



OMNITHANE® SERIES 1

PRODUCT PROFILE

GENERIC DESCRIPTION Modified Aromatic Polyurethane Primer

COMMON USAGE A single component, moisture-cured resin, containing a proprietary blend of micaceous iron oxide and zinc to function as a primer which is field and shop friendly. May be used in OEM manufacturing, potable water and wastewater immersion with the proper topcoats. May also be used for marginally prepared rusty steel and tightly adhering old coatings for non-immersion maintenance situations.

COLORS 1216 Greenish-Gray

SPECIAL QUALIFICATIONS **NSF:** Certified in accordance with **ANSI/NSF Std. 61** for potable water applications (for tanks of 1,000 gallons capacity or greater, pipes 36 inches in diameter or greater or valves 4 inches in diameter or greater) when topcoated (with or without 44-710 Urethane Accelerator) with Std. 61 certified Tnemec coatings.
AISC: Meets AISC requirements in accordance with RCSC Appendix A for Class B surface with a mean slip coefficient no less than 0.50 and tension creep not in excess of .005 inches (.13 mm). Contact Tnemec Technical Service for more information. **Note:** Using other products as primers or topcoats voids AISC requirements. Contact your Tnemec representative for specific recommendations.

PERFORMANCE CRITERIA Contact your Tnemec representative for specific test results.

COATING SYSTEM

SURFACER/FILLER/PATCHER For information, contact Tnemec Technical Services.

PRIMERS Self-priming, 90G-1K97, 90-97, H90-97, 91-H₂O, 94-H₂O

TOPCOATS Series 1, 20, FC20, 27, 27WB, 46H-413, 66, L69, L69F, N69, N69F, V69, V69F, 73, 104, 113, 114, 115, L140, L140F, N140, N140F, V140, V140F, 141, 161, 406, 446, 740, 750, 1028, 1029, 1074, 1074U, 1075, 1075U.
Note: If Series 1 is exterior exposed for 1 year or more it must be scarified or recoated with itself before topcoating. Scarification or recoating with itself is required if the Series 1 has been exterior exposed for 3 days or longer and Series 113 is the specified topcoat. **Note:** Series 115 requires Series 44-900 adhesion promoter when topcoating Series 1.
Note: Certain topcoat colors may not provide one coat hiding depending on method of application. Contact your Tnemec representative. **Note:** Series 1 requires one day exterior exposure before topcoating with Series 27WB, 1028, or 1029.

SURFACE PREPARATION

STEEL **Immersion & Severe Exposure:** SSPC-SP10/NACE No. 2 Near-White Blast Cleaning.
Non-Potable, Non-Immersion Service: Exterior Exposure: SSPC-SP6/NACE No. 3 Commercial Blast Cleaning. Interior Exposure: SSPC-SP3 Power Tool Cleaning (SSPC Rust Grade Condition C).
Slip Critical Connections: SSPC-SP5/NACE 1 White Metal Blast Cleaning or SSPC-SP3 Power Tool Cleaning (SSPC Rust Grade Condition C).

STEEL MAINTENANCE Abrasive blast cleaning produces the best coating performance. If conditions will not permit this, Series 1 may be applied over SSPC-SP2 or SP3 Hand or Power Tool Cleaned surfaces (SSPC Rust Grade Condition C) in non-potable, non-immersion environments.

GALVANIZED STEEL Surface preparation recommendations will vary depending on substrate and exposure conditions. Contact your Tnemec representative or Tnemec Technical Services.

DUCTILE IRON Recommended for immersion and exterior exposure. Please contact your Tnemec representative for specific recommendations.

PAINTED SURFACES Test patch is recommended.

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

TECHNICAL DATA

VOLUME SOLIDS 61.0 ± 2.0% (mixed)

RECOMMENDED DFT 2.5 to 3.5 mils (65 to 90 microns) per coat. **Note:** NSF certification maximum: 3.5 mils.

CURING TIME Without 44-710

Temperature †	To Touch	To Handle	To Topcoat
75°F (24°C)	1/4 hour	1 1/2 hours	16 hours
65°F (18°C)	1/4 hour	2 3/4 hours	16 hours
55°F (13°C)	1/4 hour	5 hours	20 hours

† 50% Relative Humidity. **Note:** Refer to product listings on www.nsf.org for specific potable water return to service information. Curing time will vary with surface temperature, humidity and film thickness.

