

SELECTION & SPECIFICATION DATA

Generic Type	Two component cross-linked epoxy polyamide Micaceous Iron Oxide coating.
Description	Fast drying primer / finish with excellent water resistance.
Features	<ul style="list-style-type: none"> • As a blast holding primer for systems being immersed in water. • As a lining for hot water cylinders operating at temperatures of 75°C to 90°C in continual or partial immersion. • As a primer on concrete substrates. • As a single coat direct to metal MIO finish. • Not recommended for immersion service in acids, alkalies or solvents.
Color	Green Gold (other colours may be supplied on request for larger orders)
Finish	Eggshell
Dry Film Thickness	50µm per coat (Primer) 125µm per coat DTM (Finish)
Solid(s) Content	57% ± 2%
Theoretical Coverage Rates	11.4m ² /litre at 50µm Note: Material losses during mixing and application will vary and must be taken into consideration when estimating job requirements.
VOC Value(s)	As Supplied : 380 g/l
Dry Temp. Resistance	Continuous: 200°C (392°F) Non-Continuous: 220°C (428°F)
Substrates & Compatible Coatings	Apply over properly prepared ferrous and non-ferrous metals.
Weathering	Good (chalks), MIO finish resists further degradation.
Flexibility	Excellent. ISO1519 ¼ " pass
Temperature Resistance (Immersion)	Continuous: 75°C Non-continuous: 90°C
Topcoats	Topcoat selection will depend on exposures.

SUBSTRATES & SURFACE PREPARATION

General	Remove any oil or grease from surface to be coated.
Steel	<p>Abrasive blast clean to a near white metal finish in accordance with ISO 8501 Sa3 to obtain a 50 to 75 micron blast profile.</p> <p>For non-immersion application, Carboguard 193 TL can be applied over hand-cleaned surfaces to ISO 8501 St3.</p> <p>Water jet to near white metal finish in accordance with SSPC SP12 WJ1.</p>

Carboguard 193 TL

PRODUCT DATA SHEET



SUBSTRATES & SURFACE PREPARATION

Concrete	Do not apply coating unless concrete has cured at least 28 days at 25°C and 50% RH. Remove any oil or grease from surface to be coated. Concrete should be at least as rough as medium grit sandpaper. The surface should be free of laitance. This can be accomplished by acid etch or mechanical abrasion. Do not coat concrete treated with hardening solutions unless test patch indicates satisfactory adhesion.
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MIXING & THINNING

Mixing	Mix separately, then combine and mix in the following proportions, using a power mixer. Ensure material has a smooth consistency. 3.8-Liter Kit: Part A: 2.58 liters Part B: 1.22 liters 19-Liter Kit: Part A: 12.92 liters Part B: 6.08 liters
Thinning	Thin up to 25% by volume with Thinner # 10 for spray applications. For hot surface temperatures, use Thinner HT. Note: Use of thinners other than those supplied or approved by StonCor Middle East may adversely affect product performance and void product warranty, whether expressed or implied.
Pot Life	8 Hours at 25°C and less at higher temperatures. Pot life ends when coating begins to gel.

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.

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: 2.5 (min) Material Hose: 10mm I.D. (min) Tip Size: .013-.017 (.035"-.041" for filler additives) Output PSI: 2100-2500 Filter Size: 60 mesh (remove mesh for filler additives) * PTFE packings are recommended and available from the pump manufacturer.
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, apply additional coats within 10 minutes at 24°C. Brush: Use a medium bristle brush Roller: Use a short nap roller with phenolic core.

APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	13°C (55°F)	10°C (50°F)	10°C (50°F)	0%
Maximum	32°C (90°F)	150°C (302°F)	43°C (109°F)	90%
Optimum	24°C (75°F)	29°C (84°F)	24°C (75°F)	40%

Do not apply when the surface temperature is less than 2°C above the dew point.

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

When applying at high temperatures, apply product in thin layers. To prevent blistering, also use Thinner HT.

Consult StonCor Middle East for further technical assistance.

CURING SCHEDULE

Surface Temp.	Maximum Recoat Time	Between Coats
10°C (50°F)	0.5 Years	24 Hours
16°C (61°F)	0.5 Years	12 Hours
25°C (77°F)	0.5 Years	6 Hours
32°C (90°F)	0.5 Years	3 Hours

These times are based on recommended dry film thicknesses. Excessive film thickness and/or inadequate ventilation after application require longer dry times and will cause premature failure in extreme cases. The surface should be contaminant free before recoating. If maximum recoat time is exceeded, the surface must be abraded by sweep blasting before application of additional coats.

CLEANUP & SAFETY

Cleanup | Use Carboline Thinner # 2

Safety | When used as a tank lining or in enclosed area, thorough air circulation must be provided 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. In addition to proper ventilation, fresh air respirators or fresh air hoods must be used by all application personnel. Where flammable solvents exist, explosion proof lighting equipment must be used. Hypersensitive persons should wear protective clothing, gloves and/or protective cream on face, hands and all exposed areas.

PACKAGING, HANDLING & STORAGE

Shelf Life | 12 Months minimum when stored at 25°C

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

Shipping Weight (Approximate) | 19-Liter Kit:
Part A: 31 kg
Part B: 8 kg

Storage Temperature & Humidity | Temperature: 4°C to 43°C
Humidity: 0 to 100%

Flash Point (Setaflash) | Part A: 4°C
Part B: 16°C
Thinner # 10: 25°C

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WARRANTY

To the best of our knowledge the technical data contained herein is true and accurate on the date of publication and is subject to change without prior notice. User must contact Carboline Company to verify correctness before specifying or ordering. No guarantee of accuracy is given or implied. We guarantee our products to conform to Carboline quality control. We assume no responsibility for coverage, performance, injuries or damages resulting from use. Carbolines sole obligation, if any, is to replace or refund the purchase price of the Carboline product(s) proven to be defective, at Carbolines option. Carboline shall not be liable for any loss or damage. NO OTHER WARRANTY OR GUARANTEE OF ANY KIND IS MADE BY CARBOLINE, EXPRESS OR IMPLIED, STATUTORY, BY OPERATION OF LAW, OR OTHERWISE, INCLUDING MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. All of the trademarks referenced above are the property of Carboline International Corporation unless otherwise indicated.