product data

carboline®

Carbocrylic® 3359 DTMC

Selection & Specification Data

Generic Type
Water-borne self-crosslinking acrylic

Description
A single-component durable, high performance direct-to-metal acrylic coating for use where excellent weathering properties and chemical resistance are required. Use as a direct-to-metal acrylic coating for light to medium duty service on tank exteriors, piping, and structural steel. May also be used as a finish coat over recommended primers.

Features
- Smooth, attractive, high build finish
- Excellent weatherability, gloss and color retention
- Low odor
- Good corrosion protection
- Meets most VOC (Volatile Organic Content) regulations
- Excellent resistance to flash rusting
- Outstanding application characteristics
- Dry-fall* properties

Color
Available in a variety of colors.

Finish
Gloss

Primers
Consult Carboline for recommended primers

Topcoats
Not normally topcoated (except with itself). Waterborne acrylics may be used, or others as recommended by Technical Service.

Dry Film Thickness
3 - 5 mils (75 - 100 microns) direct to properly prepared substrates.
2 – 3 mils (50 – 75 microns) over recommended primers.

Solids Content
By Volume: 40% ± 3%

Theoretical Coverage Rate
642 mil ft^2 (16 m^2/l at 25 microns)
161 ft^2 at 4 mils (4.0 m^2/l at 100 microns)
Allow for loss in mixing and application

VOC Values
As supplied: 0.37 lbs./gal (44 g/l)
EPA Method 24: 0.83 lbs./gal (100 g/l)

Thinned:
6 oz/gal w/potable water : 0.37 lbs./gal (44 g/l)
EPA Method 24: 0.83 lbs./gal (100 g/l)
These are nominal values and may vary slightly with color.

Dry Temp. Resistance
Continuous: 180°F (82°C)
Non-Continuous: 220°F (104°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 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.

Concrete
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.

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

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

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Application Equipment

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.
General guidelines:

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. 1/2" I.D. material hose, .086" fluid tip and appropriate air cap.

Airless Spray

Pump Ratio:	30:1 (minimum)*
GPM Output:	3.0 (minimum)
Material Hose:	3/8" I.D. (minimum)
Tip Size:	.017" - 0.19"
Output PSI:	1800 - 2200
Filter Size:	60 Mesh

*Teflon packings are recommended and available from the pump manufacturer.

Brush
Use a synthetic bristle brush. Multiple coats may be required to achieve desired dry film thickness and hiding characteristics.

Roller
For smooth surfaces, use a short woven nap synthetic roller. For rough surfaces, cinder block or very porous concrete, use a 3/8" woven nap synthetic roller. Multiple coats may be required to obtain desired appearance, hiding and recommended dry film thickness.

Mixing & Thinning

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

Thinning
Not normally required. May be thinned up to 6 oz/gal with clean, potable water where conditions dictate. Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

Cleanup & Safety

Cleanup
Use clean, potable water followed with a 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 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.

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 respirator.

Cleanup & Safety Cont.

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.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	60-90°F (16-32°C)	65-85°F (18-29°C)	65-90°F (18-32°C)	10-70%
Minimum	50°F (10°C)	50°F (10°C)	50°F (10°C)	0%
Maximum	100°F (38°C)	120°F (49°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. & 50% Relative Humidity	Dry to Topcoat with Itself	Dry to Handle
50°F (10°C)	3 hours	10 hours
75°F (24°C)	2 hours	6 hours
90°F (32°C)	1 hour	4 hours

The dry times above are for 3-4 mils dry film thicknesses. 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.

Packaging, Handling & Storage

Shipping Weight (Approximate)

1 Gallon	5 Gallon	50 Gallon
11 Lbs. (5 kg)	51 Lbs. (23 kg)	600 Lbs. (239 kg)

Flash Point (Setaflash)
>200°F (>93°C)

Storage Temperature & Humidity
45° - 110°F (7°- 43°C) Store indoors.
Do Not Allow to Freeze.
0-95% Relative Humidity

Shelf Life
24 months at 75°F (24°C)

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

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