MAPEI

CE
EN 1504-2

IN COMPLIANCE WITH EUROPEAN STANDARD
EN 1504-2 (H)
PRINCIPLES
PI-MC-IR
MAPEI
SURFACE PROTECTION SYSTEMS FOR CONCRETE

Planiseal WR 80 Cream

Ready-mixed hydrophobising, protective, silane-based, migrating thixotropic cream in water emulsion applied to the surface of reinforced concrete structures

WHERE TO USE

Thanks to its hydrophobising properties, **Planiseal WR 80 Cream** is particularly recommended for protecting all reinforced concrete structures exposed to aggressive agents such as chlorides and to damages caused by freeze-thaw cycles. Thanks to its special formulation, **Planiseal WR 80 Cream** may be applied directly on both vertical and horizontal surface of porous and compact concrete, on new concrete and on concrete that has already been repaired or with no evident signs of detachment from the reinforcing steel.

Some application examples

- Piles and abutments on bridges and viaducts.
- Floor slabs.
- Structures in marine environments such as quaysides, jetties, etc.
- Pre-fabricated reinforced concrete structures.
- Front edges of balconies.
- Stringcourses.
- Concrete floors.
- Foundations.
- Prefabricated structures (buffer panels, beams, columns, etc.).
- Internal and external reinforced concrete structures in general.

TECHNICAL CHARACTERISTICS

Planiseal WR 80 Cream is a solvent-free, low-density, hydrophobising, silane-based thixotropic paste in water solution with high penetration capacity applied directly on the surface of concrete to be treated.
Thanks to its special composition, **Planiseal WR 80 Cream** travels through the capillary pores and penetrates deep down into concrete to form a protective, hydrophobic coating that, helps prevent from degradation of the concrete.
Although the unchanged breathability of the substrate, **Planiseal WR 80 Cream** drastically reduces water and chloride absorption which helps prevent corrosion of the reinforcement steel in the concrete. Thanks to its special properties, it also helps prevent deterioration of new and repaired concrete by freeze-thaw cycles and de-icing salts and increases its durability, especially when used as part of a repair and protection cycle on reinforced concrete.
Planiseal WR 80 Cream complies with Euronorm EN 1504-9 (*"Products and systems for the protection and repair of concrete structures: definitions, requirements, quality control and conformity assessment. General principles for the use of products and systems")* and the requirements of EN 1504-2 *("Concrete surface protection systems")* according to principles PI, MC and IR for class: H - hydrophobic impregnation: surface protection products.

RECOMMENDATIONS

- Do not dilute **Planiseal WR 80 Cream** with water while mixing.

Planiseal WR 80 Cream

- Do not add any other product (solvent, cement, etc.).
- Do not apply to the surface of concrete in direct contact with drinking water.
- Do not apply the product if the surrounding temperature is less than +5°C.
- Protect adjacent surfaces, including metal, glass and wood. Immediately remove all accidental splashes with water or ethanol.

APPLICATION PROCEDURE

Substrate preparation

Concrete must be well cured, sound, clean and free of all traces of oil, grease, cement laitance, old paint and any other material or substance that could prevent **Planiseal WR 80 Cream** from penetrating into the concrete. When treating old concrete, the cleaning method adopted depends on the type of dirt or stain to be removed. Hydro-blasting with cold water is generally sufficient to open surface pores and encourage the product to penetrate. Hydro-blasting with hot water is particularly effective in removing oil and grease. If there are no stains or dirt, blowing the surface down with compressed air is usually sufficient. Before applying **Planiseal WR 80 Cream** wait until the surfaces are dry.

Preparation of the product

Planiseal WR 80 Cream is supplied ready-mixed and must not be diluted with solvent or water. The product may be applied directly from the drum after shaking it well to form a uniform consistency.

