



# TNEME-ZINC SERIES 90E-92

## PRODUCT PROFILE

**GENERIC DESCRIPTION** Ethyl Silicate Inorganic Zinc-Rich

**COMMON USAGE** Self-curing, primer/finish with tenacious bonding and abrasion resistance qualities. Its galvanic action resists undercutting. Excellent stand alone performance in high temperature or long-term atmospheric exposure. Finish with specialized topcoats to improve aesthetics, increase long-term performance or protect the primer from attack in aggressive exposures.

**COLORS** Greenish-gray

**ZINC PIGMENT** 79% by weight in dried film

**SPECIAL QUALIFICATIONS** Meets **AISC** requirements of Class B surface with a mean slip coefficient no less than 0.50 and a tension creep no in excess of .005 inches (.13 mm). Series 90E-92 Tnemec-Zinc uses a zinc pigment which meets the requirements of **ASTM D 520 Type III** and contains less than .002% lead. This level qualifies it to be classed as "non-lead" (less than 0.06% lead by weight) as defined in Part 1303 of the Consumer Product Safety Act Regulations. Series 90E-92 meets the qualitative and performance requirements of SSPC Paint 20 Type 1-C and SSPC Paint 29 Type 1, Level 2.

**PERFORMANCE CRITERIA** Extensive test data available. Contact your Tnemec representative for specific test results.

## COATING SYSTEM

**TOPCOATS** Series 6, 27, 39, 46H-413, 66, N69, 104, 113, 114, 161

## SURFACE PREPARATION

**Severe Exposure:** SSPC-SP10 Near-White Blast Cleaning  
**Moderate Exposure:** SSPC-SP6 Commercial Blast Cleaning.

## TECHNICAL DATA

**VOLUME SOLIDS** 65.0 ± 2.0% (mixed) void content method  
**RECOMMENDED DFT** 2.0 to 3.5 mils (50 to 90 microns) per coat.  
**CURING TIME**

Temperature	To Handle	To Recoat
50% Relative Humidity 75°F (24°C)	1 hour	16 hours
0°F (-18°C)		7 days minimum

Moisture is required to achieve proper cure. Curing time will vary with temperature and humidity. At relative humidities below 30%, it may be necessary to gently spray the coated surface with water to achieve proper cure and to minimize recoat time. Consult your Tnemec representative for specific recommendations. **Ventilation:** When used as a tank lining or in enclosed areas, provide adequate ventilation during application and cure. Reference ventilation guidelines contained in the latest edition of AWWA D 102.

## VOLATILE ORGANIC COMPOUNDS

**Unthinned:** 3.95 lbs/gallon (473 grams/litre)  
**Thinned 5% (No. 18 Thinner):** 4.15 lbs/gallon (497 grams/litre)  
**Thinned 9% (No. 15 Thinner):** 4.17 lbs/gallon (500 grams/litre)

## HAPS

**Unthinned:** 0.41 lbs/gal solids  
**Thinned 5% (No. 18 Thinner):** 0.41 lbs/gal solids  
**Thinned 9% (No. 15 Thinner):** 0.49 lbs/gal solids

## THEORETICAL COVERAGE

1,042 mil sq ft/gal (25.6 m<sup>2</sup>/L at 25 microns). See APPLICATION for coverage rates.

## NUMBER OF COMPONENTS

Two: Part A and Part B

## PACKAGING

Five-Gallon Kit: Consists of one premeasured container of liquid (Part A) and one premeasured container of powder (Part B). When mixed, yields five gallons (18.9L).

## NET WEIGHT PER GALLON

19.1 ± 0.5 lbs (8.65 ± .23 kg) (mixed)

## STORAGE TEMPERATURE

Minimum 20°F (-7°C) Maximum 100°F (38°C)

## TEMPERATURE RESISTANCE

Dry (Continuous) 750°F (399°C) Intermittent 950°F (510°C)  
**Note:** Color changes from greenish-gray to reddish-gray at temperatures above 450°F (232°C).

## SHELF LIFE

12 months at recommended storage temperature.

## FLASH POINT - SETA

Part A: 53°F (12°C) Part B: N/A

## 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 <sup>2</sup> /Gal)
Suggested	2.5 (65)	4.0 (100)	417 (38.7)
Minimum	2.0 (50)	3.0 (75)	521 (48.4)
Maximum	3.5 (90)	5.5 (140)	298 (27.7)

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**

Always use the entire contents of A and B components. Use an air-driven power mixer and keep material under constant agitation while mixing. Slowly sift powder (Part B) into liquid (Part A).

**-Do Not Reverse This Procedure-** Adjust mixer speed to break up lumps and mix until the two components are thoroughly blended. Strain through a 35 to 50 mesh (300 to 600 microns) screen before using. Keep under agitation to prevent settling. Do not use mixed material beyond pot life limits.

**THINNING**

Use No. 15 Thinner below 80°F (27°C); No. 18 Thinner above 80°F (27°C). Thin up to 5% or 1/4 pint (190 mL) per gallon with No. 18 thinner or up to 9% or 2/3 pint (302 mL) per gallon with No. 15 Thinner.

**POT LIFE**

16 hours at 60°F (16°C) 12 hours at 77°F (25°C) 7 hours 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
Binks 62 (1)	66SS	67 PD	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	30-40 psi (2.1-2.8 bar)	10-20 psi (2) (0.7-1.4 bar)

(1) With leather needle packing and heavy mastic spring.

(2) For 25 ft (7.6 m) length of material hose. Low temperatures or longer hoses will require additional pressure. Use pressure pot equipped with an agitator and keep pressure pot at same level or higher than the spray gun.

If work is stopped for 10 to 15 minutes, do not allow material to remain in hose. Shut off pot pressure at the fluid regulator and open pressure relief valve. Loosen spray gun cap ring three turns, hold cloth over air cap and pull trigger to force the material in the hose back into the pot. Keep material under agitation during shut-down, but do not repressurize pot until ready to resume work.

**Airless Spray**

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.021"-0.023" (535-585 microns) Reversible Tip	1800-3000 psi (124-207 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.

Keep material agitated to prevent settling. If work is stopped for 15 minutes or more, recirculate material to assure that only well-agitated material is in fluid lines before spraying is resumed.

**Note:** When applying Tnemec epoxies over this primer, 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:** Application not recommended.

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

**SURFACE TEMPERATURE**

Minimum 0°F (-18°C) Maximum 120°F (49°C)

The surface should be dry and at least 5°F (3°C) above the dew point. At temperatures below 32°F (0°C), the surface must be free of ice and/or frost.

**CLEANUP**

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

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