

PRODUCT PROFILE

<b>GENERIC DESCRIPTION</b>	Modified Polyamine Epoxy
<b>COMMON USAGE</b>	High solids coating offering high-build edge protection and excellent corrosion resistance. For use on the interior and exterior of steel or concrete tanks, reservoirs, pipes, valves, pumps, and equipment, as well as other steel and concrete substrates. It provides excellent resistance to abrasion and is suitable for immersion service in potable water, crude oil, and finished fuels.
<b>COLORS</b>	Available in the following standard industrial colors: 1211 Red, 1253 Gray, 1255 Beige, 1256 Blue and 35GR Black. <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. <b>Important: Due to the product's curing agent chemistry, color variations can be pronounced. However, these changes in color are aesthetic only and will not affect performance or certifications. Contact your Tnemec representative for more information.</b>
<b>SPECIAL QUALIFICATIONS</b>	Certified by <b>NSF International</b> in accordance with <b>NSF/ANSI Std. 61</b> . Seven day ambient air cured Series 141 is qualified for use on tanks and reservoirs of 500 gallons (1893 L) capacity and greater, pipes 22 inches (56 cm) in diameter and greater, fittings 1 inch (2.54 cm) in diameter and greater, valves 4 inches (10 cm) in diameter and greater, and pumps 4 inches (10 cm) in diameter and greater. When cured for 30 days at ambient air temperature, Series 141 is qualified for use on pipes 10 inches (25.4 cm) in diameter and greater, fittings 3/4 inch (1.9 cm) in diameter and greater, valves 2 1/2 inches (6.35 cm) in diameter and greater, and pumps 4 inches (10 cm) in diameter and greater. Reference the "Search Listings" section of the NSF website at <a href="http://www.nsf.org">www.nsf.org</a> for details on the maximum allowable DFT, certified colors, and primer and topcoat compatibility for use in potable water.  Series 141 conforms to API 652 for lining above ground storage tanks. Contact your Tnemec representative for additional information.
<b>PERFORMANCE CRITERIA</b>	Extensive test data available. Contact your Tnemec representative for specific test results.

COATING SYSTEM

<b>PRIMERS</b>	<b>Steel:</b> Self-priming, 1, 20, FC20, 27, 27WB, 37H, L69, L69F, N69, N69F, V69, V69F, 90E-92, 90G-1K97, 90-97, H90-97, 90G-98, 91-H <sub>2</sub> O, H91-H <sub>2</sub> O, 94-H <sub>2</sub> O, 135, L140, L140F, N140, N140F, V140, V140F, 394, 530 <b>Concrete:</b> Self-priming, 20, FC20, 27, 27WB, L69, L69F, N69, N69F, V69, V69F, L140, L140F, N140, N140F, V140, V140F, 215, 217, 218 <b>CMU:</b> Self-priming or Series 130, 215, 218, 1254
<b>TOPCOATS</b>	<b>Exterior:</b> Series 73, 180, 1028, 1029, 1074, 1074U, 1075, 1075U. <b>Note:</b> The following maximum recoat time applies when using Series 73, 180, 1074, 1074U, 1075, or 1075U: fourteen (14) days. If this time limit is exceeded, Series 141 must be uniformly scarified prior to topcoating.

SURFACE PREPARATION

<b>PRIMED STEEL</b>	<b>Immersion Service:</b> Scarify the Series 20, FC20, L69, L69F, N69, N69F, V69, V69F, L140, L140F, N140, N140F, V140 or V140F prime coat surface by brush-blasting with fine abrasive before topcoating if it has been exterior exposed for 30 days or longer and 141 is the specified topcoat.
<b>STEEL</b>	<b>Immersion Service:</b> SSPC-SP10/NACE 2 Near-White Blast Cleaning with a minimum angular anchor profile of 2.0 mils <b>Non-Immersion Service:</b> SSPC-SP6/NACE 3 Commercial Blast Cleaning with a minimum angular anchor profile of 2.0 mils. <b>Note:</b> Abrasive blast cleaning generally produces the best coating performance. If conditions will not permit this, Series 141 may be applied to SSPC-SP2 or SP3 Hand or Power Tool Cleaned surfaces.
<b>CONCRETE</b>	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 a minimum ICRI-CSP 3 surface profile. Large cracks, voids and other surface imperfections should be filled with a recommended filler or surfacer.
<b>ALL SURFACES</b>	Must be clean, dry and free of oil, grease, chalk and other contaminants.

TECHNICAL DATA

<b>VOLUME SOLIDS</b>	82% ± 2.0% (mixed) †
<b>RECOMMENDED DFT</b>	4.0 to 18.0 mils (100 to 455 microns) in a one coat application. <b>Note:</b> Thickness requirements will vary with substrate, application method and exposure. Contact your Tnemec representative. Maximum dry film thickness for NSF exposure is 18.0 mils.

