product data

carboline®

Carboguard®193

Selection & Specification Data

Generic Type	Epoxy Polyamide
Description	Carboguard 193 is a High-Build zinc- phosphate primer for new constructions and maintenance. Gives a good corrosion protection, excellent adhesion and increased application tolerance to a wide range of environmental conditions.
Features	▪ Excellent corrosion protection ▪ Good chemical resistance ▪ Good abrasion resistance ▪ VOC compliant to current AIM regulations
Color	RAL 3009 and RAL 7038 (approximate colors)
Finish	Flat
Primers	Self-priming
Topcoats	Acrylics, Epoxies, Polyurethanes
Dry Film Thickness	75 microns per coat.
Solids Content	By Volume: 50% ± 2%
Theoretical Coverage Rate	6,7 m^2/l at 75 micron. Allow for loss in mixing and application
VOC Values	As supplied: 400 g/l These are nominal values and may vary slightly with color.
Dry Temp. Resistance	Continuous: 93°C Non-Continuous: 121°C
Limitations	Not recommended for immersion service

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	Sa2½ with a 25-50 micron surface profile. St3 for Touch-up.
Galvanized Steel	SSPC-SP1 and sweep-blast according to Sa1
Previously Painted Surfaces	Lightly sand or abrade to roughen surface and degloss the surface. Existing paint must attain a minimum 3B rating accordance with ASTM D3359 “X-Scribe” adhesion test.

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Application Equipment

Spray Application (General)
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, .070" I.D. fluid tip and appropriate air cap.

Airless Spray

Pump Ratio:	30:1 (min.)
GPM Output:	3.0 (min.)
Material Hose:	3/8" I.D. (min.)
Tip Size:	.017-.021"
Output BAR:	147-162
Filter Size:	60 mesh

Teflon packings are recommended and available from the pump manufacturer.

Brush & Roller (General)
Only for Touch-up and hard to reach areas. Avoid excessive re-brushing or re-rolling.

Brush
Use a medium bristle brush.

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

Mixing & Thinning

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

Ratio
3:1 Ratio (A to B)

Thinning
Spray: Up to 25% with Thinner 15.
Brush: Up to 12% with Thinner 33.
Roller: Up to 12% with Thinner 33.
Use of thinners other than those supplied or recommended by Carboline may adversely affect product performance and void product warranty, whether expressed or implied.

Pot Life
12 Hours at 24°C.
Pot life ends when coating loses body and begins to sag

Cleanup & Safety

Cleanup
Use Thinner 2, Thinner 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.

Ventilation
When used in enclosed areas and product is thinned, 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.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	18-29°C	18-29°C	18-32°C	0-65%
Minimum	13°C	10°C	10°C	0%
Maximum	32°C	57°C	43°C	90%

This product simply requires the substrate temperature to be 3°C above the dew point. Condensation due to substrate temperatures below the dew point can cause flash rusting on prepared steel and interfere with proper adhesion to the substrate. Special application techniques may be required above or below normal application conditions.

Curing Schedule

Surface Temp. & 50% Relative Humidity	Dust Free	Dry to Topcoat	Final Cure
10°C	90 Minutes	24 hours	12 Days
16°C	45 Minutes	12 hours	6 Days
24°C	25 Minutes	6 Hours	3 Days
32°C	15 Minutes	3 hours	2 Days

These times are based on 75 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 time is 30 days for epoxy and 90 days for polyurethanes at 24°C.
If the maximum recoat time is exceeded, the surface must be abraded by sweep blasting or sanding before the application of additional coats.

Packaging, Handling & Storage

Shipping Weight (Approximate)

5 Liter	20 Liter
6,45 Kg	25,8 Kg

Flash Point (Setaflash)
Part A: 8°C
Part B: 16°C

Storage Temperature & Humidity
4-43°C Store indoors.
0-90% Relative Humidity

Shelf Life
36 months at 24°C

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