# ENDURA-SHIELD® SERIES 1094

## PRODUCT PROFILE

### GENERIC DESCRIPTION
Aliphatic Acrylic Polyurethane.

### COMMON USAGE
A user friendly, low VOC, aliphatic polyurethane coating that provides excellent color and gloss retention for exterior applications to steel, concrete and other miscellaneous substrates.

### 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
Gloss

## COATING SYSTEM

### PRIMERS
- **Galvanized Steel & Non-Ferrous Metal:** 27, 66, L69, L69F, N69, N69F, V69, V69F, 161
- **Concrete:** Series 27WB, 66, L69, L69F, N69, N69F, V69, V69F, L140, L140F, N140, N140F, V140, V140F, 161, 1224, 1254

### CMU:
- **Series 1254**

**Note:** The following maximum recoat times apply; Series L69F or L140F, 14 days; Series L69 or L140, 21 days; Series 1, 27, 27WB, 66, N69, N69F, V69, V69F, 135, N140, N140F, V140, V140F, 161, 394, 1224, 1254, 30 days; Series 90-97, 91-H2O, 90G-1K97, 94-H2O, 60 days. Contact your Tnemec representative for specific recommendations.

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

## TECHNICAL DATA

### VOLUME SOLIDS
60.0 ± 2.0% (mixed) †

### RECOMMENDED DFT
2.0 to 5.0 mils (51 to 127 microns) per coat. **Note:** Number of coats and thickness requirements will vary with substrate, application method and exposure.

### CURING TIME

<table>
<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>1-2 hours</td>
<td>9 hours</td>
<td>10-12 hours</td>
</tr>
</tbody>
</table>

To resist moisture: 8 hours. Curing time varies with surface temperature, air movement, humidity and film thickness. **Note:** For faster cure in temperatures down to 35°F (2°C), add No. 44-456 Urethane Accelerator, see separate product data sheet for cure information. **Note:** The use of Series 44-456 accelerator is not recommended when temperatures exceed 75°F (24°C).

### VOLATILE ORGANIC COMPOUNDS

- **Unthinned: 2.16 lbs/gal (259 grams/litre)**
- **Unthinned: 0.63 lbs/gal (75 grams/litre) (TBAc Exempt)**
- **Thinned 10% (No. 10 Thinner): 2.77 lbs/gal (332 grams/litre)**
- **Thinned 10% (No. 10 Thinner): 1.60 lbs/gal (191 grams/litre) (TBAc Exempt)**
- **Thinned 10% (No. 46 Thinner): 2.20 lbs/gal (263 grams/litre)**
- **Thinned 10% (No. 46 Thinner): 0.69 lbs/gal (82 grams/litre) (TBAc Exempt)**

### HAPS

- **Unthinned: 0.0 lbs/gallon solids**
- **Thinned 10% (No. 10 Thinner): 0.03 lbs/gallon solids**
- **Thinned 10% (No. 46 Thinner): 0.07 lbs/gallon solids**

964 mil sq ft/gal (89.5 m²/L at 25 microns). See APPLICATION for coverage rates. †

### THEORETICAL COVERAGE

- **Gloss**

### NUMBER OF COMPONENTS
Two: Part A and Part B

### MIXING RATIO
By volume: Four (Part A) to one (Part B)

### PACKAGING

<table>
<thead>
<tr>
<th></th>
<th>Large Kit</th>
<th>PART A (Partially filled)</th>
<th>PART B (Partially filled)</th>
<th>Yield (Mixed)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6 gallon pail</td>
<td>1 gallon can</td>
<td>5 gallons (18.9L)</td>
<td></td>
</tr>
<tr>
<td>Small Kit</td>
<td>1 gallon can</td>
<td>1 quart can</td>
<td>1 gallon (3.79L)</td>
<td></td>
</tr>
</tbody>
</table>

### NET WEIGHT PER GALLON
10.86 ± 0.25 lbs (4.92 ± .11 kg) †

### STORAGE TEMPERATURE
- **Minimum 40°F (4°C)**
- **Maximum 110°F (43°C)**

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

Part A: 12 months; Part B: 12 months at recommended storage temperature.

- **Part A:** 45°F (7°C)
- **Part B:** 40°F (4°C)

### SHELF LIFE
Paint products contain chemical ingredients which are considered hazardous. Read container label warning and Safety Data Sheet for important health and safety information prior to the use of this product.