# EPOXOLINE® | SERIES 141

**CURING TIME AT 5 MILS DFT**

Potable Water Applications:

Temperature	To Handle	To Topcoat	Immersion
90°F (32°C)	3 hours	4 hours ‡	7 days
75°F (24°C)	4 hours	5 hours ‡	7 days
65°F (18°C)	7 hours	9 hours ‡	8 days
55°F (13°C)	13 hours	18 hours ‡	9 days
45°F (7°C)	20 hours	24 hours ‡	13 days
40°F (4°C)	22 hours	28 hours ‡	18 days
35°F (0°C)	64 hours	72 hours ‡	30 days

Curing time varies with surface temperature, air movement, humidity and film thickness.

‡ **Note:** Specific application requirements, including cure schedules and environmental conditions, must be followed when topcoating Series 141. Contact Tnemec Technical Service for detailed instructions. **Note:** Maximum recoat time with itself is seven days. **Note:** For one-coat pipe and valve applications, allow 30 days cure at 75°F (24°C) prior to immersion. Refer to product listing on [www.NSF.org](http://www.NSF.org) for specific potable water return to service information.

Non-Potable Water Applications:

Temperature	To Handle	To Topcoat	Immersion
75°F (24°C)	3 hours	4 hours ‡	5 days
40°F (4°C)	4 hours	5 hours ‡	14 days

Cure time varies with surface temperature, air movement, humidity and film thickness.

‡ **Note:** Specific application requirements, including cure schedules and environmental conditions, must be followed when topcoating Series 141. Contact Tnemec Technical Service for detailed instructions. **Note:** Maximum recoat time with itself is seven days.

**VOLATILE ORGANIC COMPOUNDS**

EPA Method 24

**Unthinned:** 0.90 lbs/gallon (107 grams/litre)

**Thinned 5% (No. 60 Thinner):** 1.21 lbs/gallon (145 grams/litre)

**Thinned 10% (No. 4 Thinner):** 1.45 lbs/gallon (173 grams/litre) †

**HAPS**

**Unthinned:** 1.27 lbs/gal solids **Thinned 5% (No. 60):** 1.28 lbs/gal solids **Thinned 10% (No. 4):** 1.95 lbs/gal solids

**THEORETICAL COVERAGE**

1,315 mil sq ft/gal (32.2 m<sup>2</sup>/L at 25 microns). See APPLICATION for coverage rates. †

**NUMBER OF COMPONENTS**

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

**MIXING RATIO**

By volume: Two (Part A) to one (Part B)

**PACKAGING**

	PART A (Partially Filled)	PART B (Partially Filled)	When Mixed
Large Kit	1-6 gallon pail	1-3 gallon pail	5 gallons
Small Kit	1-1 gallon can	1-1 gallon can	1 gallon

**NET WEIGHT PER GALLON**

13.33 ± 0.25 lbs (6.05 ± .11 kg) †

**STORAGE TEMPERATURE**

Minimum 20°F (-7°C) Maximum 110°F (43°C)

Prior to application, the material temperature should be above 60°F (16°C). It is suggested the material be stored at this temperature at least 48 hours prior to use.

**TEMPERATURE RESISTANCE**

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

**SHELF LIFE**

12 months at recommended storage temperature.

**FLASH POINT - SETA**

Part A: 91°F (33°C) Part B: 111°F (44°C)

**HEALTH & SAFETY**

This product contains 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)
Minimum	4.0 (100)	5.0 (125)	329 (30.5)
Maximum	18.0 (455)	22.0 (560)	73 (6.8)

**Note:** Maximum of 18.0 mils DFT in one coat. **Maximum total dry film thickness for NSF exposure is 18.0 mils.** 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 "Search Listings" section of the NSF website at [www.nsf.org](http://www.nsf.org) for details on the maximum allowable DFT. †

**MIXING**

Mix the entire contents of Part A and Part B separately. Scrape all of the Part B into the Part A pail 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 pot life limits after agitation. Both components must be above 50°F (10°C) prior to mixing. For optimum application properties, the material temperature should be above 60°F (16°C). For applications to surfaces between 35°F to 50°F (2°C to 10°C) allow mixed material to stand 30 minutes and restir before use. **Note:** A large volume of material will set up quickly if not applied or lessened in mass. **Caution: Do not reseal mixed material. An explosion hazard may be created.**

**THINNING**

**Caution: Do not add thinner to Part A prior to mixing with Part B.** For airless spray, brush or roller, thin up to 5% per gallon with No. 4 Thinner or No. 60 Thinner. For air spray, thin up to 10% per gallon with No. 4 or No. 60 Thinner.

**POT LIFE**

2 hours at 77°F (21°C) 1 hour at 90°F (32°C)

**SPRAY LIFE**

1 hour at 77°F (21°C) 30 minutes at 90°F (32°C)

# EPOXOLINE® | SERIES 141

**APPLICATION EQUIPMENT**

**Air Spray**

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss JGA	E	765 or 704	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	75-100 psi (5.2-6.9 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
0.017"-0.021" (430-535 microns)	3000-3800 psi (207-262 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:** Roller application optional when environmental restrictions do not allow spraying. Use 3/8" or 1/2" (9.5 mm to 12.7 mm) synthetic woven nap covers.

**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.

**CLEANUP**

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

† Values may vary with color.

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