Carbothane 134

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Aliphatic acrylic polyurethane.
Description	A thin film, high gloss finish with exceptional weathering performance characteristics. Used extensively in virtually all industrial markets, Carbothane 134 provides a smooth, durable finish that offers superior resistance to corrosion, abrasion and UV chemical exposure.
Features	• Exceeds SSPC Paint 36 specification for a Level 3 urethane • Achieves adhesion of 5A in accordance with ASTM D3359 • Achieves a hardness of H in accordance with ASTM D3363 • Less than 75% gloss loss after 5500 hours in accordance with ASTM G53 • Excellent gloss and colour retention • Excellent weatherability • Excellent flexibility • Excellent flow characteristics that allow for application by spray or roller • Superior impact and abrasion resistance • Indefinite recoatability • Finish coat for exteriors of tanks, equipment, piping, structural steel and concrete surfaces where chemical resistance, toughness and weatherability are required • Can be used over urethane, epoxy and others as recommended • Excellent coating for use in chemical processing, pulp and paper, petrochemical, offshore drilling, and similar demanding industries • Widely used in heavy marine, institutional and waste treatment areas where a highly resistant and attractive coating is required • Not recommended for immersion service
Color	Available in a variety of colours. White and Pastel Shades may require multiple coats for adequate hiding. Consult your local StonCor Africa Sales or Customer Service Department for availability. **NOTE:** Carboline is committed to being a “lead-free” supplier. This however results in certain bright colours having a lower obliteration in comparison to “lead-based” coatings. Some colours (particularly Reds, Oranges and Yellows) may require multiple coats when applied over darker surfaces. Light coloured primers are available to mitigate against this.
Finish	Gloss (70-85)
Dry Film Thickness	40 Microns Dry film thicknesses in excess of 80 microns per coat are not recommended. **NOTE:** Excessive film thickness will cause gassing and poor film appearance.
Solid(s) Content	By Volume 56% ± 2%
Theoretical Coverage Rates	14m²/litre at 40 microns **NOTE:** Material and application losses will vary and must be taken into consideration when estimating job requirements.
VOC Value(s)	As supplied: Carbothane 134: 385 g/l Thinner # 25 @ 25%: 486 g/l
Dry Temp. Resistance	Continuous: 93°C (199°F) Non-Continuous: 121°C (250°F)

SUBSTRATES & SURFACE PREPARATION

General	Remove any oil or grease from surface to be coated.
Steel	Apply over clean, dry, recommended primers and/or tie coats.
Concrete	Apply over clean, dry, recommended primers or surfacers.

PERFORMANCE DATA (TYPICAL VALUES)

Test Method	System	Results
Adhesion ASTM D3359	Blasted steel 1 Coat epoxy 1 Coat Carbothane 134	5A
Hardness ASTM D3363	Blasted steel 1 Coat epoxy 1 Coat Carbothane 134	H
Weathering ASTM G53	1 Coat Carbothane 134	5500 Hours < 75% gloss loss

MIXING & THINNING

Mixing	Mix separately, then combine and power mix in the following proportions (do not mix partial kits) **5 Litre** Part A: 4.45 litre Part B: 0.55 litre
Thinning	Thin up to 25% by volume with Thinner # 25 for normal spray or brush application. When roller applied at higher temperatures, Thinner AB may be used up to 15% to minimise bubble formation. **NOTE: The minimum amount of thinning for the specific application technique is recommended. Maximum thinning may result in pigment floatation with certain colours.** **NOTE:** Substitute thinners, especially Lacquer Thinners, may contain alcohols which will inhibit the cure of Carbothane 134. Use of thinners other than those supplied or approved by StonCor Africa may adversely affect product performance and void product warranty, whether express or implied.
Ratio	8:1
Pot Life	2 Hours at 25°C and less at higher temperatures. Pot life ends when the material becomes too viscous to use.

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	Use sufficient air volume for correct operation of equipment. Use a 50% overlap with each pass of the gun. On irregular surfaces, coat the edges first, making an extra pass later.
Conventional Spray	Use a 10mm minimum I.D. material hose, with a 1.4 to 1.8mm tip and appropriate air cap. Hold gun approximately 300 to 350mm from surface and at a right angle to the surface.
Airless Spray	Refer to StonCor Africa Technical Service Department
Brush	Brushing is recommended only for touch-up of small areas. Use natural bristle brush, applying with full strokes. Avoid rebrushing.
Roller	For roller application, use a short nap mohair roller with phenolic core. Avoid rerolling.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	10°C (50°F)	10°C (50°F)	10°C (50°F)	0%
Maximum	43°C (109°F)	54°C (129°F)	49°C (120°F)	85%
Optimum	24°C (75°F)	24°C (75°F)	23°C (73°F)	60%

Do not apply when the surface temperature is less than 3°C above the dew point.
Special thinning and application techniques may be required above or below normal conditions.

CURING SCHEDULE

Surface Temp.	Dry to Handle	Final Cure
16°C (61°F)	7 Hours	10 Days
24°C (75°F)	4 Hours	7 Days
32°C (90°F)	3 Hours	5 Days

These times are based on recommended dry film thickness of 40 microns. Higher film thicknesses will lengthen cure times.
Rain Resistance: Requires a minimum cure of 3 hours at 25°C and longer at lower temperatures. Surface moisture before this time will decrease the gloss.

Curing Details | **Relative Humidity: 50%**

CLEANUP & SAFETY

Cleanup | Use Thinner # 2

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 | 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 ensure all personnel are below guidelines. If not able to monitor levels, use MSHA / NIOSH approved respirator.

Caution | Read and follow all caution statements on this product data sheet and on the material safety data sheets for this product.

PACKAGING, HANDLING & STORAGE

Shelf Life | Part A: 36 Months minimum when stored at 25°C
Part B: 24 Months minimum when stored at 25°C
NOTE: Polyurethane materials are moisture sensitive. Keep tightly covered before use. Moisture contamination will cause poor cure of the coating or gelation of Part B.

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

Shipping Weight (Approximate) | **5 Litre Kit**
Carbothane 134: 7.0kg
Thinner # 25: 4.9kg

Storage Temperature & Humidity | 4 to 43°C
0 to 90%

PACKAGING, HANDLING & STORAGE

Flash Point (Pensky Martens Closed Cup)	Part A: 17°C Part B: 33°C Thinner # 25: 23°C
Storage	Store indoors

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 to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. Carboline warrants our products to be free of manufacturing defects in accord with applicable Carboline quality control procedures. THIS WARRANTY IS NOT VALID WHEN THE PRODUCT IS NOT: (1) APPLIED IN ACCORDANCE WITH CARBOLINE'S SPECIFICATIONS, AND/OR (2) PROPERLY STORED, CURED, AND USED UNDER NORMAL OPERATING CONDITIONS. Carboline assumes no responsibility for coverage, performance, injuries, or damages resulting from use of the product. If this product is found not to perform as specified upon inspection by a Carboline representative during the warranty period, Carboline's sole obligation, if any, is to replace the Carboline product(s) proven to be defective or refund the purchase price thereof, at Carboline's sole option. Carboline shall not be liable for any other losses or damages. This warranty excludes (1) labor and costs of labor for the application or removal of any product, and (2) any incidental or consequential damages, whether based on breach of express or implied warranty, negligence, strict liability or any other legal theory. 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. The whole text of this Product Data Sheet, as well as the documents derived from it, have been written in English, and for legal purposes the English version shall prevail.