



PRODUCT PROFILE

GENERIC DESCRIPTION	Inorganic Hybrid Water-Based Epoxy
COMMON USAGE	A unique, low odor, low VOC, water-based epoxy coating featuring HydroLink curing technology for exceptional durability and corrosion resistance. Used for the protection and finishing of steel and concrete structures including structural steel, tanks, pipes, and equipment. Superior wetting for marginally prepared steel and tightly adhered existing coatings. This coating is ideally suited for steel fabrication and OEM applications, with fast-curing and rapid handling properties. Series 27WB exhibits low yellowing and good color stability in whites and light tone colors. Formula protected under U.S. patent.
COLORS	1255 Beige, 00WH Tnemec White, 39BL Delft Blue, 35GR Black, 33GR Gray. Other colors may be available, contact your Tnemec representative. Note: This coating can exhibit color change when subjected to sunlight. If this coating is being used as a finish coat, and exposed to UV light in exterior exposure, caution should be taken when selecting colors. Contact your Tnemec representative for more information.
FINISH	Satin
SPECIAL QUALIFICATIONS	Series 27WB was tested in accordance with, and passed, the California Department of Public Health CDPH/EHLB/Standard Method Version 1.1, 2010 emissions testing and meets qualifications of LEED v4, Collaborative for High Performance Schools, and Living Building Challenge.
PERFORMANCE CRITERIA	Contact your Tnemec representative for specific test results.

COATING SYSTEM

PRIMERS	Steel: Self-priming or Series 1, 66, 66HS, L69, L69F, N69, N69F, 90G-1K97, 90-97, H90-97, 91-H ₂ O, 94-H ₂ O, 161, 161HS, 394. Note: Series 1, 90G-1K97, 90-97, H90-97, 91-H ₂ O, 94-H ₂ O and 394 must be exterior exposed for 24 hours prior to topcoating. Galvanized Steel: Self-priming Concrete: Self-priming, 215, 217, 218, 1254 CMU: Self-priming, 130, 215, 1254 Drywall: Self-priming, 151
TOPCOATS	Series 30, 66HS, 72, 73, 113, 114, 115, 156, 157, 158, 161HS, 180, 181, 270, 273, 280, 281, 287, 290, 291, 297•, 406, 435, 436, 446, 740, 750, 1026, 1028, 1029, 1070, 1070V, 1071, 1071V, 1072, 1072V, 1074, 1074U, 1075, 1075U, 1077, 1078, 1080•, 1081•. Note: When topcoating with Series 740 or 750 over 27WB, 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	Immersion Service: SSPC-SP10/NACE 2 Near-White Blast Cleaning. Note: For immersion service, must be primed with either Series 1, 66, 66HS, L69, L69F, N69, N69F, 90G-1K97, 90-97, H90-97, 91-H ₂ O, 94-H ₂ O, 161 or 161HS. Non-Immersion Service: SSPC-SP6/NACE 3 Commercial Blast Cleaning Note: Abrasive blast cleaning generally produces the best coating performance. If conditions will not permit this, Series 27WB may be applied to SSPC-SP2 or SP3 Hand or Power Tool Cleaned surfaces (SSPC Rust Grade Condition C).
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.
CAST/DUCTILE IRON	Contact your Tnemec representative or Tnemec Technical Services.
CONCRETE	Allow new concrete to cure 28 days. For optimum results and/or immersion service, abrasive blast referencing SSPC-SP13/NACE 6, ICRI CSP 2-4 Surface Preparation of Concrete and Tnemec's Surface Preparation and Application Guide.
CMU	Allow mortar to cure for 28 days. Prepare in accordance with SSPC-SP13/NACE 6 to level protrusions and mortar spatter and remove other contaminants.
PAINTED 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	100% (mixed) †
RECOMMENDED DFT	3.0 to 14.0 mils (75 to 350 microns) per coat. Note: Number of coats and thickness requirements will vary with substrate, application method and exposure. Contact your Tnemec representative.

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

Curing time varies with surface temperature, air movement, humidity and film thickness. For immersion service cure a minimum of 24 hours at 75°F (24°C). † The following minimum recoat times apply when topcoating with Series 297, 1080 or 1081: 95°F (35°C) 12 hours, 75°F (24°C) and 55°F (13°C) 24 hours, 45°F (7°C) 4 days, 35°F (2°C) 7 days. **Note:** For faster cure in temperatures down to 35°F (2°C), add No. 44-700 Epoxy Accelerator, see separate product data sheet for cure information. **Note:** The use of Series 44-700 Accelerator is not recommended when temperatures exceed 75°F (24°C).

