SELECTION & SPECIFICATION DATA

**Generic Type** | Aliphatic Acrylic Polyurethane

**Description**
Thin film, high gloss finish with exceptional weathering performance characteristics. Used extensively in virtually all industrial markets, 134 HG provides a smooth, durable finish that has superior resistance to corrosion, abrasion and chemical exposure.

- High solids, low VOC content
- Excellent weatherability
- Exceeds SSPC Paint 36 specification for a Level 3 urethane
- Conforms to the requirements of AS 3750.6:2009 Type 1 "Paints for Steel Structures - Full Gloss Polyurethane (2 pack)"

**Features**
- Approved for use in food & dairy processing plants (refer to NZ/AU Approvals section, page 5)
- Available in a comprehensive lead-free colour range
- Excellent flow characteristics allow for application by spray or roller
- Superior impact and abrasion resistance
- Indefinite recoatability
- Suitable for use in USDA inspected facilities

- **NZ Standard:** White, Black & Yellow LF
- **AU Standard:** White & Yellow LF
- **AU/NZ Tinted:** Available in most British Standard, AS2700, Resene colours and custom tints.
  - Please refer to your local representative for further information.

**Colour**

**Finish** | Gloss (70-85)

**Primer**
Refer to Substrates & Surface Preparation.

**Dry Film Thickness** | 51 - 76 microns (2 - 3 mils) per coat

**Solids Content**
By Volume 70% +/- 2%

**Theoretical Coverage**
- 27.6 m² at 25 microns (1123 ft² at 1.0 mils)
- 13.8 m² at 50 microns (561 ft² at 2.0 mils)
- 9.2 m² at 75 microns (374 ft² at 3.0 mils)

Allow for loss in mixing and application.

**VOC Values**
- **As Supplied:** 264 g/l
- Thinner 25: 20% v/v 366 g/l

These are nominal values and may vary slightly with color.

**Dry Temp. Resistance**
- Continuous: 93°C (200°F)
- Non-Continuous: 121°C (250°F)

Discolouration and loss of gloss is observed above 93°C; some colours may be adversely affected at lower temperatures.

**Limitations**
Application method (ie spray v brush) may affect final colour tone and texture; care must be taken to keep conditions as constant as possible to reduce variations in final appearance. It is also advisable to work from a single batch of material since variations can occur from batch to batch. For more information consult Carboline Technical Service Department.

**Topcoats**
Carbothane® 130 Clear Coat when required for graffiti resistance (NZTA/AMA approved) or extreme weatherability
SUBSTRATES & SURFACE PREPARATION

General
Surfaces must be clean and dry. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating. For all surfaces prime and/or undercoat with specific Carboline coating as recommended in the relevant Coating Specification. Refer to the specific primer or undercoat Product Data Sheet for detailed requirements.

Galvanized Steel
Prime with specific Carboline primer as recommended by your Carboline Sales Representative. Refer to the specific primer’s Product Data Sheet for substrate preparation requirements.

Previously Painted Surfaces
Lightly sand to roughen and degloss the surface. Existing paint must attain a minimum 3A rating in accordance with ASTM D3359 “XScibe” adhesion test.

