

SELECTION & SPECIFICATION DATA

Generic Type	Two components, Epoxy - Amine.
Description	Carboguard 101 (ex Apsacoat 101), is a very high solids self-priming coating. Excellent corrosion resistance product to marine/chemical environments. Used for the corrosion protection of buried tanks and pipes.
Features	<ul style="list-style-type: none"> • Very high solids("Solvent less") self - priming coating. • Excellent corrosion resistance to marine/chemical environments. • Excellent corrosion resistance to sea and fresh water immersion. • Excellent corrosion resistance to buried pipes and tanks. • Excellent resistance to mechanical and abrasion damage. • Excellent resistance to cathodic disbondment. • Excellent resistance to electric insulation (12000 volts/mm)
Color	<p>Green</p> <p>Before Mixing: Component Base (part A): yellow Component Hardener (part B): blue</p>
Finish	Semi-Gloss
Primer	<p>Self-priming.</p> <p>May be overlapped over old coats such as polyethylene, polypropylene, bitumen or itself to fill the gap between the linings.</p>
Wet Film Thickness	<p>1,000 up to 3,000 micron</p> <p>Wet on wet, in single coat.</p> <p>May be applied in a single coat wet on wet at standard dry film thickness of 1.500 micron.</p> <p>Maximum dry film thickness, wet on wet: 3,000 micron</p>
Dry Film Thickness	from 1,000 up to 3,000 micron.
Typical Uses	<p>Recommended for long term high resistance, such as:</p> <ul style="list-style-type: none"> • External surfaces for sea lines and pipelines, buried or immersed in sea and fresh water. • External coating for elbows, valves, joints, fittings etc., buried or immersed in sea and fresh water. • Piles and structures coating of steel and concrete piers. • Jackets coating of off-shore platforms. • Coating of immersed areas, topsides, splash zone of any steel or concrete surface to be immersed in sea or fresh water. • External/Internal coat for sea water inlets. <p>Immersion: For Immersion service, consult Carboline Italia Technical Service, for specific recommendations, regarding fluids types, film thickness etc.</p>
Solid(s) Content	<p>By volume:</p> <p>98 % ± 2 %</p>

Carboguard 101

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Theoretical Coverage Rates	0.96 sq.m./lt. at 1.000 micron
	0.64 sq.m./lt. at 1.500 micron
	0.48 sq.m./lt. at 2.000 micron
	0.32 sq.m./lt. at 3.000 micron
VOC Values	As Supplied : 50 g/l
Dry Temp. Resistance	Dry temp. Resistance: da: -20 °C a: +110 °C. (14 - 230°F) Dry Buried Temp. Resistance: * Continuous: 65°C (140°F) Not - Continuous: 80°C (176°F). *Contact Technical Service to obtain specific information
Limitations	When exposed to atmospheric agents, condensation or ultraviolet rays, it will discolor, chalk and lose gloss as all epoxy.
Viscosity	Thixotropic product

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	In shop: grit blasting in accordance with ISO8501-1 (SA 2 ½) with profile Medium G per ISO8503.
	On site: sand blasting or other equivalent abrasives in accordance with ISO 8501-1 (SA 2 ½) with profile Medium G per ISO 8503
Concrete or CMU	Concrete must be cured 28 days at 24°C (75°F) 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.
Special Instruction	SMALL up to 200 sq./cm. Without substrate exposure: Power tool grinding of damaged areas and application by brush of one coat of Carboguard 104 up to specified.
	DFT LARGE or SMALL areas with substrate exposure: Blast in accordance with ISO 8501-1 (SA 2 ½) of all exposed substrate and roughening the close coating and then apply Carboguard 101 / Carboguard 104 up to specified DFT.

MIXING & THINNING

Mixing	Mix the Components Base and Hardener (part A and part B) separately with suitable mechanical mixer. DO NOT MIX PARTIAL KITS.
Thinning	Carboguard 101 has not to be thinned.

MIXING & THINNING

Ratio	by Volume: Component Base (part A): 1 Component Hardener (part B): 1
	by Weight : Component Base (part A): 42 Component Hardener (part B): 58
Pot Life	15 minutes at 40°C (100°F)
	6 minutes at 60°C (140°F)
	Pot life ends when coating thickens and loses application properties.

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.

General	The following P.C.U. has been found suitable and can be replaced by others having same characteristics: Graco Equipment
	Carboguard 101 must be applied with PCU (Plural Components Unit) only with these characteristics: N° 2 tanks heated with dielectric oil or electric resistances with N°2 thermostats. N° 2 pneumatic mixers N° 2 heaters type Graco Viscon with N° 2 thermostats. N° 1 main pump type Graco Hydra-Cat, pump ratio 45:1. P.C.U. allows to use paint hoses up to 30 Mt. and over, insulated and/or heated. Material hose 3/8" ID. Tip Size .018-.029" ID Fluid Filters not lower than 30 Mesh to be placed before the mixing. Pre-heat temperatures: Component Base(part A) - (Yellow): 45°C (110°F) standard 60°C (140°F) max. Component Hardener (part B) - (Blue): 45°C (110°F) standard 60°C (140°F) max.
Plural Component Airless Spray	
Brush & Roller (General)	For touch-up only of SMALL areas without substrate exposure.
Brush	Use a medium bristle brush avoid excessive rebrushing. Apply a coat of CARBOGUARD 104 up to specified Dry Film Thickness.
Roller	Not recommended.

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APPLICATION CONDITIONS

Condition	Material	Surface	Ambient	Humidity
Minimum	40°C (104°F)	5°C (41°F)	5°C (41°F)	0%
Maximum	60°C (140°F)	50°C (122°F)	40°C (104°F)	85%

Apply when the surface temperature will be 3 °C (5 °F) above the dew point (Dew-Point).

Inspection and tests, such adhesion, holiday test, impact test and DFT measurements, must be done only when hardness Shore D reaches a value of 70±2%.

CURING SCHEDULE

Curing Details

These times are based on recommended DFT applied by PCU with components pre-heated up to 40°C.

Higher film thickness, insufficient ventilation, cooler ambient temperatures and or high RH% will require longer cure times.

CURING:

Temperature of the Mix.: 40°C.

Drying Time : 8 hours - Hardness Shore D: 65

Drying Time: 20 hours - Hardness Shore D: 75

Drying Time: 30 hours - Hardness Shore D: 85 maximum.

Carboguard 101 is not recoatable without special surface preparation when it has Shore D value higher than 65.

CLEANUP & SAFETY

Cleanup

The pumps must be cleaned every time the application is interrupted, even for short periods. Flush into the Thinner # 2 or Thinner # 76 system until it comes out clean and without residues or colored.

In case of spillage, absorb and dispose in accordance with local applicable regulations.

Safety

Read and follow all caution statements on this product data sheet and on the SDS 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, thorough air circulation must be used during and after application until the coating is cured. Use MSHA/NIOSH approved supplied air respirator.

Caution

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.

PACKAGING, HANDLING & STORAGE

Shelf Life

Component Base (part A): 18 months at 24°C (75°F)
Component Hardener (part B): 18 months at 24°C (75°F)

Storage Temperature & Humidity

4 - 35 °C (39 - 95°F)
0-90% HR

Flash Point (Setaflash)

Component Base (part A) : 96°C (204°F)
Component Hardender (part B) : 57°C (135°F)

Storage

Storage indoor.

PACKAGING, HANDLING & STORAGE

Packaging	Component Base (part A): 10-190 liters
	Component Hardener (part B): 10-190 liters

WARRANTY

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