Carboguard 890 GF

PRODUCT DATA SHEET

SELECTION & SPECIFICATION DATA

Generic Type	Cycloaliphatic amine epoxy with glass reinforcement
Description	A three-component, glass reinforced epoxy coating. Carboguard 890 GF is chemical resistant and has a wide range of uses in industrial environments. Its glass reinforcement allows for excellent internal film strength, hardness, impact and abrasion resistance. Most commonly, it is used in severe service (above or below the water line) in marine applications where these resistance qualities are desired.
Features	• Three component mix • Excellent chemical resistance • Surface tolerant characteristics for less severe applications • Self-priming and primer / finish capabilities • Excellent abrasion resistance and hardness • VOC compliant to current AIM regulations
Color	Refer to Carboline colour guide. Certain colours may require multiple coats for hiding. Use only factory made colours for immersion applications.
Finish	Flat (0-10)
Primer	Normally self-priming. May be applied over other epoxy primers.
Dry Film Thickness	200 to 500 microns in a single coat
Solid(s) Content	77% ± 2%
Theoretical Coverage Rates	3.1m²/litre at 250 microns
VOC Value(s)	As supplied: 204 g/litre Thinned 10% with Thinner # 2: 264 g/litre Thinned 12% with Thinner # 33: 276 g/litre Use Thinner # 2 up to 10% for Carboguard 890 GF where non-photochemically reactive solvents are required.
Dry Temp. Resistance	Continuous: 149°C (300°F) Non-Continuous: 177°C (351°F)
Under Insulation Resistance	Continuous: 149°C (300°F) Discolouration and loss of gloss is observed above 93°C
Limitations	Do not apply over latex coatings. Discolouration may be objectionable if used as a topcoat.
Topcoats	Acrylics, Epoxies, Polyurethanes

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.

SUBSTRATES & SURFACE PREPARATION

Steel	**Immersion:** ISO 8501 Sa2½ Profile: 75 to 100 microns **Non-immersion:** ISO 8501 Sa2 Profile: 50 to 75 microns ISO 8501 St2 or St3 are suitable cleaning methods for mild (non-immersion) environments.
Galvanized Steel	Abrasive blast clean to achieve a minimum 50 to 75 micron profile.
Concrete	Concrete must be cured 28 days at 24°C and 50% relative humidity or equivalent. Prepare surfaces in accordance with ASTM D4258 Surface Cleaning of Concrete and ASTM D4259 Abrading Concrete. Voids in concrete may require surfacing. Prime with Carboguard 1340.

PERFORMANCE DATA (TYPICAL VALUES)

Test Method	System	Results
Adhesion (ASTM D3359)	Blasted Steel 1 ct. 890 GF	5A
Flame & Smoke (ASTM E84)	2 cts. 890 GF	5 Flame 5 Smoke Class A
Pencil Hardness (ASTM D3363)	Blasted Steel 2cts. 890 GF	Greater than 8H
Salt Fog (ASTM B117)	Blasted Steel 1 ct. IOZ 1 ct. 890 GF	No effect on plane, no rust in scribe and no undercutting after 4000 hours
Salt Fog (ASTM B117)	Blasted steel 2 cts. 890 GF	No effect on plane, rust in scribe. 1.6mm undercutting at scribe after 2000 hours
Scrub Resistance (ASTM D2486)	Blasted Steel 1 ct. 890 GF	93% gloss retained after 10,000 cycles w/ liquid scrub medium

MIXING & THINNING

Mixing	Power mix Carboguard 890 GF Part A and Part B separately, then combine and power mix while adding the Part C slowly until a uniform consistency is reached. DO NOT MIX PARTIAL KITS.
Thinning	**Spray**: Up to 10% with Thinner # 2 **Brush**: Up to 12% with Thinner # 33 **Roller**: Up to 12% with Thinner # 25 Thinner # 33 can be used for spray in hot / windy conditions. Use of thinners other than those supplied or recommended by StonCor Africa may adversely affect product performance and void product warranty, whether expressed or implied. * See VOC values for thinning limits.
Ratio	1:1 ratio A to B with 1.9kg Part C
Pot Life	3 Hours at 24°C Pot life ends when coating loses body and begins to sag. Pot life times will be less at higher temperatures.

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	This is a high solids coating and may require adjustments in spray techniques. Wet film thickness is easily and quickly achieved. Wet all hoses with solvent prior to using product.

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Conventional Spray	Pressure pot equipped with dual regulators, 10mm I.D. minimum material hose, 1.8mm I.D. fluid tip and appropriate air cap.
Airless Spray	**Pump Ratio:** 45:1 (min)* **GPM Output:** 3.0 (min) **Material Hose:** 10mm ID (min) **Tip Size:** .027" to .041" **Output PSI:** 2200 to 2500 * Teflon packings are recommended and available from the pump manufacturer. Remove all filters.
Brush & Roller (General)	Multiple coats may be required to obtain desired appearance, recommended dry film thickness and adequate hiding. Avoid excessive re-brushing or re-rolling. For best results, tie-in within 10 minutes at 24°C.
Brush	Use a medium bristle brush
Roller	Use a short nap synthetic roller cover with phenolic core

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	10°C (50°F)	10°C (50°F)	10°C (50°F)	0%
Maximum	32°C (90°F)	52°C (126°F)	43°C (109°F)	80%
Optimum	23°C (73°F)	23°C (73°F)	24°C (75°F)	40%

This product simply requires the substrate temperature to be 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.	Dry to Recoat	Dry to Topcoat w/ Other Finishes	Final Cure
10°C (50°F)	12 Hours	24 Hours	3 Days
16°C (61°F)	8 Hours	16 Hours	2 Days
24°C (75°F)	4 Hours	8 Hours	1 Day
32°C (90°F)	2 Hours	4 Hours	16 Hours

*** Based on 100 to 200 microns 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. Excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration and may result in a surface haze. Any haze or blush **must** be removed by water washing before topcoating. During high humidity conditions, it is recommended that the application be done while temperatures are increasing. **Maximum recoat / topcoat times are 30 days for epoxies and 90 days for polyurethanes at 24°C.** If the maximum recoat times have been exceeded, the surface must be abraded by sweep blasting or sanding prior to the application of additional coats.

Curing Details	**Relative Humidity: 50%**

CLEANUP & SAFETY

Cleanup	Use Thinner # 2. 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 material safety data sheet 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 as a tank lining or 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 ensure 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 Electrical Code. In areas where explosion hazards exist, workmen should be required to use non-ferrous tools and wear conductive and non-sparking shoes.

PACKAGING, HANDLING & STORAGE

Shelf Life	Part A: 36 Months at 24°C Part B: 15 Months at 24°C ***Shelf Life: (actual stated shelf life) when kept at recommended storage conditions and in original unopened containers.**
Shipping Weight (Approximate)	**10.8 Litre Kit** Part A: 6.93kg Part B: 8.44kg Part C: 1.96kg
Storage Temperature & Humidity	4 to 43°C 0 to 100%
Flash Point (Pensky Martens Closed Cup)	Part A: 32°C Part B: 23°C When mixed: 26°C
Storage	Store indoors

WARRANTY

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