Mapecoat CFS

Two-component thixotropic epoxycoating

WHERE TO USE

Mapecoat CFS is used as protective coating/liner for horizontal and vertical surfaces.

Mapecoat CFS is suitable for use as waterproofing membrane within oil and gas industry, on con-deep structures, on bridges, jetties and similar constructions.

Mapecoat CFS is flexible and thixotropic.

Mapecoat CFS is normally applied on concrete and other cement-based substrates, but may also be applied on steel surfaces.

TECHNICAL CHARACTERISTICS

Mapecoat CFS is thixotropic and is easy to apply in high thickness on both horizontal and vertical surfaces.

Mapecoat CFS gives a flexible and wear resistant coating.

Mapecoat CFS is delivered in grey color.

Mapecoat CFS is used as flexible sealant in system **Mapefloor BR.**

Mapecoat CFS complies with the principles defined in EN 1504-9 standards ("*Products and systems for protecting and repairing concrete structures. Definitions, requirements, quality control and conformity assessment. General principles for the use and application of systems*"), and the requirements of EN 1504-2 ("*Protection systems for concrete surfaces*") for class: products for protecting surfaces - coating (C) – PI, IR, MC og CR.

APPLICATION PROCEDURE

Preparation of the substrate:
The concrete must be sound, clean and dust-free with a smooth permanent surface. Normal cleaning methods such as milling, grinding or shot blasting can be used.

Steel surfaces should be sand- or shot blasted to a purity of SA 2 ½.

The substrate's surface temperature should be at least +5 °C and at least 3 °C above the applicable dew point during product application.

Preparation of the product:
Components A and B should have a temperature of +15 °C or more when mixed together. Component B is poured into component A and mixed with a drill whisk at a slow speed for approximately 3 minutes until the product is completely homogenous.

Be sure to mix well the bottom and sides of the container.

The product must not be thinned!

Mapecoat CFS: Two-component thixotropic epoxycoating. The product complies with specification in EN 1504-2 Coating (C) principles: PI, IR, MC and CR

TECHNICAL DATA (typical values)

PRODUCT DETAILS	Component A	Component B
Color:	white	black
Appearance:	dense liquid	dense liquid
Density (g/cm³):	1.380	1.022
Brookfield viscosity at +23°C (mPa•s):	thixotropic	thixotropic
APPLICATION DATA		
Mixing ratio:	3:1 Component A: Component B	
Color of mix:	grey	
Consistency of the mix:	dense liquid	
Density of the mix (kg/m³):	1 277	
Brookfield viscosity of the mix (mPa•s):	thixotropic	
Application temperature range:	+5 – 30 °C	
Potlife (EN 9514):	19 minutes	
FINAL PROPERTIES (7 days at + 23 °C and 50 % R.H)		
Final setting time:	7 days	
Elongation at break (ISO 527-3) at 23 °C:	73%	
Elongation at break (ISO 527-3) at -10 °C:	2 %	
Glas transition temperature (DCS):	12.9 °C	
Shore A (ISO 868:2003) (1s):	approx. 88	
Shore D (ISO 868:2003) (1s):	approx. 46	

Performance characteristics for product or system	Test methods	Requirements according to EN 1504-2	Product or system performance
Permeability to CO_2	EN 1062-6	Permeability to CO_2 SD > 50 m	Sd > 420 m
Water vapor permeability:	EN ISO 7783	Class I: Sd < 5 m Class II: 5 m < Sd < 50 m Class III: Sd > 50 m	Sd (H_2O) = 69.2 m Class III
Capillary absorption and permeability to water	EN 1062-3	w < 0.1 kg/m²*h^{0,5}	w < 0.01 kg/m²*h^{0,5}
Impact resistance:	EN 6272-1	Class I: ≥ 4 Nm Class II: ≥ 10 Nm Class III: ≥ 20 Nm	Class II
Pull-off test Reference substrate: MC (0.40) as specified in EN 1766, curing time 7 days:	EN 1542	Average (N/mm²) Crack-bridging or flexible systems with no traffic: ≥ 0.8 (0.5) with traffic: ≥ 1.5 (1.0) Rigid systems with no traffic: ≥ 1.0 (0.7) with traffic: ≥ 2.0 (1.0)	Primer used: Mapecoat L-L: 2.4 N/mm² Mapeprimer M: 3.7 N/mm²

