

Selection & Specification Data

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| Generic Type | Aliphatic Acrylic Polyurethane |
| Description | High gloss finish with exceptional weathering performance characteristics. Used extensively in virtually all industrial markets, 134 VOC provides a smooth, durable finish that has superior resistance to corrosion, abrasion and chemical exposure. |
| Features | <ul style="list-style-type: none"> ▪ High solids, low VOC content ▪ Excellent weatherability ▪ Exceeds SSPC Paint 36 specification for a Level 3 urethane ▪ Excellent flow characteristics allow for application by spray or roller ▪ Superior impact and abrasion resistance ▪ VOC compliant to current AIM regulations |
| Color * | Refer to Carboline Color Guide. Certain colors, particularly in non-lead safety oranges, reds and yellows may require multiple coats for adequate hiding. Check color suitability before use. |
| Finish | Gloss |
| Primers | Refer to <i>Substrates & Surface Preparation</i> |
| Topcoats | Carbothane® Clear Coat when required |
| Dry Film Thickness | 2.0-2.5 mils (50-62 microns) |
| Solids Content | By Volume: 70% ± 2% |
| Theoretical Coverage Rate | 1123 mil ft ² (27.5 m ² /l at 25 microns) Allow for loss in mixing and application |
| VOC Values | As supplied: 1.58 lbs./gal (190 g/l) Thinned: 11 oz/gal w/ #214: 2.06 lbs./gal (247 g/l) 10 oz/gal w/ #25: 2.05 lbs./gal (245 g/l) 10 oz/gal w/ #215: 2.06 lbs./gal (247 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

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

The following data applies to both Carbothane 134 HG and 134 VOC

| Test Method | System | Results | Report # |
|---|--|--|----------|
| ASTM D4541 Adhesion | Blasted Steel 1 ct. Epoxy 1 ct. 134 HG | 2562 psi (Pneumatic) | 09360 |
| ASTM D3359 Adhesion | Blasted Steel 1 ct. Epoxy 1 ct. 134 HG | 5A | 09360 |
| ASTM D4060 Abrasion | Blasted Steel 1 ct. 134 HG | 70 mg. loss after 1000 cycles, CS17 wheel, 1000 gm. load | 09360 |
| ASTM G26 Weatherometer | Blasted Steel 1 ct. Epoxy 1 ct. 134 HG | No blistering, rusting or cracking; gloss retention of 85%; color change of 1 McAdam unit after 2000 hours. | 09360 |
| ASTM G53 ASTM D4587 Accelerated Weathering | Blasted Steel 1 ct. Org. Zinc 1 ct. Epoxy 1 ct. 134 HG | No rusting, blistering or loss of adhesion; less than 5% gloss loss after 3000 hours | 03390 |
| ASTM B117 Salt Fog | Blasted Steel 1 ct. Org. Zinc 1 ct. Epoxy 1 ct. 134 HG | No rusting, blistering, loss of bond or any measurable creepage from the scribe after 3000 hours. | 03390 |
| ASTM D3363 Hardness | Blasted Steel 1 ct. Epoxy 1 ct. 134 HG | H | 09360 |
| ASTM D2794 Impact Resistance | Blasted Steel 1 ct. 134 HG | 155 inch-pounds; no visible cracking. Gardner Impact Tester | 03259 |
| ASTM D870 Immersion Resistance | Blasted Steel 1 ct. Org. Zinc 1 ct. Epoxy 1 ct. 134 HG | No rusting in the scribe; no blistering, softening or discoloration after either 30 days of freshwater immersion or 30 days of salt water immersion at 75°F. | 03390 |

Test reports and additional data available upon written request.

Carbothane® 134 VOC

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 13 oz/gal (9%) w/ #214
Brush: Up to 12 oz/gal (8%) w/ #215
Roller: Up to 12 oz/gal (8%) w/ #25
Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

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.

Caution This product contains flammable solvents. Keep away from sparks and open flames. All electrical equipment and installations should be made and grounded in accordance with the National Electric Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

Application Conditions

| Condition | Material | Surface | Ambient | Humidity |
|-----------|------------------------|------------------------|------------------------|----------|
| Normal | 60°-85°F (16°-29°C) | 65°-85°F (18°-29°C) | 65°-85°F (18°-29°C) | 40-60% |
| Minimum | 50°F (10°C) | 35°F (2°C) | 35°F (2°C) | 10% |
| Maximum | 100°F (38°C) | 120°F (49°C) | 95°F (35°C) | 80% |

Industry standards are for substrate temperatures to be above 5°F (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 direct 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 microbubbling of the product.

Curing Schedule

| Surface Temp. & 50% Relative Humidity | Dry to Handle | Dry to Recoat | Final Cure |
|---------------------------------------|---------------|---------------|------------|
| 35°F (2°C) | 36 Hours | 36 Hours | 14 Days |
| 50°F (10°C) | 16 Hours | 16 Hours | 10 Days |
| 75°F (24°C) | 8 Hours | 8 Hours | 7 Days |
| 90°F (32°C) | 4 Hours | 4 Hours | 5 Days |

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.

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Packaging, Handling & Storage

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| Shipping Weight (Approximate) | <u>1 Gallon Kit</u> | <u>5 Gallon Kit</u> |
| | 14 lbs (6kg) | 60 lbs (27kg) |

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| Flash Point (Setaflash) | Part A: | 74° F (23° 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.**



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