

Carbothane® 134 HB

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Two component, acrylic, aliphatic polyurethane.
Description	Carbothane 134 HB is a fast dry, high gloss, high build, two component polyurethane coating. Carbothane 134 HB exhibits excellent dry times and handling characteristics. This coating has outstanding hardness, adhesion and resistance to: impact, marring, abrasion, chemicals and staining. Typical applications include structural steel, tanks, equipment or others as typically found in both industrial and architectural projects. Not recommended for continuous immersion service.
Features	<ul style="list-style-type: none"> • VOC compliant – 3.3 pounds per gallon as supplied • Fast Dry – 6-8 hours to handle at 75°F • High build, high gloss • Excellent abrasion resistance • Application by conventional, airless spray, HVLP or electrostatic • Excellent chemical resistance • Indefinite recoatability • Meets SSPC Paint Spec 36; Level 3
Color	Available in a wide variety of colors.
Finish	High Gloss
Primer	Use over epoxy, zinc rich epoxy or as recommended by Carboline.
Dry Film Thickness	3 - 5 mils (76 - 127 microns) per coat
Solids Content	By Volume 54% +/- 2%
Theoretical Coverage Rate	866 ft²/gal at 1.0 mils (21.3 m²/l at 25 microns) 289 ft²/gal at 3.0 mils (7.1 m²/l at 75 microns) 173 ft²/gal at 5.0 mils (4.3 m²/l at 125 microns) Allow for loss in mixing and application.
VOC Values	As Supplied : 3.3 lbs/gal (395 g/l) Thinner 214 : 8 oz/gal; 3.5 lbs/gal (420 g/l) Thinner 215 : 7 oz/gal; 3.5 lbs/gal (420 g/l) Thinner 25 : 6 oz/gal; 3.5 lbs/gal (420 g/l) These are nominal values.
Dry Temp. Resistance	Continuous: 200°F (93°C) Non-Continuous: 250°F (121°C) Discoloration is observed above 180°F (82°C).

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.
Steel	Prime with appropriate primer.
Primed Surfaces	Remove any oil or grease from the surface prior to use of Thinner 2 or Carboline Surface Cleaner 3 (Refer to Data Sheet) in accordance with SSPC-SP1.



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MIXING & THINNING

Mixing	<p>For plural component application equipment follow the equipment manufacturer's instructions. For batch mixing, power mix Part A separately, then combine and power mix thoroughly in the following proportions.</p> <p>THIS PRODUCT IS MOISTURE SENSITIVE. AVOID MOISTURE CONTAMINATION. DO NOT MIX PARTIAL KITS.</p>
Thinning	<p>Normally not required. May be thinned up to 6 oz/gal with Thinner 25 for spray application (or Thinner 97 in very hot conditions). For brush or roller use up to 8 oz/gal of Thinner 214 or up to 7 oz/gal of Thinner 215.</p> <p>Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.</p>
Ratio	<p>4:1 Ratio 4 parts Carbothane 134 HB Part A to 1 part Carbothane 134 HB Part B (Urethane Converter 8800)</p> <p><u>1 Gallon Kit</u> Part A (134 HB): .80 gallons (in 1 gallon can) Part B Urethane Converter 8800: 25.6 fluid oz.</p> <p><u>5 Gallon Kit</u> Part A (134 HB): 4 gallons (in 5 gallon can) Part B Urethane Converter 8800: 1 gallon</p>
Pot Life	<p>2 hours at 75°F (24°C) Not thinned Pot life decreases at higher temperatures. Pot life ends when coating becomes too viscous to use. This product is moisture sensitive. Avoid moisture contamination.</p>

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)	The following spray equipment has been found suitable and is available from manufacturers.
Conventional Spray	Pressure pot equipped with dual regulators, 3/8" I.D. minimum material hose, 0.070" 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: 0.011-0.015" Output PSI: 2500-2800 Filter Size: 60 mesh
Brush & Roller (General)	Multiple coats may be required to obtain desired appearance, recommended 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	Brushing is recommended for touch-up of small areas. Use natural bristle brush applying with full strokes.



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Roller | Use a medium-nap synthetic roller cover with phenolic core.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	50°F (10°C)	35°F (2°C)	35°F (2°C)	0%
Maximum	130°F (54°C)	120°F (49°C)	95°F (35°C)	80%

Industry standards are for substrate temperatures to be 5°F (3°C) above 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 loss of gloss and/or microbubbling of the product.

CURING SCHEDULE

Surface Temp.	Dry to Handle	Dry to Recoat & Topcoat w/ other finishes	Final Cure General
40°F (4°C)	20 Hours	20 Hours	14 Days
50°F (10°C)	12 Hours	12 Hours	10 Days
75°F (24°C)	6 Hours	6 Hours	7 Days
90°F (32°C)	3 Hours	3 Hours	5 Days

These times are based on a 4.0 mil (100 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. **Note:** Product may be force cured.

Carboline Additive 101 can be used to accelerate the film forming process in this product for conditions outside of the parameters of this data sheet. Carboline Additive 101 is added at a rate of 1.0-2.0 oz per mixed gallon or a maximum of 6 oz per mixed five gallons. At this addition rate, Additive 101 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 Additive 101, this product will continue to cure at temperatures as low as 20°F (-7°C).

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 SDS for this product and use personal protective equipment as directed.
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 supplied air 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 nonferrous tools and wear conductive and non-sparking shoes.



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PACKAGING, HANDLING & STORAGE

Shelf Life	Part A: Min. 36 months at 75°F (24°C) Urethane Converter: 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.
Storage Temperature & Humidity	40° - 110°F (4-43°C) 0-80% Relative Humidity
Storage	Store Indoors.
Shipping Weight (Approximate)	1 Gallon Kit Shipping Weight 134 HB (Approx): 15 lbs. (6kg) Thinner #25: 8 lbs. (4 kg) Thinner #97: 8 lbs. (4 kg) Thinner #214: 8 lbs. (4 kg) Thinner #215: 8 lbs. (4 kg)
	5 Gallon Kit Shipping Weight 134 HB (Approx): 58 lbs. (22 kg) Thinner #25: 41 lbs. (19 kg) Thinner #97: 41 lbs. (19 kg) Thinner #214: 41 lbs. (19 kg) Thinner #215: 41 lbs. (19 kg)
Flash Point (Setaflash)	Part A: 58°F (14°C) Part B (Urethane Converter 8800): 28°F (-2°C) Thinner #25: 90°F (32°C)

WARRANTY

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance, injuries or damages resulting from use. Carbolines sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carbolines option. Carboline shall not be liable for any loss or damage. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated.



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