APPLICATION OF THE PRODUCT

Used as a protective coating/liner on concrete:

a. Primers

The surface should always be cleaned and prepared with a primer (such as **Mapeprimer M** or **Mapecoat L-L**) before applying **Mapecoat CFS**. The primer is best applied using roller – after application all pores or air holes in the surface of the concrete should be filled and the surface appears to be sealed without any apparent dry spots.

If **Mapeprimer M** is used **Mapecoat CFS** should either be applied "fresh on fresh" or applied within its recoatability time (48 hours at 20 ^{0}C). If this time is exceeded the primer should be grinded and/or a new layer of primer should be applied.

If **Mapecoat L-L** is used **Mapecoat CFS** should either be applied "fresh on fresh" or **Mapecoat L-L** should be broadcasted with dry sand grain size of 0.1-0.5 or 0.4 - 0.8 mm while the primer is still wet, in order to ensure good adhesion of the subsequent layer.

b. Coatings

Mapecoat CFS should be applied using a smooth trowel, brush or spray equipment in the intended thickness of 1.5 -2.5 mm.

It is recommended to apply the coating in one single application to insure the adhesion between the different layers.

If several applications are necessary it is recommended to either gently grind the surface of **Mapecoat CFS** before the second application or in some cases - wash the surface with a weak organic acid (eg .citric acid) and ethanol.

Mapecoat CFS can also be applied on fresh concrete. Please contact Mapei Technical department for specific advice.

Application on steel surface:

a. Primers

The surface should always be cleaned and prepared with a primer such as **Primer EP Rustop** before applying **Mapecoat CFS**. The primer is best applied using roller, brush or airless spray.

Mapecoat CFS should be applied minimum 6-8 hours and maximum 24 hours after application of the primer. If this time is exceeded the primer should be cleaned and/ or a new layer of primer should be applied.

b. Coatings

Mapecoat CFS should be applied using a smooth trowel, brush or spray equipment in the intended thickness of 1.5 -2.5 mm.

It is recommended to apply the coating in one single application to insure the adhesion between the different layers.

If several applications are necessary it is recommended to either gently grind the surface of **Mapecoat CFS** before the second application or in some cases - wash the surface with a weak organic acid (eg .citric acid) and ethanol.

PLEASE NOTE!

If the product is applied in areas with a high concentration of CO_2, high moisture and/ or temperatures less than 3 degrees above dew point, this might lead to a sticky and discoloured surface. Before any further treatment, this must be removed and the surface must be recoated.

CLEANING

Tools and equipment must be washed immediately after use with **Spesialtynner**, ethanol or other cleaning agent suited for epoxy. Once hardened the product may only be removed mechanically

CONSUMPTION

Used as a protective coating: approximately 2-3 kg/m^2 per coat.
Consumption is depending on the temperature and the substrate's coarseness and absorption.

PACKAGING

3 kg set: Component A = 2.25 kg and component B = 0.75 kg
18 kg set: Component A = 13.5 kg and component B = 4.5 kg

STORAGE

Properties for use are not changed for a period of 24 months if stored between + 5 and + 30 ˚C in unopened in original packaging.

SAFETY INSTRUCTIONS FOR PREPARATION AND USE

Instructions for the safe use of our products can be found on the latest version of the SDS available from our website www.mapei.no.

PRODUCT FOR PROFESSIONAL USE.

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above - information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application: for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application: in every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the technical data sheet, available from our web site www.mapei.no

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