



H.S. EPOXY SERIES 104

PRODUCT PROFILE

GENERIC DESCRIPTION	Cycloaliphatic Amine Epoxy
COMMON USAGE	Versatile coating applies up to 10 mils per coat on steel or concrete. Protects in immersion, salt spray and chemical exposures. Superior abrasion- and stain-resistance.
COLORS	Primer: 1211 Red. Topcoat: Refer to Tnemec Color Guide. Note: 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.
FINISH	Semi-gloss. Gloss can vary with texture, porosity of substrate and thickness of film.
SPECIAL QUALIFICATIONS	Conforms to the performance requirements of AWWA C 210 (not for potable water contact).
PERFORMANCE CRITERIA	Extensive test data available. Contact your Tnemec representative for specific test results.

COATING SYSTEM

PRIMERS	Steel: Self-priming or Series 66, L69, L69F, N69, N69F, V69, V69F, 90E-92, 90-97, 90G-1K97, 161 Concrete: Self-priming or Series 215, 218. CMU: Self-priming or Series 130, 215, 218
TOPCOATS	Series 66, L69, L69F, N69, N69F, V69, V69F, 73, 104, 1074, 1074U, 1075, 1075U Refer to COLORS on applicable topcoat data sheets for additional information. Note: When topcoating with Endura-Shield polyurethane finish, exterior exposed Series 104 has the following maximum time to recoat: Series 73, 1074, 1074U, 1075 or 1075U, 60 days. If this time is exceeded, an epoxy intermediate coat or scarification is required before topcoating. Refer to appropriate topcoat data sheet for additional information.

SURFACE PREPARATION

STEEL	Immersion Service: SSPC-SP10/NACE 2 Near White Blast Cleaning with a minimum angular anchor profile of 2.0 mils Non-Immersion Service: SSPC-SP6/NACE 3 Commercial Blast Cleaning with a minimum angular anchor profile of 2.0 mils
CONCRETE	Allow new concrete to cure for 28 days. Abrasive blast referencing SSPC-SP13/NACE 6, ICRI-CSP3-5 Surface Preparation of Concrete and Tnemec's Surface Preparation and Application Guide.
CMU	Allow mortar to cure for 28 days. Level protrusions and mortar spatter.
PRIMED SURFACES	Immersion Service: Scarify the surface before topcoating if the Series 66, L69, L69F, N69, N69F, V69, V69F, 104 or 161 prime coat has been exterior exposed for 14 days or longer.
ALL SURFACES	Must be clean, dry and free of oil, grease, chalk and other contaminants.

TECHNICAL DATA

VOLUME SOLIDS	82.0 ± 2.0% (mixed) †
RECOMMENDED DFT	4.0 to 10.0 mils (100 to 255 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 Handle	To Recoat	Immersion
75°F (24°C)	6 hours at 4.0 mils (100 microns) DFT 10 hours at 10.0 mils (255 microns) DFT	16-18 hours	7 days

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

VOLATILE ORGANIC COMPOUNDS

EPA Method 24 †
Unthinned: 0.80 lbs/gallon (96 grams/litre)
Thinned 10% (No. 2 Thinner): 1.92 lbs/gallon (230 grams/litre)
Thinned 10% (No. 49 Thinner): 0.80 lbs/gallon (96 grams/litre)

HAPS

Unthinned: 1.60 lbs/gal solids
Thinned 10% (No. 2 Thinner): 2.50 lbs/gal solids
Thinned 10% (No. 49 Thinner): 1.60 lbs/gal solids

THEORETICAL COVERAGE

1,315 mil sq ft/gal (32.3 m²/L at 25 microns). See APPLICATION for coverage rates. †

NUMBER OF COMPONENTS

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

PACKAGING

5 gallon (18.9L) pails and 1 gallon (3.79L) cans — Order in multiples of 2.

NET WEIGHT PER GALLON

14.70 ± 0.25 lbs (6.67 ± .11 kg) (mixed) †

STORAGE TEMPERATURE

Minimum 20°F (-7°C) Maximum 120°F (49°C)
 For optimum application properties, material temperature must 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 & Part B: 81°F (27°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.

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APPLICATION

COVERAGE RATES

	Dry MILS (Microns)	Wet MILS (Microns)	Sq Ft/Gal (m ² /Gal)
Minimum	4.0 (100)	5.0 (125)	329 (30.5)
Maximum	10.0 (255)	12.0 (305)	131 (12.2)

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

Power mix contents of each container, 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. Do not use mixed material beyond pot life limits. **Note:** Both components must be above 60°F (16°C) prior to mixing. Mixing ratio is one to one by volume. A large volume of material will set up quickly if not applied or reduced in volume.

Caution: Do not reseal mixed material. An explosion hazard may be created.

THINNING

Use No. 2 Thinner. For air spray, airless spray or roller, thin up to 10% or 3/4 pint (380 mL) per gallon. Thin up to 10% or 3/4 pint (380 mL) per gallon with No. 49 Thinner when required by air pollution regulations.

POT LIFE

2 1/2 hours at 60°F (16°C) 2 hours at 77°F (25°C) 1 hour at 100°F (38°C)

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)	60-90 psi (4.2-6.2 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"-0.021" (380-535 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.

Note: Application over inorganic zinc-rich primers: Apply a wet mist coat and allow tiny bubbles to form. When bubbles disappear in 1 to 2 minutes, apply a full wet coat at specified mil thickness.

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. **Note:** Two or more coats may be required to obtain recommended film thicknesses.

Brush: Recommended for small areas only. Use high quality natural or synthetic bristle brushes. **Note:** Two or more coats may be required to obtain recommended film thicknesses.

SURFACE TEMPERATURE

Minimum 60°F (16°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 xylol.

† Values may vary with color.

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