be above 60°F (16°C) prior to application.

## TEMPERATURE RESISTANCE

(Dry) Continuous 250°F (121°C) Intermittent 275°F (135°C)

## SHELF LIFE

Part A: 24 months; Part B: 12 months at recommended storage temperature.

## FLASH POINT - SETA

Part A: 98°F (37°C) Part B: 95°F (35°C)

## HEALTH &amp; 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 <sup>2</sup> /Gal)
Suggested	<del>6.0 (150)</del>	9.0 (230)	176 (16.4)
Minimum	2.0 (50)	3.0 (75)	529 (49.2)
Maximum	10.0 (255)	15.0 (375)	106 (9.8)

**Note:** Roller or brush application requires two or more coats to obtain recommended film thickness. Allow for overspray and surface irregularities. Wet 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. Reference the NSF website at [www.nsf.org](http://www.nsf.org) for details on the maximum allowable DFT. †

## MIXING

Start with equal amounts of Series L140F Parts A and B. Power mix contents of each container separately, making sure no pigment remains on the bottom. Pour a measured amount of Part B into a clean container large enough to hold both components. Add an equal volume of Part A to Part B while under agitation. Continue agitation until the two components are thoroughly mixed. **Note:** Both components must be above 50°F (10°C) prior to mixing. For optimum mixing and application properties, the material should be above 60°F (16°C).

Thin by volume and thoroughly mix. Failure to thoroughly mix the Part A and Part B components prior to thinning can affect product's gloss and performance. Do not use mixed material beyond pot life limits. **Note:** For application to surfaces between 35°F to 50°F (2°C to 10°C), allow mixed material to stand 30 minutes and restir before using.

## THINNING

Use No. 49 Thinner. For air spray, thin up to 5% or 1/4 pint (190 mL) per gallon. No thinning necessary for airless spray. For roller or brush application, thin up to 5% or 1/4 pint (190 mL) per gallon. **Caution: Series L140F NSF certification is based on thinning with No. 49 Thinner only.** Use of any other thinner voids NSF/ANSI/CAN Std 61.

## POT LIFE

2 hours at 50°F (10°C) 1 hour at 75°F (24°C) 30 minutes at 100°F (38°C)

## SPRAY LIFE

30 minutes at 75°F (24°C)

**Note:** Spray application after listed times will adversely affect ability to achieve recommended dry film thickness.

## APPLICATION EQUIPMENT

## Air Spray

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss JGA	E	704	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	50-80 psi (3.4-5.5 bar)	10-20 psi (0.7-1.4 bar)

Low temperatures or longer hoses require higher pot pressure.

## Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.015"-0.019" (380-485 microns)	3500-5100 psi (241-351 bar)	1/4" or 3/8" (6.4 or 9.5 mm)	60 mesh (250 microns)

Use appropriate tip/atomizing pressure for equipment, applicator technique, and weather conditions.

**Roller:** Use a 3/8" or 1/2" (9.5 mm or 12.7 mm) synthetic woven nap roller cover. Use longer nap to obtain penetration on rough or porous surfaces.

**Brush:** Recommended for small areas only. Use high-quality natural or synthetic bristle brushes.

## SURFACE TEMPERATURE

Minimum 35°F (2°C) Maximum 135°F (57°C)  
 The surface should be dry and at least 5°F (3°C) above the dew point. Coating will not cure below minimum surface temperature.

POTA-POX<sup>®</sup> PLUS | SERIES L140F**CLEANUP**

Flush and clean all equipment immediately after use with the recommended thinner or MEK.

† Values may vary with color.

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