



T N E M E C

EPOXOLINE WB SERIES 1224

PRODUCT PROFILE

GENERIC DESCRIPTION

Inorganic Hybrid Water-Based Epoxy

COMMON USAGE

An advanced generation, water-based epoxy coating that is low odor, low VOC, and specially formulated with corrosion-inhibitive properties for the long-term protection of steel substrates. Excellent when used as a primer or intermediate coat within a high-performance coating system. Offers excellent adhesion to metal substrates and provides exceptional corrosion protection up to 400°F (204°C). Formula protected under U.S. patent.

COLORS

32GR Light Gray. **Note:** Additional colors may be available. Contact your Tnemec representative for more information.

FINISH

Flat

SPECIAL QUALIFICATIONS

Series 1224 at 4.0 - 6.0 mils meets AISC requirements of Class A surface with a mean slip coefficient no less than 0.30 and a tension creep not in excess of 0.015 inches (0.38 mm).

COATING SYSTEM

PRIMERS

Steel: Self-priming or Series 1, 90G-1K97, 90-75, 90-97, H90-97, 91-H₂O, 94-H₂O, 394.
Note: Series 1, 90G-1K97, 90-97, H90-97, 91-H₂O, 94-H₂O and 394 must be exterior exposed for one day prior to topcoating.
Galvanized Steel: Self-priming

TOPCOATS

Series 30, 66, 72, 73, 113, 114, 115, 156, 157, 158, 161, 180, 181, 270, 273, 280, 281, 287, 290, 291, 297, 740, 750, 971, 1026, 1028, 1029, 1070, 1070V, 1071, 1071V, 1072, 1072V, 1074, 1074U, 1075, 1075U, 1077, 1078, 1080, 1081, 1094, 1095, 1096.
Note: When topcoating with Series 740 or 750 over 1224, a 90 day maximum recoat time applies. An extended cure time is needed when topcoating with Series 297, 1080 or 1081. Reference additional recoat times listed below the cure table.
Note: More than one finish coat may be required to achieve uniform and desired gloss level.

SURFACE PREPARATION

STEEL

SSPC-SP6/NACE 3 Commercial Blast Cleaning
Note: Abrasive blast cleaning generally produces the best coating performance. If conditions will not permit this, Series 1224 may be applied to SSPC-SP2 or SP3 Hand or Power Tool Cleaned surfaces.

GALVANIZED STEEL

Surface preparation recommendations will vary depending on substrate and exposure conditions. Consult the latest version of Tnemec Technical Bulletin 10-78 or contact your Tnemec representative or Tnemec Technical Services.

NON-FERROUS METAL

Contact Tnemec Technical Services for more information.

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 NAPP 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).

PAINTED SURFACES

Test patch is recommended in accordance with Technical Bulletin 98-10 latest revision.

PRIMED SURFACES

Non-Immersion Service: Ask your Tnemec representative for specific recommendations.

ALL SURFACES

Must be clean, dry and free of oil, grease and other contaminants.

TECHNICAL DATA

VOLUME SOLIDS

65% (mixed)

RECOMMENDED DFT

4.0 to 8.0 mils (100 to 205 microns) per coat.
Note: Two coats may be required for aggressive exposures.

CURING TIME

Temperature	To Touch	To Handle	To Recoat†
120°F (49°C)	15 minutes	1 hour	2 hours
95°F (35°C)	30 minutes	2 hours	3 hours
75°F (24°C)	1 hour	6 hours	8 hours
55°F (13°C)	2 hours	8 hours	16 hours
45°F (7°C)	3 hours	10 hours	24 hours
35°F (2°C)	4 hours	3 days	4 days

† The following minimum recoat times apply when topcoating with Series 297, 1080 or 1081: 95°F (35°C) 12 hours, 75°F (24°C) 24 hours and 55°F (13°C) 24 hours, 45°F (7°C) 4 days, 35°F (2°C) 7 days. Curing time varies with surface temperature, air movement, humidity and film thickness. Substrates containing integral water repellants can prolong cure times.