PERFORMANCE DATA

<table>
<thead>
<tr>
<th>Test Method</th>
<th>System</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM B117 Salt Fog</td>
<td>Blasted Steel 1 ct Org Zinc 1 ct Epoxy 1 ct 134 HG</td>
<td>No rusting, blistering, loss of bond or any measurable creepage from the scribe after 3000 hours.</td>
</tr>
<tr>
<td>ASTM D2794 Impact Resistance</td>
<td>Blasted Steel 1 ct 134 HG</td>
<td>155 inch-pounds; no visible cracking. Gardner Impact Tester</td>
</tr>
<tr>
<td>ASTM D3359 Adhesion</td>
<td>Blasted Steel 1 ct. Epoxy 1 ct 134 HG</td>
<td>5A</td>
</tr>
<tr>
<td>ASTM D3363 Hardness</td>
<td>Blasted Steel 1 ct Epoxy 1 ct 134 HG</td>
<td>H</td>
</tr>
<tr>
<td>ASTM D4060 Abrasion</td>
<td>Blasted Steel 1 ct 134 HG</td>
<td>70 mg. loss after 1000 cycles, CS17 wheel, 1000 gm. load</td>
</tr>
<tr>
<td>ASTM D4541 Adhesion</td>
<td>Blasted Steel 1 ct. Epoxy 1 ct. 134 HG</td>
<td>2562 psi Pneumatic</td>
</tr>
<tr>
<td>ASTM D870 Immersion Resistance</td>
<td>Blasted Steel 1 ct. Org. Zinc 1 ct Epoxy 1 ct 134 HG</td>
<td>No rusting in the scribe; no blistering, softening or discoloration either 30 days of soft water imm</td>
</tr>
<tr>
<td>ASTM G26 Weatherometer</td>
<td>Blasted Steel 1 ct. Epoxy 1 ct. 134 HG</td>
<td>No blistering, rusting or cracking; gloss retention of 85%; color change of 1 McAdam unit after 2000</td>
</tr>
<tr>
<td>ASTM G53 ASTM D4587 Accelerated Weathering</td>
<td>Blasted Steel 1 ct. Org. Zinc 1 ct Epoxy 1 ct. 134 HG</td>
<td>No rusting, blistering or loss of adhesion; less than 5% gloss loss after 3000 hours</td>
</tr>
<tr>
<td>NORSOK M-501 Revision 5</td>
<td>System 1: ISO 20340 1 ct 60-75 microns as system finish coat</td>
<td>Tested &amp; approved by N.I.T., Oslo, Norway Report #3410-05-0060</td>
</tr>
</tbody>
</table>

Test reports and additional data available upon written request.

MIXING & THINNING

Mixing
Power mix Part A separately, then combine with Part B and power mix. DO NOT MIX PARTIAL KITS.

Thinning
Spray: Up to 20% w/ Thinner #25
Brush: Up to 20% w/ Thinner #22
Roller: Up to 20% w/ Thinner #22

Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

Ratio
4:1 Ratio (A to B)

Pot Life
4 Hours at 24°C and less at higher temps. Pot life ends when coating becomes too viscous to use. MOISTURE CONTAMINATION WILL SHORTEN POT LIFE AND CAUSE GELLING.
APPLICATION EQUIPMENT GUIDELINES

Listed below are general equipment guidelines for the application of this product. Job site conditions may require modifications to these guidelines to achieve the desired results.

**Spray Application (General)**
This is a high solids coating and may require adjustments in spray techniques. Wet film thickness is easily and quickly achieved. Spray equipment is available from manufacturers such as Binks, DeVilbiss and Graco.

**Conventional Spray**
Pressure pot equipped with dual regulators, 9.5 mm (3/8") I.D. minimum material hose, 1.8 mm (.070") I.D. fluid tip and appropriate air cap.

*Pump Ratio: 30:1 min.
Output: 11 lt/minute min.
Material Hose: 9.5 mm (3/8") I.D. min.
Tip Size: .015-.017"
Output PSI: 2100-2400
Filter Size: 60 mesh
*Teflon packings are recommended and available from the pump manufacturer.

**Airless Spray**
Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or rerolling. For best results, tie-in within 10 minutes at 24°C.

*Pump Ratio: 30:1 min.
Output: 11 lt/minute min.
Material Hose: 9.5 mm (3/8") I.D. min.
Tip Size: .015-.017"
Output PSI: 2100-2400
Filter Size: 60 mesh
*Teflon packings are recommended and available from the pump manufacturer.

**Brush & Roller (General)**
Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or rerolling. For best results, tie-in within 10 minutes at 24°C.

**Brush**
Recommended for touch-up only. Use a medium, natural bristle brush.

**Roller**
Use a short-nap mohair roller cover with phenolic core.

APPLICATION CONDITIONS

<table>
<thead>
<tr>
<th>Condition</th>
<th>Material</th>
<th>Surface</th>
<th>Ambient</th>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum</td>
<td>10°C (50°F)</td>
<td>2°C (36°F)</td>
<td>2°C (36°F)</td>
<td>0%</td>
</tr>
<tr>
<td>Maximum</td>
<td>38°C (100°F)</td>
<td>49°C (120°F)</td>
<td>35°C (95°F)</td>
<td>80%</td>
</tr>
</tbody>
</table>

Industry standards are for substrate temperatures to be above 3°C the dew point.