**Keep out of the reach of children.**

**Note:** The use of Series 44-456 accelerator is not recommended when temperatures exceed 75°F (24°C). For faster cure in temperatures down to 35°F (2°C), add No. 44-456 Urethane Accelerator, see separate product data sheet for cure information.

**Note:** The use of Series 44-456 accelerator is not recommended when temperatures exceed 75°F (24°C).
### Application

**Coverage Rates**

Conventional Build (Spray, Brush or Roller)

<table>
<thead>
<tr>
<th></th>
<th>Dry Mils (Microns)</th>
<th>Wet Mils (Microns)</th>
<th>Sq Ft/Gal (m²/Gal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suggested</td>
<td>2.5 (65)</td>
<td>4.0 (100)</td>
<td>585 (35.8)</td>
</tr>
<tr>
<td>Minimum</td>
<td>2.0 (50)</td>
<td>3.5 (90)</td>
<td>481 (44.7)</td>
</tr>
<tr>
<td>Maximum</td>
<td>3.0 (75)</td>
<td>5.0 (130)</td>
<td>321 (29.8)</td>
</tr>
</tbody>
</table>

Hi-Build (Spray Only)

<table>
<thead>
<tr>
<th></th>
<th>Dry Mils (Microns)</th>
<th>Wet Mils (Microns)</th>
<th>Sq Ft/Gal (m²/Gal)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suggested</td>
<td>4.0 (100)</td>
<td>6.5 (165)</td>
<td>240 (22.4)</td>
</tr>
<tr>
<td>Minimum</td>
<td>3.0 (75)</td>
<td>5.0 (130)</td>
<td>321 (29.8)</td>
</tr>
<tr>
<td>Maximum</td>
<td>5.0 (125)</td>
<td>8.5 (215)</td>
<td>193 (17.9)</td>
</tr>
</tbody>
</table>

**MIXING**

Stir contents of the container marked Part A, making sure no pigment remains on the bottom. If using Series 44-456 accelerator, slowly add two (2) ounces of Series 44-456 per mixed gallon of Series 1094 while under agitation. **Note:** The use of more than the recommended amount of Series 44-456 accelerator will adversely affect performance.

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. 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.

**THINNING**

Thinning is required for proper application. Use No. 10 Thinner. For air spray, airless spray, brush or roller, thin up to 10% or 12 ounces (354 mL) per gallon. **Note:** In areas that require lower VOC, use No. 46 Thinner.

**Pot Life**

Without 44-456: 4 hours at 75°F (24°C)

With 44-456: 5 hours at 35°F (2°C)  4 hours at 55°F (13°C)  3 hours at 75°F (24°C)

**Application Equipment**

**Air Spray**

<table>
<thead>
<tr>
<th>Gun</th>
<th>Fluid Tip</th>
<th>Air Cap</th>
<th>Air Hose ID</th>
<th>Mat'l Hose ID</th>
<th>Atomizing Pressure</th>
<th>Pot Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td>DeVilbiss JGA</td>
<td>E</td>
<td>765 or 704</td>
<td>5/16&quot; or 3/8&quot; (7.9 or 9.5 mm)</td>
<td>3/8&quot; or 1/2&quot; (9.5 or 12.7 mm)</td>
<td>50-80 psi (3.4-5.5 bar)</td>
<td>10-20 psi (0.7-1.4 bar)</td>
</tr>
</tbody>
</table>

Low temperatures or longer hoses require higher pot pressure.

**Airless Spray**

<table>
<thead>
<tr>
<th>Tip Orifice</th>
<th>Atomizing Pressure</th>
<th>Mat'l Hose ID</th>
<th>Manifold Filter</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.015&quot;-0.017&quot; (330-430 microns)</td>
<td>2700-3500 psi (186-241 bar)</td>
<td>1/4&quot; or 3/8&quot; (6.4 or 9.5 mm)</td>
<td>60 mesh (250 microns)</td>
</tr>
</tbody>
</table>

Use appropriate tip/atomizing pressure for equipment, applicator technique and weather conditions.

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

**Surface Temperature**

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.

**Cleanup**

Flush and clean all equipment immediately after use with xylene or MEK. Use Tnemec No. 74 Thinner when needed to reseal mixed material. An explosion hazard may be created.

**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. †

† Values may vary with color.