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VOLATILE ORGANIC COMPOUNDS

Unthinned: 0.01 lbs/gallon (0.9 grams/litre) †

HAPS

0 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 and Part B (One Part A to One Part B by volume.)

PACKAGING

KITS CONSIST OF:

	PART A	PART B	Yield (mixed)
Medium Kit	2 gal pail	6 gal pail (partial fill)	4 gallons (15.1L)
Small Kit	1 gallon can	3 gallon can (partial fill)	2 gallons (7.56L)

NET WEIGHT PER GALLON

14.25 ± 0.25 lbs (6.46 ± .11 kg) (mixed) †

STORAGE TEMPERATURE

Minimum 40°F (4°C) Maximum 90°F (32°C)

TEMPERATURE RESISTANCE

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

SHELF LIFE

Part A: 12 months; Part B: 9 months at recommended storage temperature.

FLASH POINT - SETA

Part A: 147°F (64°C) Part B: >212°F (100°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

Unthinned

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m²/Gal)
Minimum	6.0 (150)	6.0 (150)	267 (24.8)
Maximum	10.0 (250)	10.0 (250)	160 (14.9)

Thinned 20%

	Dry Mils (Microns)	Wet Mils (Microns)	Sq Ft/Gal (m²/Gal)
Minimum	3.0 (75)	3.5 (90)	481 (44.7)
Maximum	14.0 (355)	17.0 (430)	95 (8.8)

Note: Roller or brush application may require 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.

MIXING

Power mix the contents of the container marked Part B, 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 for a minimum of two minutes until the two components are thoroughly mixed. If using Series 44-700 accelerator, slowly add one (1) ounce of 44-700 per mixed gallon of Series 27WB while under agitation. **Note:** The use of more than the recommended amount of 44-700 will adversely affect performance.

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. A clean mixing blade devoid of paint buildup is needed after each kit to ensure proper mixing of components. For optimum mixing and application properties, the material temperature should be between 70°F and 85°F (21°C and 29°C).

THINNING

For spray, brush or roller application thin 15% to 20% per gallon with clean tap water. **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

Without 44-700: 2 1/2 hours at 75°F (24°C) thinned 15% with water 1 hour at 90°F (32°C) thinned 20% with water

With 44-700: 2 hours at 40°F (4°C) thinned 15% with water 1 1/2 hours at 60°F (15°C) thinned 15% with water 45 minutes at 75°F (24°C) thinned 15% with water

Note: The use of Series 44-700 Accelerator is not recommended when temperatures exceed 75°F (24°C).

SPRAY LIFE

Without 44-700: 2 1/2 hours at 75°F (24°C) thinned 15% with water 3.5 hours at 75°F (24°C) thinned 20% with water 45 minutes at 90°F (32°C) thinned 20% with water

With 44-700: 1 1/2 hours at 40°F (4°C) thinned 15% with water 45 minutes at 75°F (24°C) thinned 15% with water

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)	50-70 psi (3.4-4.8 bar)	10-20 psi (0.7-1.4 bar)

Low temperatures or longer hoses require higher pot pressure. Do not allow material to remain in hose.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.017"-0.021" (430-535 microns)	3700-5000 psi (255-345 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 3/8" or 1/2" (9.5 mm to 12.7 mm) high quality synthetic woven nap covers.

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

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SURFACE TEMPERATURE

Minimum 35°F (2°C), optimum 65°F to 80°F (18°C to 27°C), maximum of 120°F (49°C). The substrate temperature should be at least 5°F (3°C) above the dew point. Coating will not cure below minimum surface temperature. Cure time necessary to resist direct contact with moisture at surface temperature:

Temperature	To Resist Moisture
120°F (49°C)	5 hours
95°F (35°C)	6 hours
75°F (24°C)	7 hours
55°F (13°C)	20 hours
45°F (7°C)	36 hours
35°F (2°C)	4 days

MATERIAL TEMPERATURE

For optimum mixing, application and handling, the material temperature during application should be between 70°F and 85°F (21°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 and clean all equipment immediately after use with water, followed by a final flush with MEK or Methyl Acetate.
 † **Values may vary with color.**

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