

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	<ul style="list-style-type: none"> • 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) • 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
Colour	<ul style="list-style-type: none"> • NZ Standard: White, Black & Yellow LF • AU Standard: White & Yellow LF • AU/NZ Tinted: Full range of lead-free tinted AS, BS & RAL colours and custom colours
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 Rate	27.6 m ² at 25 microns (1123 ft ² at 1.0 mils) 13.8 m ² at 50 microns (561 ft ² at 2.0 mils) 9.2 m ² at 75 microns (374 ft ² 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

Carbothane 134 HG

PRODUCT DATA SHEET



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 "X-Scribe" adhesion test.

PERFORMANCE DATA

Test Method	System	Results
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.
ASTM D2794 Impact Resistance	Blasted Steel 1 ct 134 HG	155 inch-pounds; no visible cracking. Gardner Impact Tester
ASTM D3359 Adhesion	Blasted Steel 1 ct. Epoxy 1 ct 134 HG	5A
ASTM D3363 Hardness	Blasted Steel 1 ct Epoxy 1 ct 134 HG	H
ASTM D4060 Abrasion	Blasted Steel 1 ct 134 HG	70 mg. loss after 1000 cycles, CS17 wheel, 1000 gm. load
ASTM D4541 Adhesion	Blasted Steel 1 ct. Epoxy 1 ct. 134 HG	2562 psi Pneumatic
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 either 30 days of soft water imm
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
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
NORSOK M-501 Revision 5	System 1: ISO 20340 1 ct 60-75 microns as system finish coat	Tested & approved by N.I.T., Oslo, Norway Report #3410-05-0060

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.

Airless Spray | *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

Condition	Material	Surface	Ambient	Humidity
Minimum	10°C (50°F)	2°C (36°F)	2°C (36°F)	0%
Maximum	38°C (100°F)	49°C (120°F)	35°C (95°F)	80%

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.

Carbothane 134 HG

PRODUCT DATA SHEET



CURING SCHEDULE

Surface Temp.	Dry to Handle	Dry to Recoat & Topcoat w/ other finishes	Final Cure General
2°C (35°F)	36 Hours	36 Hours	14 Days
10°C (50°F)	16 Hours	16 Hours	10 Days
24°C (75°F)	8 Hours	8 Hours	7 Days
32°C (90°F)	4 Hours	4 Hours	5 Days

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.
Ventilation	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°-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

Approvals NZ/AU	Food Processing NZ AsureQuality assessed and passed for food/beverage including farm & factory non-incident contact. Ref: H3112
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WARRANTY

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