

SELECTION & SPECIFICATION DATA

Generic Type	Aliphatic Acrylic-Polyester Polyurethane
Description	High build, low sheen finish that has excellent resistance to corrosion, chemicals and abrasion. Suitable for application over a number of Carboline primers and intermediates, this material provides very good weathering performance in a broad range of colours.
Features	<ul style="list-style-type: none"> • Outstanding performance properties in both mild and aggressive environments • High build; suitable for many two-coat systems • Approved for use in food & dairy processing plants (refer to "Approvals NZ/AU" section) • Application by spray, brush or roller • Indefinite recoatability • Low HAPs content
Colour	<p>NZ Standard: White, & Black AU Standard: White AU/NZ Tinted: Available in most British Standard, AS 2700, Resene colours and custom tints.</p>
Finish	Satin
Primer	Refer to Substrates & Surface Preparation.
Film Build	75 - 125 microns dry per coat Dry film thickness in excess of 175 microns per coat is not recommended.
Solid(s) Content	By Volume 61% +/- 2%
Theoretical Coverage Rates	8.1 m ² /litre at 75 microns dry 6.1 m ² /litre at 100 microns dry 4.9 m ² /litre at 125 microns dry Allow for loss in mixing and application.
VOC Values	<p>As Supplied : 324 g/l</p> <p>These are nominal values and may vary slightly with colour.</p>
Dry Temp. Resistance	<p>Continuous: 149°C (300°F)</p> <p>Some discoloration and loss of gloss may be experienced at elevated temperatures.</p>
Limitations	Light abrasion / rubbing may result in burnishing of the surface (sheen variation may occur).
Topcoats	<p>Carbothane 130 Clear Coat when required for graffiti resistance (NZTA/AMA approved) or extreme weatherability</p> <p>Note: <i>Application of Carbothane 130 Clear Coat will improve UV resistance of most colours <u>but will raise the gloss level.</u></i></p>

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. Refer to the specific primer's Product Data Sheet for detailed requirements of the specified primer.
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Carbothane 133 LH

PRODUCT DATA SHEET



SUBSTRATES & SURFACE PREPARATION

Steel	For maximum protection, abrasive blasting to a minimum of SSPC-SP 6 (AS 1627.4 Sa 2), or better, with a 35-70 micron surface profile. Power or hand tool clean as minimum requirement. Prime with specific Carboline primers as recommended by your Carboline sales representative or Carboline specification.
Galvanised 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.
Aluminium	Degrease, abrade and prime with appropriate Carboline primer as recommended by your Carboline sales representative or Carboline specification.
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. Prime with specific Carboline primers as recommended by your Carboline sales representative or Carboline specification.

MIXING & THINNING

Mixing	Power mix Part A separately, then combine with Part B and power mix. DO NOT MIX PARTIAL KITS.
Thinning	Not normally required for airless spray. Use minimum quantity of Thinner #25 required for good spray atomisation - typically 0-20% depending upon spray equipment and conditions. For brush / roller application use Thinner #22.
Ratio	4:1 by volume (Part A : Part B)
Pot Life	4 Hours at 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.

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. 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, 9.5 mm (3/8") I.D. minimum material hose, 1.8 mm (0.070") 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: 0.013-0.015" Output PSI: 2100-2300 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 rebrushing or re-rolling. For best results, tie-in within 10 minutes at 24°C.

APPLICATION EQUIPMENT GUIDELINES

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Brush | Recommended for touch-up only. Use a medium, natural bristle brush.

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

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	4°C (39°F)	4°C (39°F)	4°C (39°F)	0%
Maximum	38°C (100°F)	43°C (109°F)	43°C (109°F)	90%

Industry standards are for substrate temperatures to be 3°C above the dew point. This product simply requires the substrate temperature to be above the dew point.

Caution: This Product is moisture sensitive in the liquid stage and until cured. Protect from high humidity, dew and direct moisture contact until 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.	Dry to Handle	Dry to Recoat	Final Cure General
4°C (40°F)	24 Hours	24 Hours	28 Days
10°C (50°F)	15 Hours	15 Hours	14 Days
24°C (75°F)	6 Hours	6 Hours	7 Days
32°C (90°F)	3 Hours	3 Hours	4 Days

These times are based on a 75-125 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 #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 ml per mixed litre or a maximum of 25 ml 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 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.

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PRODUCT DATA SHEET



CLEANUP & SAFETY

Ventilation	<p>This product contains iso-cyanate. For spray application users must have air-fed masks as directed in local regulations.</p> <p>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.</p>
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PACKAGING, HANDLING & STORAGE

Shelf Life	<p>Part A: Min. 24 months at 24°C Part B: Min. 24 months at 24°C</p> <p>*Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.</p>
Shipping Weight (Approximate)	<p>5 Litre Kit - 9.2 kg 10 Litre Kit - 18.5kg</p>
Storage Temperature & Humidity	<p>4°-43°C 0-90% Relative Humidity</p>
Flash Point (Setaflash)	<p>Part A: 20°C Part B: -2°C</p>
Storage	<p>Store Indoors.</p> <p>This product is solvent based and not affected by excursions below these published storage temperatures, down to -7°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.</p>
Packaging	<p>5 and 10 litre kits - WITE, and CLER tint base colours. 5 litre kit only for White, Black and DEEP tint base colours.</p>

APPROVALS

Approvals NZ/AU	<p>Food Processing - New Zealand AsureQuality® assessed for food/beverage industry including dairy factory and dairy farm non-incident contact (assessment reference number: h3111).</p>
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WARRANTY

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