

Selection & Specification Data

Generic Type	Cycloaliphatic Amine Epoxy with Glass Reinforcement
Description	A glass reinforced chemically resistant epoxy coating with wide versatility in all industrial markets. It is self-priming. Glass reinforcement improves internal film strength, hardness, impact, and abrasion resistance. It is often used in severe service (above or below the water line) in marine applications where these resistance qualities are desired.
Features	<ul style="list-style-type: none"> • Excellent chemical resistance • Surface tolerant characteristics for less severe applications • Low-temperature cure version available • Self-priming and primer/finish capabilities • Excellent abrasion resistance & hardness • VOC compliant to current AIM regulations
Gloss	Flat
Colour	Refer to Carboline Color Guide. Certain colours may require multiple coats for hiding. Use only factory made colours for immersion applications. Note: The low temperature version will cause most colours to yellow or discolour more than normal in a short period of time. (Epoxies lose gloss, discolour and chalk in sunlight exposure.)
Primers	Normally self-priming. May be applied over other epoxies, zinc-rich primers, or as specified.
Topcoats	Acrylics, Epoxies, Polyurethanes
Dry Film Thickness	150-250 microns DFT per coat 250 – 500 microns DFT system DFT
Solids Content	By volume: 77% ± 2%
Theoretical Coverage Rate	5.1 m ² per litre at 150 microns DFT 3.9 m ² per litre at 200 microns DFT 3.1 m ² per litre at 250 microns DFT
Mix Ratio	890 Mix (volume): 1:1 (Part A : Part B) Glass Flake: 4.32 kg per 20 litre resin mix (Total 3 component mix = 21.8 litres)
VOC Values	As supplied: 192 g/l
Dry Temp. Resistance	Continuous: 121°C Non-Continuous: 149°C Discolouration and loss of gloss is observed above 93°C.
Limitations	Epoxies lose gloss, discolour and chalk in sunlight exposure Use only factory made colours for immersion applications.

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	<u>Immersion:</u> AS 1627.4 Class 2½; 75-100 microns profile <u>Non-Immersion:</u> AS 1627.4 Class 2; 50-75 microns profile
Galvanized Steel	Sweep blast to 50-75 microns 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 (or equivalent standards). Voids in concrete may require surfacing. Pre-sealing with Carboguard 1340 can assist by reducing the incidence of pin-holing.

Carboguard® 890 GF

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) The following spray equipment has been found suitable and is available from reputable manufacturers such as DeVilbiss and Graco.

Conventional Spray Pressure pot equipped with dual regulators, 9 mm (3/8") I.D. minimum material hose, 2.8 mm (.110") I.D. fluid tip and appropriate air cap.

Airless Spray Pump Ratio: 30:1 (min.)*
Output: 12 lt/minute (min.)
Material Hose: 9mm (3/8") I.D. (min.)
Tip Size: .035"-.041"
Output PSI: 2200-2500
*Teflon packings are recommended and available from the pump manufacturer.

Brush & Roller 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.
Use medium bristle brushes and / or short nap rollers with phenolic cores.

Mixing & Thinning

Mixing Power mix A & B separately, then combine and power mix. Then slowly add the Glass Flake Additive.
DO NOT MIX PARTIAL KITS.

Ratio Carboguard 890: 1:1 Ratio (A to B)
Glass Flake: 4 tins (4.32 kg / 20 lt mix)

Thinning Spray: Up to 10% with Thinner #2
Brush: Up to 12% with Thinner #33
Roller: Up to 12% with Thinner #33
Thinner #33 can be used for spray in hot/windy conditions. 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 890 GF: 3 Hours at 24°C
890 GF LT version: 2 hours at 24°C
Pot life ends when coating loses body and begins to sag. Pot life times will be less at higher temperatures.

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 MSDS for this product. 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.

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 local 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	16° - 29°C	16° - 29°C	16° - 32°C	0-80%
Minimum	10°C	10°C	10°C	0%
Maximum	32°C	52°C	42°C	90%

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

Based on 100 – 200 microns dry film thickness

Surface Temp. & 50% Relative Humidity	Dry to Recoat	Dry to Topcoat w/ Other Finishes	Final Cure
10°C	12 hours	24 hours	3 days
16°C	8 hours	16 hours	2 days
24°C	4 hours	8 hours	1 day
32°C	2 hours	4 hours	16 hours

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 recoating. During high humidity conditions, it is recommended that the application be done while temperatures are increasing. Maximum recoat/topcoat times are 90 days for epoxies 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.

Packaging, Handling & Storage

Pack Sizes 20 litre, 2 component 1:1 mix ratio (A-B)
4.32 kg (4 tins) Glass Flake Additive

Flash Point (Setflash) 32°C for Part A
23°C for Part B
26°C for 890 GF mixed
N/A for Glass Flake Additive

Storage Temperature & Humidity Store under cover.
4° - 43°C
0 - 100% RH

Shelf Life Part A: 36 months at 24°C
Part B: 15 months at 24°C
Glass Flake Additive: 60 months at 24°C

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

Manufactured / supplied by:-
Altex Coatings Ltd, 91-111 Oropi Road,
Tauranga 3112
New Zealand
Phone: +64 7 5411221
Resene Paints Australia Ltd.
T/A Altex Coatings
7 Production Avenue
Queensland 4214
Australia
Phone: +61 7 55949522



350 Hanley Industrial Court, St. Louis, MO 63144-1599
314/644-1000 314/644-4617 (fax) www.carboline.com

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