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.

Features
- High solids, low VOC content
- Excellent weatherability
- Far exceeds SSPC Paint 36 specification for a Level 3 urethane
- Available in a variety of colors including metallic-pigmented colors
- Excellent flow characteristics allow for application by spray or roller
- Superior impact and abrasion resistance
- Indefinite recoatability
- VOC compliant to current AIM regulations

Color
Refer to Carboline Color Guide. Certain colors, particularly in non-leaded safety oranges, reds and yellows may require multiple coats for adequate hiding. Check color suitability before use.

Finish
Gloss

Primer
Refer to Substrates & Surface Preparation

Topcoats
Carbothane® 130 Clear Coat when required

Dry Film
2.0-3.0 mils (50-75 µ)
Thickness
May be applied up to 4 mils (100 µ) as needed

Solids Content
By Volume: 70% ± 2%

Theoretical Coverage Rate
1123 mil ft² (27.5 m²/l) at 25 µ

VOC Values
As supplied: 2.2 lbs./gal (264 g/l)
Thinned:
25 oz./gal w/ #25: 3.06 lbs./gal (366 g/l)
25 oz./gal w/ #214: 2.9 lbs./gal (348 g/l)
25 oz./gal w/ #215: 3.0 lbs./gal (362 g/l)
These are nominal values and may vary slightly with color.

Dry Temp. Resistance
Continuous: 200°F (93°C)
Non-Continuous: 250°F (121°C)
Discoloration and loss of gloss is observed above 200°F (93°C).

* The alignment of aluminum flakes in aluminum-filled finishes is very dependent on application conditions and techniques. 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.

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 with specific Carboline primer as recommended by your Carboline sales representative. Refer to the specific primer's Product Data Sheet for detailed requirements of the specified primer.

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 or abrade to roughen and degloss the surface. Existing paint must attain a minimum 3B rating in accordance with ASTM D3359 “X-Scribe” adhesion test.

Performance Data

<table>
<thead>
<tr>
<th>Test Method</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM D4541 Adhesion</td>
<td>Blasted Steel 1 ct. Epoxy 1 ct. 134 HG</td>
</tr>
<tr>
<td>ASTM D3359 Adhesion</td>
<td>Blasted Steel 1 ct. Epoxy 1 ct. 134 HG</td>
</tr>
<tr>
<td>ASTM D4060 Abrasion</td>
<td>Blasted Steel 1 ct. 134 HG</td>
</tr>
<tr>
<td>ASTM G26 Weatherometer</td>
<td>Blasted Steel 1 ct. Epoxy 1 ct. 134 HG</td>
</tr>
<tr>
<td>ASTM G53</td>
<td>Blasted Steel 1 ct. Org. Zinc 1 ct. Epoxy 1 ct. 134 HG</td>
</tr>
<tr>
<td>ASTM D3363 Hardness</td>
<td>Blasted Steel 1 ct. Epoxy 1 ct. 134 HG</td>
</tr>
<tr>
<td>ASTM D870 Water/Saltwater Resistance</td>
<td>Blasted Steel 1 ct. Org. Zinc 1 ct. Epoxy 1 ct. 134 HG</td>
</tr>
</tbody>
</table>

March 2011 replaces December 2009

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**Application Equipment**

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

**General Guidelines:**

Spray Application (General)

This is a high solids coating and may require adjustments in spray techniques. Wet film thickness is easily and quickly achieved. The following spray equipment has been found suitable and is available from manufacturers such as Binks, DeVilbiss and Graco.

Conventional Spray

Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, .070" I.D. fluid tip and appropriate air cap.

Airless Spray

Pump Ratio: 30:1 (min.)*
GPM Output: 3.0 (min.)
Material Hose: 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 re-rolling. For best results, tie-in within 10 minutes at 75°F (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.

**Mixing & Thinning**

Mixing

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

Ratio (By Volume)

4:1 Ratio (A to B)

Thinning

Spray: Up to 25 oz/gal (20%) w/ #214 or #25
Brush: Up to 25 oz/gal (20%) w/ #215
Roller: Up to 25 oz/gal (20%) w/ #215

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

Carbothane® Thinner #236E may also be used to thin this product to minimize HAP and VOC emissions. Consult Carboline Technical Service for guidance.

Pot Life

4 Hours at 75°F (24°C) and less at higher temperatures. Pot life ends when coating becomes too viscous to use. MOISTURE CONTAMINATION WILL SHORTEN POT LIFE AND CAUSE GELLATION.

**Cleanup & Safety**

Cleanup

Use Thinner #2 or Acetone. In case of spillage, absorb and 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. Employ normal workmanlike safety precautions. Hypersensitive persons should wear protective clothing, gloves and use protective cream on face, hands and all exposed areas.

Ventilation

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 vapor 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 sure or if not able to monitor levels, use MSHA / NIOSH approved respirator.

**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>Normal</td>
<td>60°-85°F (16°-29°C)</td>
<td>65°-85°F (18°-29°C)</td>
<td>65°-85°F (18°-29°C)</td>
<td>40-60%</td>
</tr>
<tr>
<td>Minimum</td>
<td>50°F (10°C)</td>
<td>35°F (2°C)</td>
<td>35°F (2°C)</td>
<td>10%</td>
</tr>
<tr>
<td>Maximum</td>
<td>100°F (38°C)</td>
<td>120°F (49°C)</td>
<td>95°F (35°C)</td>
<td>85%</td>
</tr>
</tbody>
</table>

Industry standards are for substrate temperatures to be at least 5°F (3°C) above the dew point.

Caution: This product is moisture sensitive in the liquid stage and during initial cure. Protect from direct moisture (rain or dew) contact during initial curing period. Excessive exposure to moisture may result in a loss of gloss and/or microbubbling of the product.

**Curing Schedule**

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

These times are based on a 2.0 mil (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 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 214 or 215. If the film shows a slight "tack" the surface is suitable for recoating without extensive surface preparation such as abrading.

**Packaging, Handling & Storage**

<table>
<thead>
<tr>
<th>Shipping Weight (Approximate)</th>
<th>1 Gallon Kit</th>
<th>5 Gallon Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>13 lbs (5kg)</td>
<td>57 lbs (26 kg)</td>
<td></td>
</tr>
</tbody>
</table>

Flash Point (Setalight)

Carbothane 134 HG Part A: 50°F (10°C)
Urethane Converter 811 Part B: 106°F (41°C)

Storage (General)

Store indoors.

Storage Temperature & Humidity

40°-110°F (4°-43°C)
0-80% Relative Humidity

SheLF Life

Part A: Min. 36 months at 75°F (24°C)
Part B: Min. 24 months at 75°F (24°C)

*SHELF Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.