VOLATILE ORGANIC COMPOUNDS

Unthinned: 0.01 lbs/gallon (1 gram/litre)

HAPS

0.00 lbs/gal solids

THEORETICAL COVERAGE

1,049 sq ft/gal (25.7 m²/L at 25 microns). See APPLICATION for coverage rates.

NUMBER OF COMPONENTS

Two: Part A and Part B

MIXING RATIO

Two (Part A) to One (Part B) by volume

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PACKAGING

KIT CONSISTS OF:

	PART A (Partially Filled)	PART B (Partially Filled)	Yield (mixed)
Large Kit	3.5 gal pail	6 gal pail	5 gallons (18.9 L)
Small Kit	2 gal pail	3 gal pail	2 gallons (7.5 L)

NET WEIGHT PER GALLON

14.71 ± 0.25 lbs (6.67 ± .11 kg)

STORAGE TEMPERATURE

Minimum 35°F (2°C) Maximum 110°F (43°C)
Protect from freezing

TEMPERATURE RESISTANCE

(Dry) Continuous 375°F (190°C) Intermittent 400°F (204°C)

SHELF LIFE

12 months at recommended storage temperature.

FLASH POINT - SETA

Part A: >230°F (110°C) Part B: >230°F (110°C)

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 (m²/Gal)
Suggested	6.0 (150)	9.0 (230)	175 (16.2)
Minimum	4.0 (100)	6.0 (150)	262 (24.4)
Maximum	8.0 (205)	12.0 (305)	131 (12.2)

(1) Note for Steel: 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 thickness may adversely affect coating performance.

MIXING

Power mix contents of each container, making sure no pigment remains on the bottom. Add the contents of the can marked Part A to Part B while under mechanical agitation. During mixing, scrape the container wall to aid in complete blending of the two components. Continue agitation until the two components are thoroughly mixed. Thin by volume and thoroughly mix. Do not use mixed material beyond pot life limits. **Note:** Both components should be above 50°F (10°C) prior to mixing. **Note:** If using Series 44-715 High Temperature Additive, reference the Series 44-715 product data sheet for mixing instructions.

THINNING

Use cool, clean tap water. For airless spray, roller or brush applications, thin 15% or 19.2 ounces per gallon. **Caution: Thinning with high temperature water will significantly reduce the pot life. For best results, water temperature should not exceed 80°F (27°C).**

POT LIFE

2 hours at 70°F (21°C) 1 hour at 95°F (35°C)

APPLICATION

For best results when applying to surfaces exceeding 150°F (66°C), Series 1224 should be spray applied in mist coats. Reference Surface Temperature for additional information.

APPLICATION EQUIPMENT

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.019"-0.023" (483-584 microns)	3000-4500 psi (207-310 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 synthetic woven nap cover. For smooth surfaces use 3/8" to 1/2" (9.5 mm to 12.7 mm). To obtain proper penetration for rough or porous surfaces, use a longer nap cover. Smooth out build-up at laps.

Brush: Use a stiff nylon brush. Work material into voids and avoid brushing out too thin.

SURFACE TEMPERATURE

Minimum 35°F (2°C), optimum 65°F to 80°F (18°C to 27°C), maximum of 200°F (93°C). The substrate temperature should be at least 5°F (3°C) above the dew point. Coating will not cure below minimum surface temperature. **Note:** When surface temperatures exceed 150°F (66°C), Series 44-715 High Temperature Additive must be used. Reference the Series 44-715 product data sheet for additional information.

MATERIAL TEMPERATURE

For optimum application and handling, the material temperature during application should be between 65°F and 85°F (18°C and 29°C). Temperature will affect the workability. Cool temperatures increase viscosity and decrease workability. Warm temperatures will decrease viscosity and shorten pot life.

CLEANUP

Flush out and clean all equipment immediately after use with water, followed by a final flush with MEK or Methyl Acetate.

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