



PRODUCT PROFILE

**GENERIC DESCRIPTION** Waterborne Acrylic Polyurethane

**COMMON USAGE** A waterborne polyurethane coating that provides excellent abrasion resistance and color and gloss retention for exterior applications to steel, concrete and other miscellaneous substrates. It features low VOC content, low odor, semi-gloss finish and easy cleanup.

**COLORS** Refer to Tnemec Color Guide. **Note:** Certain colors may require multiple coats depending on method of application and finish coat color. When feasible, the preceding coat should be in the same color family, but noticeably different.

**FINISH** Semi-Gloss

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

COATING SYSTEM

**PRIMERS** **Steel:** Series 20, 22, 27, 66, N69, N69F, L69, L69F, V69, V69F, 84, 104, 115, 135, L140, L140F, N140, N140F, V140, V140F, 141, 161, 287  
**Galvanized Steel and Non-Ferrous Metal:** Series 66, L69, L69F, N69, N69F, V69, V69F, 115, 135, 161  
**Concrete:** Series 20, 66, N69, N69F, L69, L69F, V69, V69F, 84, 104, 141, 161, 270, 273, 280, 287  
**CMU:** L69, L69F, N69, N69F, V69, V69F, 130. Intermediate coat required (any of the above primers for concrete).  
**Note:** Epoxy primers exterior exposed for more than 30 days require an epoxy intermediate coat or scarification prior to topcoating with Series 1081.

**INTERMEDIATE** Series 35, 115, 287, 1028, 1029

**TOPCOATS** Series 1080, 1088

SURFACE PREPARATION

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

TECHNICAL DATA

**VOLUME SOLIDS** 61.0 ± 2.0% (mixed) †

**RECOMMENDED DFT** 2.0 to 3.0 mils (50 to 75 microns) per coat. **Note:** Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating aesthetics and performance. Number of coats and thickness requirements will vary with substrate, application method and exposure. Excessive film thicknesses will cause microbubbling. Contact your Tnemec representative.

CURING TIME

Temperature	To Touch	To Handle	To Recoat
75°F (24°C)	45 minutes	6 hours	6 1/4 hours

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

VOLATILE ORGANIC COMPOUNDS

**Unthinned:** 0.72 lbs/gallon (87 grams/litre)  
**Thinned 5% (No. 66 Thinner):** 1.22 lbs/gallon (147 grams/litre) †

HAPS

**Unthinned:** 0 lbs/gal solids  
**Thinned 15%:** 0 lbs/gal solids

THEORETICAL COVERAGE

978 mil sq ft/gal (24.0 m<sup>2</sup>/L at 25 microns). See APPLICATION for coverage rates. †

NUMBER OF COMPONENTS

Two: Part A and Part B

MIXING RATIO

By volume: Four (Part A) to one (Part B)

PACKAGING

	PART A (Partially filled)	PART B (Partially filled)	When Mixed Yield
Three Gallon Kit	5 gallon pail	1 gallon can	3 gallons (11.4L)
One Gallon Kit	1 gallon can	1 quart can	1 gallon (3.79L)

NET WEIGHT PER GALLON

12.35 ± 0.25 lbs (5.60 ± .11 kg) †

STORAGE TEMPERATURE

Minimum 40°F (4°C) Maximum 110°F (43°C)  
 Protect from freezing.

TEMPERATURE RESISTANCE

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

SHELF LIFE

12 months at recommended storage temperature.

FLASH POINT - SETA

Part A: 125°F (52°C) Part B: >200°F (93°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.**

# ENDURA-SHIELD® | SERIES 1081

**APPLICATION**

**COVERAGE RATES**

	Dry Mills (Microns)	Wet Mills (Microns)	Sq Ft/Gal (m <sup>2</sup> /Gal)
Suggested	2.5 (65)	4.0 (100)	391 (36.3)
Minimum	2.0 (50)	3.5 (90)	489 (45.4)
Maximum	3.0 (75)	5.0 (125)	326 (30.3)

**Note:** Coverage rates based on unthinned material. 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 aesthetics and performance. †

**MIXING**

Stir contents of the container marked Part A, making sure no pigment remains on the bottom. Add the contents of the container marked Part B to Part A **while under mechanical agitation**. Continue agitation until the two components are thoroughly mixed. Continue mechanical agitation and thin according to the thinning instructions. Do not use mixed material beyond pot life limits. **Caution: Part B is moisture-sensitive and will react with atmospheric moisture. Keep unused material tightly closed at all times. Do not reseal mixed material. An explosion hazard may be created.** Unused mixed material should be thinned with equal amounts of water by volume and disposed of properly.

**THINNING**

Thinning is required for proper application. Thin up to 15% by volume with clean water. For warm temperature applications, product can be thinned with a combination of 5% No. 66 Thinner and 10% water. **Note:** Thin with mechanical agitation only after Part B has been thoroughly mixed with Part A according to mixing instructions.

**POT LIFE**

2 hours at 77°F (25°C)

**APPLICATION EQUIPMENT**

**Air Spray**

Gun	Fluid Tip	Air Cap	Air Hose ID	Mat'l Hose ID	Atomizing Pressure	Pot Pressure
DeVilbiss JGA	E	704	5/16" or 3/8" (7.9 or 9.5 mm)	3/8" or 1/2" (9.5 or 12.7 mm)	60-80 psi (4.1-5.5 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"-0.017" (380-430 microns)	3100-3900 psi (214-270 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 1/4" (preferred) or 3/8" (6.4 mm to 9.5 mm) synthetic woven nap roller covers.

**Brush:** Recommended for small areas only. Use high quality natural or synthetic bristle brushes. Two coats are required to obtain recommended film thickness.

**APPLICATION CONDITIONS**

Minimum 50°F (10°C) Maximum 120°F (49°C)

The surface should be dry and at least 5°F (3°C) above the dew point. **Caution: Protect from high humidity, dew and direct moisture contact during application and curing.** Application and/or curing in humidities above maximum, or exposure to moisture from rain or dew may result in a loss of gloss and/or microbubbling of the product.

**CLEANUP**

Flush and clean all equipment immediately after use with water and flush with xylene.

† Values may vary with color.

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