**Caution:** This product is moisture sensitive in the liquid stage and until fully cured. Protect from high humidity, dew and moisture contact until fully cured. 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 micro-bubbling of the product.
**Curing Schedule**

<table>
<thead>
<tr>
<th>Surface Temp.</th>
<th>Dry to Handle</th>
<th>Dry to Recoat &amp; Topcoat w/ other finishes</th>
<th>Final Cure General</th>
</tr>
</thead>
<tbody>
<tr>
<td>2°C (35°F)</td>
<td>36 Hours</td>
<td>36 Hours</td>
<td>14 Days</td>
</tr>
<tr>
<td>10°C (50°F)</td>
<td>16 Hours</td>
<td>16 Hours</td>
<td>10 Days</td>
</tr>
<tr>
<td>24°C (75°F)</td>
<td>8 Hours</td>
<td>8 Hours</td>
<td>7 Days</td>
</tr>
<tr>
<td>32°C (90°F)</td>
<td>4 Hours</td>
<td>4 Hours</td>
<td>5 Days</td>
</tr>
</tbody>
</table>

These times are based on a 50 micron dry film thickness. Higher film thickness, insufficient ventilation or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure.

*Maximum self-recoat times are indefinite.* Surface must be clean and dry. As part of good painting practice it is recommended to test for adhesion by wiping the surface with Thinner #25. If the film shows a slight “tack” the surface is suitable for recoating without extensive surface preparation such as abrading.

Polyurethane Accelerator can be used to accelerate the film forming process in this product for conditions outside of the parameters of this data sheet. Polyurethane Accelerator is added at a rate of 5 mls per mixed litre or a maximum of 25 mls per mixed five litres. At this addition rate, Polyurethane Accelerator will accelerate the cure rate of the urethane product between 25-40% depending on the substrate temperature range and reduce the pot life of the product by approximately 40-50% of that stated on the product data sheet. With the use of Polyurethane Accelerator, this product will continue to cure at temperatures as low as -7°C.

**Cleanup & Safety**

**Cleanup**
Use Thinner #2, #25 or Acetone. In case of spillage, dispose of in accordance with local applicable regulations.

**Safety**
Read and follow all caution statements on this product data sheet and on the MSDS for this product and use personal protective equipment as directed.

Contains iso-cyanate. When sprayed may be harmful by inhalation - do not breathe vapour or spray. Wear suitable clothing, gloves, eye and face protection, including suitable breathing protection such as an air supplied respirator or hood.

When used in enclosed areas, thorough air circulation must be used during and after application until the coating is cured. The ventilation system should be capable of preventing the solvent vapour concentration from reaching the lower explosion limit for the solvents used. User should test and monitor exposure levels to insure all personnel are below guidelines. If not able to monitor levels, use suitable approved air-fed respirator.

**Packaging, Handling & Storage**

**Shelf Life**
Part A: Min. 36 months at 24°C
Part B: Min. 24 months at 24°C

*Shelf Life: when kept at recommended storage conditions and in original unopened containers.

**Shipping Weight (Approximate)**
5 Litre Kit - 6.6 kg
10 Litre Kit - 13.2 kg

**Storage Temperature & Humidity**
4°C-43°C
0-80% Relative Humidity

**Flash Point (Setaflash)**
Carbothane 134 HG Part A: 10°C
Carbothane 134 HG Part B: 41°C

**Storage**
Store Indoors.
PACKAGING, HANDLING & STORAGE

This product is solvent based and not affected by excursions below these published storage temperatures, down to -10°C, for a duration of no more than 14 days. Always inspect the product prior to use to make sure it is smooth and homogeneous when properly mixed.

APPROVALS

<table>
<thead>
<tr>
<th>Approvals NZ/AU</th>
<th>Food Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>NZ AsureQuality assessed and passed for food/beverage including farm &amp; factory non-incidental contact. Ref: H3112</td>
<td></td>
</tr>
</tbody>
</table>

WARRANTY

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