product data carboline®

Carbocrylic® 3359

Selection & Specification Data

Generic Type Waterborne Acrylic

Description Versatile high performance finish with excellent corrosion resistance and exterior weathering properties.

Features
- Multi-purpose interior/exterior coating
- Excellent color and gloss retention
- Single component
- Outstanding corrosion protection
- Low odor, low VOC
- Acceptable for use in USDA facilities

Color Refer to Carboline Color Guide. Certain colors may require multiple coats to hide.

Finish Semi-Gloss

Primer Acrylics, Alkyds, Epoxies, Inorganic and Organic Zincs and others as recommended under Substrates & Surface Preparation. A mist coat may be required to minimize bubbling over Inorganic Zinc primers.

Dry Film Thickness 2 - 3 mils (51 - 76 microns) per coat

Do not exceed 3.0 mils in a single coat

Solids Content By Volume 37% +/- 2%

Theoretical Coverage Rate
593 ft^2/gal at 1.0 mils (14.6 m^2/l at 25 microns)
297 ft^2/gal at 2.0 mils (7.3 m^2/l at 50 microns)
198 ft^2/gal at 3.0 mils (4.9 m^2/l at 75 microns)

Allow for loss in mixing and application.

VOC Values As Supplied 0.5 lbs/gal (60 g/l)

These are nominal values and may vary slightly with color.
EPA Method 24: 1.1 lbs/gal (132 g/l)
(Calculated minus water and exempt solvents)

Dry Temp. Resistance
Continuous: 235 °F (113 °C)
Non-Continuous: 325 °F (163 °C)

Slight discoloration and loss of gloss is observed above 200 F (93 C).

Limitations Apply and cure at temperatures of 50°F and above for 24 hours.

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.

Steel SSPC-SP6 with a 1.0-2.0 mil (25-50 micron) surface profile for maximum protection. SSPC-SP2 or SP3 as minimum requirement. Prime with specific Carboline primers as recommended by your Carboline Sales Representative.

Galvanized Steel SSPC-SP1. Prime with Carbocrylic® 120 or others as recommended by your Carboline Sales Representative.

Substrates & Surface Preparation

Concrete or CMU **Concrete:** Must be cured 28 days at 75°F (24°C) and 50% relative humidity or equivalent. Laitance, form oils, curing agents and hardeners must be removed by suitable method before coating application. Prime with Carbocrylic 120.'
CMU: Mortar joints should be thoroughly cured for a minimum of 15 days at 75°F (24°C) and 50% relative humidity or equivalent. Prime with a latex block filler.

Drywall & Plaster Joint compound and plaster should be fully cured prior to coating application. Prime with Carbocrylic 120.

Previously Painted Surfaces Lightly sand or abrade to roughen surface and degloss the surface. Existing paint must attain a minimum 3A rating in accordance with ASTM D3359 “X-Scribe” adhesion test. Prime with Carbocrylic 120 or others as recommended by your Carboline Sales Representative.

Wood Lightly sand with fine sandpaper and remove dust. Prime with Carbocrylic 120.

PVC Remove all oils, grease, and dirt. Prepare surface by light sanding/abrading to degloss and provide anchor profile.

Performance Data

Test Method	System	Results
ASTM B117 Salt Fog	Blasted Steel 1 ct. IOZ 1 ct. 3359	No blistering, rusting or rust creepage at scribe after 1500 hours
ASTM D1653 Water Vapor Transmission	1 ct. 3359	Water Vapor Permeance (WVP) of 3.94 U.S. Perms
ASTM D3359 Adhesion	Blasted Steel 1 ct 3358 1 ct 3359	5A
ASTM D3363 Pencil Hardness	1 ct. Acrylic Pr. 2 cts. 3359	5B
ASTM D4060 Abrasion	1 ct. Acrylic Pr. 2 cts. 3359	185 mg. loss. 3000 cycles, CS10 Wheel
ASTM D4213 Scrub Resistance	1 ct. 3359	.0235/.0655 Microliters per 100 cycles Wet/ Dry Film Volume
ASTM D4541 Adhesion	Stainless Steel 1 ct 3359	1675 psi (Elcometer)
ASTM E84 Flame and Smoke	1 ct 3358 1 ct. 3359	Flame 10 Smoke 20 Class A

Test reports and additional data available upon written request.

Mixing & Thinning

Mixing Power mix until uniform in consistency. Avoid excessive air entrapment.

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Mixing & Thinning

Thinning May be thinned up to 6 oz/gal (5%) with clean, potable water. Areas with cool substrate and warm ambient conditions can experience a surface skinning and separation. Under these conditions, the use of 6-12 oz/gal (5-10%) of Additive 102 assists in the proper film formation at the recommended dry film thickness, without surface skinning. Use of thinners other than those supplied by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

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) Pre-rinse equipment with undiluted Carboline Surface Cleaner 3 followed by clean potable water before spraying. 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, ½" I.D. minimum material hose, .086" I.D. fluid tip and appropriate air cap.

Airless Spray Pump Ratio: 30:1 (min.)*
Pump Ratio: 45:1 for two or more guns
GPM Output: 3.0 (min.)
Material Hose: 3/8" I.D. (min.)
Tip Size: .017-.019"
Output PSI: 1800-2100
Filter Size: 60 mesh
*Teflon packings are recommended and available from the pump manufacturer. For ease of application, remove the pickup tube and immerse the lower unit directly into the material.

Brush & Roller (General) Multiple coats may be required to achieve desired appearance, hiding and recommended dry film thickness. Avoid excessive re-brushing or re-rolling.

Brush Use a synthetic bristle brush.

Roller Use a short-nap synthetic roller cover with phenolic core. For rough surfaces, use a 3/8” woven nap synthetic roller.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Minimum	50 °F (10 °C)	50 °F (10 °C)	50 °F (10 °C)	0%
Maximum	105 °F (41 °C)	130 °F (54 °C)	110 °F (43 °C)	85%

Do not apply when the surface temperature is less than 5°F (3°C) above the dew point. Do not apply if temperatures are expected to drop below 50°F (10°C) within 24 hours of application. Special application techniques may be required above or below normal application conditions.

Curing Schedule

Surface Temp.*	Dry to Handle	Dry to Topcoat
50 °F (10 °C)	3 Hours	3 Hours
75 °F (24 °C)	2 Hours	2 Hours
90 °F (32 °C)	1 Hour	1 Hour

These times are based on a 2.0-3.0 mil (50-75 micron) dry film thickness. Higher film thicknesses, insufficient ventilation, high humidity or cooler temperatures will require longer cure times.
The acrylic film forming process may require several weeks at 75 F (24 C) with proper ventilation to develop adhesion and water resistance. High humidity, high film thickness, insufficient ventilation or cooler temperatures will lengthen the Dry to Handle and Dry to Topcoat times due to slower water evaporation rate. Waterborne acrylics are sensitive to moisture during early cure and are susceptible to handling damage.

Cleanup & Safety

Cleanup Use clean potable water followed with suitable solvent to dry equipment. 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. Use adequate ventilation. Keep container closed when not in use.

Packaging, Handling & Storage

Shelf Life 36 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)
0-95% Relative Humidity

Shipping Weight (Approximate) 1 Gallon - 11 lbs (5 kg)
5 Gallons - 51 lbs (23 kg)
50 Gallons - 525 lbs (239 kg)

Flash Point (Setaflash) >200°F (93°C)

carboline®
Coatings - Linings - Fireproofing

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