Note: When recoating Series 1 with itself, the minimum recoat time is 2 hours at 70°F (21°C).

Ventilation: When used in enclosed areas, provide adequate ventilation during application and cure.

With 44-710: The use of 44-710 can greatly reduce dry to handle cure times. **Note:** Series 44-710 Accelerator must be used when the surface temperature falls below 50°F (10°C).

VOLATILE ORGANIC COMPOUNDS **Unthinned:** 2.79 lbs/gallon (334 grams/litre)
Thinned 10% (No. 2 or 3 Thinner): 3.20 lbs/gallon (384 grams/litre)
Thinned 10% (No. 49 Thinner): 2.79 lbs/gallon (334 grams/litre)

HAPS **Unthinned:** 0.79 lbs/gal solids
Thinned 10% (No. 2 Thinner): 1.98 lbs/gal solids
Thinned 10% (No. 3 Thinner): 0.83 lbs/gal solids
Thinned 10% (No. 49 Thinner): 0.79 lbs/gal solids

THEORETICAL COVERAGE 978 mil sq ft/gal (24.0 m²/L at 25 microns). See APPLICATION for coverage rates.

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NUMBER OF COMPONENTS	One
PACKAGING	Five-gallon pail yielding 3 gallons (11.4 L) and one-gallon can yielding 0.95 gallons (3.6 L)
NET WEIGHT PER GALLON	21.10 ± 0.60 lbs (9.57 ± .27 kg)
STORAGE TEMPERATURE	Minimum 20°F (-7°C) Maximum 110°F (43°C)
TEMPERATURE RESISTANCE	(Dry) Continuous 250°F (121°C) Intermittent 300°F (149°C)
SHelf LIFE	12 months at recommended storage temperature.
FLASH POINT - SETA	85°F (29°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 (m ² /Gal)
	Suggested	3.0 (75)	5.0 (125)
Minimum	2.5 (65)	4.0 (100)	391 (36.4)
Maximum	3.5 (90)	5.5 (140)	284 (26.4)

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 Stir thoroughly making sure no pigment remains on the bottom of the can. Use a power mixer and keep material under constant agitation while mixing.

THINNING For spray, thin up to 10% or 3/4 pint (380 mL) per gallon with No. 2 Thinner if temperatures are below 80°F (27°C). Thin up to 10% or 3/4 pint (380 mL) per gallon with No. 3 Thinner if temperatures are above 80°F (27°C). For brush or roller, thin up to 10% or 3/4 pint (380 mL) with No. 3 Thinner. **Note:** No. 49 Thinner may be substituted where there are VOC restrictions. **Note:** NSF certification requires thinning with No. 2 Thinner. Use of any other thinner voids ANSI/NSF Std. 61 certification.

POT LIFE 24 hours at 77°F (25°C) and 50% R.H. **Caution: This product cures with moisture acting as a catalyst. Incorporation of moisture or moisture laden air (humidity) during use will shorten pot life.** The use of a solvent blanket (small addition of solvent that sits atop the paint in the can) can help to retard a reaction with moisture in the container but agitation will have to be done by manual means, taking care to not disturb the solvent or incorporate it into the paint. Avoid continual agitation at high RPM. When feasible keep containers of material covered during use.

APPLICATION EQUIPMENT **Note:** When intermediate and finish coats are white or light colors, best hiding of this primer can be achieved by spray application; or when roller applied, by using 1/4" synthetic woven nap roller covers.

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)	40-50 psi (2.8-3.4 bar)	10-20 psi (0.7-1.4 bar)

† (with heavy mastic spring) 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. Compressed air must be dry.

Airless Spray

Tip Orifice	Atomizing Pressure	Mat'l Hose ID	Manifold Filter
0.017"-0.021" (430-535 microns) Reversible Tip	2400-3000 psi (165-207 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.

Roller: Use a 1/4" or 3/8" (6.4 mm or 9.5 mm) synthetic woven nap cover.

Brush: Use high quality natural or synthetic bristle brushes.

SURFACE TEMPERATURE Minimum 35°F (2°C) Maximum 120°F (49°C)
The surface should be dry and at least 5°F (3°C) above the dew point. **Note:** Series 44-710 Accelerator must be used if the surface temperature is 35°F to 60°F (2°C to 16°C) and 20% to 40% relative humidity, or if surface temperature is below 50°F (10°C) regardless of humidity.

AMBIENT HUMIDITY Minimum 20% Maximum 90%

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

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