Application of the product

Make sure the surface of the concrete is not frozen and that rain or a drop in temperature to below +5°C is forecast for at least 12 hours after application. The effectiveness of **Planiseal WR 80 Cream** depends on its penetration depth and this in turn depends on the type and absorbency of the concrete. The product may be applied by low-pressure airless spray on large surfaces or with a roller or a trowel for smaller areas. Apply one or two coats of the product, depending on the condition and absorbency of the substrate. Wait until the first coat is completely dry before applying the second coat. The surrounding temperature and the temperature of the surfaces, as well as the absorbency of the substrate, may affect the drying time of the product, which varies from 30 minutes to several hours. Concrete will be a matt white colour immediately after applying the product and then gradually become transparent while the product is drying.
Do not apply **Planiseal WR 80 Cream** on substrates that are not sufficiently cured. Areas that are still moist could limit the spread of the product deep down into the concrete.
Contact MAPEI Technical Services for advice regarding application on substrates or in conditions not mentioned in this Data Sheet.

PRECAUTIONS TO BE TAKEN DURING APPLICATION

- Do not apply **Planiseal WR 80 Cream** if it is about to rain or if rain is forecast within 12 hours of application.
- Apply at a temperature from +5°C to +35°C.
- Do not apply the product in strong winds.
- Do not apply the product on wet or damp concrete.
- Do not apply on external hot surfaces exposed to strong solar radiation.

Cleaning

Rinse tools and remove all traces and splashes of product immediately after application with water or ethanol.

CONSUMPTION

Consumption varies according to the porosity of the substrate and is generally around 0.15-0.3 kg/m^2 per coat.

PACKAGING

Planiseal WR 80 Cream is available in 5 kg drums.

STORAGE

Planiseal WR 80 Cream may be stored for 12 months in its original packaging in a covered, dry area. Store the product in an area with a temperature of +5°C to +35°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Planiseal WR 80 Cream is not considered hazardous according to current norms and guidelines regarding the classification of mixtures.
It is recommended to use protective gloves and goggles and to take the usual precautions for handling chemicals.
For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

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 website www.mapei.com

Planiseal WR 80 Cream: ***Ready-mixed hydrophobising, protective, silane-based migrating thixotropic cream applied to the surface of reinforced concrete structures, complies with Euronorm EN 1504-9 (H) principles PI, MC and IR***

TECHNICAL DATA (typical values)

PRODUCT IDENTITY	
Consistency:	thixotropic
Colour:	yellowish-white
Density (g/m³):	0.9
Active substance content (%):	80
APPLICATION DATA (at +20°C - 50% R.H.)	
Application temperature:	+5°C to +35°C
Dilution rate:	ready-mixed

FINAL PERFORMANCE

Performance characteristic	Test method	Requirements according to EN 1504-2	Performance of product
Penetration depth:	EN 1504-2 (table 3, n.19)	Class I: < 10 mm Class II: ≥ 10 mm	Class II: ≥ 10 mm
Water absorption and resistance to alkalis:	EN 13580	Absorption rate < 7.5% compared with untreated test sample	5.1%
		Absorption ratio after immersion in alkali solution <10%	5.3%
Drying speed coefficient:	EN 13579	Class I: > 30% Class II: > 10%	38.6% (Class I)
Loss in mass after freeze-thaw cycles with de-icing salts:	EN 13581	The loss in mass at the surface of the impregnated test sample must take place at least 20 cycles after the non-impregnated test sample	Δ cycles > 20
Reduction in chloride ion diffusion:	NT Build 515	/	68%
Hazardous substances:	EN 1504-2, 5.3	/	compliant

Planiseal WR 80 Cream

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement or replace requirements per the TDS in force at the time of the MAPEI product installation.
The most up-to-date TDS can be downloaded from our website www.mapei.com.

ANY ALTERATION TO THE WORDING OR REQUIREMENTS CONTAINED OR DERIVED FROM THIS TDS EXCLUDES THE RESPONSIBILITY OF MAPEI.

All relevant references for the product are available upon request and from www.mapei.com

7661-12-2017-I (GB)

MAPEI®

BUILDING THE FUTURE