product data

carboline®

CAR® 300

CERAMIC ABRASION RESISTANT LINING

Selection & Specification Data

Generic Type
Two-component abrasion resistant ceramic epoxy novolac matrix.

Description
CAR 300 is an epoxy novolac ceramic system for the repair of steel surfaces subject to erosion, corrosion and chemical attack. CAR 300 will provide a surface that should also improve flow and equipment efficiency. It may be applied in a single coat application up to 400 microns without slumping. Multiple coats will be necessary in extreme circumstances. Easy to apply by brush or roller to achieve a smooth finish.

Features
- CAR 300 is recommended for quick repair and lining of steel surfaces exposed to wear and chemical attack, i.e. impellers, pipes, valves & pump casings
- Excellent abrasion resistance
- Not recommended for engine components

Colour
Grey & Blue

Finish
Semi-gloss (epoxies lose gloss and eventually chalk in sunlight exposure).

Dry Film Thickness
200 to 400 microns per coat
Do not exceed 600 microns per coat. If higher thicknesses are required, the product may be reinforced with a non-woven fiberglass to form a laminate. The use of laminates is a prerequisite for concrete lining.

Solids Content
By Volume 98% ± 2%

Theoretical Coverage Rate
2.5m²/litre at 400 microns

NOTE: Material losses during mixing and application will vary and must be taken into consideration when estimating job requirements.

Temp Resistance
Performance is dependent on actual chemical exposure. Refer to StonCor Africa Technical Department.

Most aqueous solutions	95°C
Non-immersion	190°C

Substrates & Surface Preparation

General
Remove all oil or grease from surface to be coated prior to abrasive blast, power or hand tool cleaning.

Steel
Ensure that the surface is dry and free from all contaminants. Dry abrasive blast to a near white metal finish, in accordance with ISO 8501 Sa2½ to obtain a 50 to 75 micron blast profile.

For mild environments, power tool clean in accordance with ISO 8501 St3 to produce a rust-scale free surface.

Typical Physical Properties

Consistency	0.4mm No Sag
Cured Density	1.75
Adhesion (Pull-off)	>15 MPa typical

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Application Equipment

General

Do not attempt to install material if temperatures of material and substrate are not within the recommended ranges. The curing time and application properties of the material are severely affected by temperature changes. Do not use water or steam in the vicinity of the application. Moisture can seriously affect the working time and other properties. Do not add thinners to the system. Full cure will not be achieved and performance will be affected.

Application

Using a brush or roller, apply product to the desired thickness. If mixed material is left in the container, it will become unusable within 30 minutes, depending on the temperature. If further build-up of coating is required, light abrasive blast or sand the cured surface to create a rough profile for improved adhesion. A reinforcing fabric such as woven glass fibre can be bedded into the CAR 300 and overcoated immediately when additional support is required. Clean equipment immediately after use with Brush Cleaner and rinse off in clean water. Post curing at 60°C for 4 hours will accelerate the cure rate to full cure status. This process must be carried out in a gradual increase and subsequent decrease in temperature so as not to shock the system.

Wash between coats with potable water and dry with clean cloth prior to overcoating.

Mixing & Thinning

Mixing

For best results, the contents of the tin should be mixed together for approximately 4 to 5 minutes using a power mixer.

Thinning

A small amount of Carboline Thinner # 76 (2 to 3%) may be used to improve flow and leveling where brush applying topcoats. If to be applied by spray, consult StonCor Africa Technical department for specific recommendations in writing.

Pot Life

30 Minutes at 25°C and less at higher temperatures. Pot life ends when coating becomes too viscous to use.

Application Conditions

Condition	Material	Surface	Ambient	Humidity
Normal	19-29°C	16-29°C	16-29°C	0-85%
Minimum	16°C	16°C	10°C	0%
Maximum	32°C	32°C	40°C	85%

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

Curing Schedule

Surface Temp. & 50% Relative Humidity	Dry to Touch	Dry to Handle	Dry to Overcoat *	Final Cure
25°C	1 ½ Hours	8 Hours	8 to 16 Hours	48 Hours

* Wash between coats with potable water and dry with clean cloth prior to overcoating.

Cleanup & Safety

Cleanup

Brush Cleaner and water

Safety

Read and follow all caution statements on this product data sheet and on the MSDS for this product. Employ normal workmanlike safety precautions. Use adequate ventilation. Keep container closed when not in use.

Caution

Read and follow all caution statements on this product data sheet.

Packaging, Handling & Storage

Shipping Weight (Approximate)		**5 Litre**	**1 Litre**
	Parts A & B	9.5kg	1.9kg
	Brush Cleaner	4.6kg	
Flash Point (Pensky Martens Closed Cup)	Part A	>93°C	
	Part B	>93°C	
	Brush Cleaner	22°C	
Storage Temperature & Humidity	4 to 35°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.**

carboline®
Coatings - Linings - Fireproofing

Co. Reg. No.: 1996/01848/07
Tel No: +27 11 254 5500
Website: www.carboline.co.za
E-mail: carbolinesa@carboline.com

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