

Selection & Specification Data

Generic Type	Two component cross-linked epoxy containing micaceous iron oxide
Description	Carboguard 893 is a high solids, high build epoxy primer with excellent corrosion resistance. Can be applied by spray, brush or roller to yield a cured film which is tough and abrasion resistant. Performs extremely well under a wide variety of topcoats and application conditions.
Features	<ul style="list-style-type: none"> - Excellent corrosion protection - Good flexibility and lower stress upon curing than most epoxy coatings - Excellent tolerance of damp (not wet) substrates - Can be spray applied up to 150 microns dry film thickness in one coat - Meets the most stringent VOC (Volatile Organic Content) regulations - Recommended as a general purpose epoxy primer over blast-cleaned steel or intermediate coat over inorganic zinc primers - Recommended with an appropriate topcoat for protection of structural steel, concrete, equipment and tank exteriors exposed to corrosive conditions - May be used as an intermediate coat over inorganic and organic zincs. A mist coat is required to minimize bubbling over inorganic zincs - As a primer for catalyzed epoxies, catalyzed urethanes and others as recommended - Not recommended for immersion service, splash and spillage of very strong solvents or concentrated acids
Colour	Light Grey & Buff MIO
Finish	Semi-gloss
Topcoat	Carboguard 890, Carbothane 134, Carbothane 133HB and others as recommended.
	NOTE: Not to be topcoated with water-based and solvent-based acrylics or vinyls.
Dry Film Thickness	75 Microns for use in mild environments or as an intermediate coat over Carbozinc 11 100 to 150 Microns for more severe environments Dry film thicknesses in excess of 250 microns per coat are not recommended. Excessive film thickness over inorganic zinc may increase damage during shipping or erection.
Solids Content	By Volume 77% ± 2%
Theoretical Coverage Rate	6.2m ² /litre at 125 microns Mixing and application losses will vary and must be taken into consideration when estimating job requirements.
VOC Values	As supplied 195 g/litre Thinned 9% with Thinner # 2 250 g/litre Thinned 12% with Thinner # 2 261 g/litre
Temp Resistance	Non-immersion Continuous 93°C Non-continuous 121°C

Substrates & Surface Preparation

General	Remove any oil and grease from surface to be coated.
Steel	Apply over clean, dry steel, abrasive blasted to a near white metal finish in accordance with ISO 8501 Sa2½ to obtain a 25 to 50 micron blast profile.
Concrete	Apply over clean, dry, recommended surfaces. Can be applied directly to concrete where an uneven surface can be tolerated. Remove laitance by abrasive blasting or other means. Do not coat concrete treated with hardening solutions unless test patches indicate satisfactory adhesion. Concrete must be cured at least 28 days at 25°C and 50% RH or equivalent time.

Performance Data

Test Method	System	Results
Salt Fog ASTM B117	Blasted steel 1 Coat IOZ 1 Coat 893	No blistering; rusting and no creepage at scribe at 4000 hours
Water Fog ASTM D1735	Blasted steel 1 Coat IOZ 1 Coat 893	No blistering; softening or rusting after 5000 hours
Abrasion ASTM D4060	Blasted steel 1 Coat 893	88mg loss after 1000 cycles C17 wheel; 1000gm load

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Application Equipment

- Spray** This is a high solids coating and may require slight adjustments in spray techniques. Wet film thicknesses are easily and quickly achieved. The following spray equipment has been found suitable:
- Conventional** Pressure pot equipped with dual regulators, 10mm minimum material hose, .070" fluid tip and the appropriate air cap.
- Airless**
- | | |
|---------------|-----------------|
| Pump Ratio | 30:1 (min)* |
| GPM Output | 3.0 (min) |
| Material Hose | 10mm I.D. (min) |
| Tip Size | .017 to .021" |
| Output psi | 2100 to 2300 |
| Filter Size | 60 Mesh |
- * Teflon packings are recommended and are available from the pump manufacturer.
- Brush or Roller** For small areas and touch-up only. Use medium bristle brush or good quality short nap roller, avoid excessive rebrushing and rerolling. Two coats may be required to obtain the desired appearance, hiding and recommended dry film thickness. For best results, tie-in within 10 minutes at 25°C.

Mixing & Thinning

- Mixing** Power mix separately, then combine and power mix in the following proportions:
- | | |
|--------|---------------------|
| | 10 Litre Kit |
| Part A | 5 litres |
| Part B | 5 litres |
- Thinning** For spray applications, may be thinned up to 12% by volume with Thinner # 2. Refer to specification data for VOC information.
- NOTE:** Use of thinners other than those supplied or approved by StonCor Africa may adversely affect product performance and void product warranty, whether expressed or implied.
- Pot Life** 4 Hours at 25°C and less at higher temperatures. Pot life ends when material loses film build. Thinning rates above 12% will shorten the working time to 2 hours due to reduced film build.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	16-29°C	16-29°C	16-29°C	0-80%
Minimum	10°C	10°C	10°C	0%
Maximum	32°C	57°C	43°C	80%

Do not apply or cure material when the surface temperature is less than 3°C above the dew point.

Special thinning and application techniques may be required above or below normal conditions.

Curing Schedule

These times are based on 100 microns dry film thickness. Film thicknesses higher than 100 microns will lengthen curing times.

Dry to touch	3 Hours at 25°C
Dry to handle	6 Hours at 25°C

Surface Temp. & 50% Relative Humidity	Dry to Topcoat
10°C	24 Hours
16°C	16 Hours
25°C	8 Hours
32°C	4 Hours

These times are based on a 100µm dry film thickness. Higher film thicknesses, insufficient ventilation, or cooler temperatures will require longer cure times and could result in solvent entrapment and premature failure. Low temperatures, excessive humidity or condensation on the surface during curing can interfere with the cure, can cause discoloration, and may result in a surface blush. If product has been cured under such conditions, surface should be washed and dried prior to topcoating.

For overcoating within the recoat interval. Must have a clean, dry surface free of chalk, salts, etc. per typical good painting practices. Consult StonCor Africa Technical Services for specific information.

If the maximum recoat times have been exceeded, the surface must be abraded by sweep blasting or sanding prior to the overcoating, ensuring substrate is dust-free. Carboguard 893 applied below 4°C may temporarily soften for several hours after temperatures rise to 16°C. This is a normal condition and will not affect performance.

Cleanup & Safety

- Cleanup** Use Thinner # 2
- Safety** Read and follow all caution statements on this product data sheet and on the material safety data sheet for this product. 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 vapour 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 unable to monitor levels, use MSHA/NIOSH approved supplied air respirator.

Packaging, Handling & Storage

- | | | | |
|------------------------------------------------|---------------------------------------|----------------|-----------------|
| Shipping Weight (Approximate) | Carboguard 893 | 5 Litre | 10 Litre |
| | Thinner # 2 | 4.6kg | 16.2kg |
| Flash Point (Pensky Martens Closed Cup) | Part A | 22°C | |
| | Part B | 22°C | |
| | Thinner # 2 | 22°C | |
| Storage Temperature & Humidity | 4 to 43°C | | |
| | 0 to 90% | | |
| | Store indoors | | |
| Shelf Life | 24 Months minimum when stored at 25°C | | |

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



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