

SELECTION & SPECIFICATION DATA

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| Generic Type | Aliphatic Acrylic Polyurethane |
| Description | A clear coat finish that provides added UV protection over pigmented Carboline polyurethanes. Exceptionally hard film and excellent depth-of-image provide extended service life to the Carbothane topcoats, especially when deeptone and metallic colors are used. |
| Features | <ul style="list-style-type: none"> • Hard finish with excellent impact and abrasion resistance • Excellent resistance to UV degradation • High gloss version provides very good depth of image • Attractive gloss and satin finishes • Suitable for conventional spray or roller application • Graffiti resistant • VOC compliant to current AIM regulations |
| Color | Clear (0910) |
| Finish | Satin |
| Dry Film Thickness | 1 - 2 mils (25 - 51 microns) per coat |
| Solids Content | By Volume 57% +/- 2% |
| Theoretical Coverage Rate | 914 ft ² /gal at 1.0 mils (22.4 m ² /l at 25 microns) 457 ft ² /gal at 2.0 mils (11.2 m ² /l at 50 microns) Allow for loss in mixing and application. |
| VOC Value(s) | Per EPA Method 24: 2.3 lbs/gal (340 g/l) 13 oz/gal of Thinner 214: 3.4 lbs/gal (407 g/l) 13 oz/gal of Thinner 215: 3.4 lbs/gal (407 g/l) 13 oz/gal of Thinner 236 E: 2.3 lbs/gal (360 g/l) This product contains US EPA VOC-exempt solvent(s). |
| 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). |

SUBSTRATES & SURFACE PREPARATION

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| General | Apply over Carbothane topcoats that are clean and dry, and within the recoat time allotment. Employ adequate methods to remove dirt, dust, oil and all other contaminants that could interfere with adhesion of the coating. |
| Previously Painted Surfaces | Consult Carboline Technical Services for information. |

Carbothane[®] Clear Coat (Satin)

PRODUCT DATA SHEET



PERFORMANCE DATA

| Test Method | System | Results |
|---|---|--|
| ASTM D3359 Adhesion | Blasted Steel 1 ct. Epoxy 1 ct. Urethane 1 ct. Clear | Satin: 5B |
| ASTM D3363 Hardness | 1 ct. Clear | Satin: 2H |
| ASTM D4541 Adhesion | Blasted Steel 1 ct. Epoxy 1 ct. Urethane 1 ct. Clear | Satin: 1435 psi (Pneumatic) |
| ASTM D522 Flexibility | 1 ct. Clear | Satin No cracking observed at 1/8" diameter Method A |
| ASTM G53 ASTM D4587 Accelerated Weathering | Blasted Steel 1 ct. Epoxy 1 ct. Urethane 1 ct. Clear | Satin No blistering, cracking or chalking; color difference less than 3.88 DE units; no loss |
| Graffiti Resistance | Blasted Steel 1 ct. Epoxy 1 ct. Urethane 1 ct. Clear | Satin All removed by solvent after exposure to: shoe polish, Sharpie marker, cryon, lipstick |

Test reports and additional data available upon written request.

MIXING & THINNING

Mixing | Power mix Part A separately, then combine and power mix. DO NOT MIX PARTIAL KITS.

Thinning | **Spray:** Normally not required.
Brush or Roller: Up to 13 oz/gal (10%) w/ #214, 215, or 236E (exempt solvent) for VOC restricted areas.
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 | Satin: 4:1 Ratio (A to B)

Pot Life | 3 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.

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, 3/8" I.D. minimum material hose, .043" I.D. fluid tip and appropriate air cap.

Airless Spray | Not recommended.

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.

- Brush** | Recommended for touch-up only. Use a medium, natural bristle brush and avoid excessive re-brushing.
- Roller** | Use a ½"-nap mohair roller cover with phenolic core and avoid excessive re-rolling.

APPLICATION CONDITIONS

| Condition | Material | Surface | Ambient | Humidity |
|-----------|--------------|--------------|-------------|----------|
| 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 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 micro-bubbling of the product.

CURING SCHEDULE

| Surface Temp. | Dry to Handle | Dry to Recoat | Final Cure General |
|---------------|---------------|---------------|--------------------|
| 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 1.0-2.0 mil (25-50 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.

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. 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 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 non-ferrous tools and wear conductive and non-sparking shoes.

Carbothane[®] Clear Coat (Satin)

PRODUCT DATA SHEET



PACKAGING, HANDLING & STORAGE

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|---|---|
| Shelf Life | Part A: Min. 36 months at 75 °F (24 °C) Part B (Urethane Converter 811): 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) | Satin |
| | 1.0 Gallon Kit - 11 lbs 5 Gallon Kit - 55 lbs |
| Flash Point (Setaflash) | Part A: 43 °F (6 °C) |
| | Part B (Urethane Converter 811): 127 °F (53 °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.