



ENDURA-SHIELD® SERIES 1081

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 - Note: Final gloss level of topcoat can vary depending on number of coats applied. One coat will generally result in a lower sheen than two coats of the material.
PERFORMANCE CRITERIA	Contact your Tnemec representative for specific test results.

COATING SYSTEM

PRIMERS	<p>Steel: Series 20, 22, 27, 27WB, 66, N69, N69F, L69, L69F, V69, V69F, 84, 104, 115, 135, L140, L140F, N140, N140F, V140, V140F, 141, 161, 287</p> <p>Non-Ferrous Metal: Series 66, L69, L69F, N69, N69F, V69, V69F, 115, 135, 161</p> <p>Concrete: Series 20, 66, N69, N69F, L69, L69F, V69, V69F, 84, 104, 141, 161, 270, 273, 280, 287, 1254</p> <p>CMU: L69, L69F, N69, N69F, V69, V69F, 130, 1254. Intermediate coat required (any of the above primers for concrete).</p> <p>Note: Epoxy primers exterior exposed for more than 30 days require an epoxy intermediate coat or scarification prior to topcoating with Series 1081. A minimum recoat of 24 hours at 75°F (24°C) applies when using Series 27WB. Reference the Series 27WB product data sheet for additional cure information. More than one finish coat of Series 1081 is required when used over Series 27WB to achieve uniform and desired gloss level.</p>
INTERMEDIATE TOPCOATS	Series 113, 114, 115, 280, 287, 1028, 1029 Series 1080

SURFACE PREPARATION

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

VOLUME SOLIDS	61.0 ± 2.0% (mixed) †												
RECOMMENDED DFT	2.0 to 3.0 mils (50 to 75 microns) per coat. Note: Number of coats and thickness requirements will vary with substrate, application method, and exposure. Caution: Application of coating below minimum or above maximum recommended dry film thicknesses may adversely affect coating aesthetics and performance. Excessive film thicknesses will cause microbubbling. Contact your Tnemec representative.												
CURING TIME	<table border="1"> <thead> <tr> <th>Temperature</th> <th>To Touch</th> <th>To Handle</th> <th>To Recoat</th> </tr> </thead> <tbody> <tr> <td>75°F (24°C)</td> <td>45 minutes</td> <td>6 hours</td> <td>6 hours</td> </tr> </tbody> </table> <p>Curing time varies with surface temperature, air movement, humidity and film thickness.</p>	Temperature	To Touch	To Handle	To Recoat	75°F (24°C)	45 minutes	6 hours	6 hours				
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VOLATILE ORGANIC COMPOUNDS	<p>Unthinned: 0.73 lbs/gallon (88 grams/litre)</p> <p>Thinned 5% (Water): 0.73 lbs/gallon (88 grams/litre)</p> <p>Thinned 5% (No. 66 Thinner): 1.23 lbs/gallon (147 grams/litre) †</p>												
HAPS	<p>Unthinned: 0 lbs/gal solids</p> <p>Thinned 5% (Water): 0 lbs/gal solids</p> <p>Thinned 5% (No. 66 Thinner): 0 lbs/gal solids</p>												
THEORETICAL COVERAGE	978 mil sq ft/gal (24.0 m ² /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	<table border="1"> <thead> <tr> <th></th> <th>PART A (Partially filled)</th> <th>PART B (Partially filled)</th> <th>When Mixed Yield</th> </tr> </thead> <tbody> <tr> <td>Large Kit</td> <td>5 gallon pail</td> <td>1 gallon can</td> <td>3 gallons (11.4L)</td> </tr> <tr> <td>Small Kit</td> <td>1 gallon can</td> <td>1 quart can</td> <td>1 gallon (3.79L)</td> </tr> </tbody> </table>		PART A (Partially filled)	PART B (Partially filled)	When Mixed Yield	Large Kit	5 gallon pail	1 gallon can	3 gallons (11.4L)	Small Kit	1 gallon can	1 quart can	1 gallon (3.79L)
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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.												

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APPLICATION

COVERAGE RATES

	Dry MILS (Microns)	Wet MILS (Microns)	Sq Ft/Gal (m ² /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. **Important: 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	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)	50-80 psi (3.4-5.5 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
0.013"-0.017" (330-430 microns)	3000-4000 psi (207-275 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. Do not use medium or long nap roller covers. Two coats are required to obtain dry film thickness above 3.0 mils (75 microns).

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 40°F (4°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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