

COOL BARRIER GRIP WWR

MASONRY WATER REPELLENTS



Product description

COOL BARRIER GRIP WWR is a solventless silicone microemulsion concentrate based on silanes and siloxanes that is diluted with water to yield a microemulsion.

Dilute, aqueous solutions of COOL BARRIER GRIP WWR are high-quality, specialty water repellents for hydrophobic impregnation and priming normal and reinforced concrete as well as water resisting admixtures for non-load bearing manufactured concrete products.

Special features

COOL BARRIER GRIP WWR is characterised by:

- good depth of penetration
- dilutable with water, and free of solvents
- low volatility
- high resistance to alkalis

Treated concrete will have the following permanent properties:

- greatly delays chloride and water absorption by concrete
- no loss in breathability
- improved durability against freeze-thaw de-icing salt stress
- enhanced durability
- provides good adhesion for paints

In the construction material COOL BARRIER GRIP WWR reacts with atmospheric moisture and / or the water in the building material's pores, eliminating alcohol. The active thus substance formed greatly reduces the concrete's absorbency in the active zone (penetration depth after post treatment), but without blocking any pores or capillaries. The impregnated building material retains very high water-vapor permeability.

Application

COOL BARRIER GRIP WWR is recommended as a hydrophobic impregnation agent and primer for normal and reinforced concrete for bridges, roads and buildings as well as water resisting admixtures for non-load bearing manufactured concrete products.

COOL BARRIER GRIP WWR forms dilute solutions immediately on being poured into drinking water. Ready-to-use silicone microemulsions activated in this way must be used up on the day of preparation.

The recommended dilution ratio is 1:3 to 1:14 (1 pbw COOL BARRIER GRIP WWR + 3 to 14 pbw water).

For the hydrophobic impregnation of high-grade, load bearing concrete, a dilution ratio of 1 part COOL BARRIER GRIP WWR and 3 parts of water is required, as the product has been approved according to EN 1504-2 in that for dilution rate.

Processing

Processing as a Hydrophobic Impregnating Agent for Concrete:

The work performed (preparing the concrete surface, setting up a reference surface, application and quality control) must follow the applicable regulations.

Concrete should not be impregnated until at least four weeks after it has been produced so that the setting of the cement is not affected.

- New surfaces that are still unsoiled must be cleansed of coarse particles and dust deposits by sweeping or, if necessary, using compressed air. Surfaces already weathered, and those heavily soiled by oil, rubber residue, etc., must first be cleaned using superheated steam or high-pressure water before commencing treatment. It is imperative that the water used be siphoned off immediately to prevent saturation of the concrete.

- Impregnation should always be performed on superficially dry concrete, i.e., when the surface of the concrete appears evenly dry, no more damp patches are visible and the moisture content equilibrium is established. To this end, moisture in the surface zone of the concrete is measured using a suitable technique.

The surface-zone moisture content of the concrete (from the surface to a depth of 20 mm) should not exceed 4 wt%.

- Evenly apply the impregnating agent to the building material in two coats, wet-on-wet. The two coats are absolutely essential to prevent the formation of defects in the impregnated surface. Do not allow puddles to form. The impregnating agent is applied by flow coating at reduced pressure (1-2 bar). A lambskin roller may be used afterward for more even coverage.

- In the event of unexpected rain, cover surfaces already impregnated and halt all further impregnation

Processing as a Concrete Admixture (Water Resisting Admixture)

The recommended admixture range of a 1:9 dilution of COOL BARRIER GRIP WWR is 1.0% to 5.0 % of the cement content. A significant reduction in water uptake can already be achieved at a concentration of 1.0 % of the cement. COOL BARRIER GRIP WWR is added either simultaneously with or immediately after the mixing water – it should never be added along with other additives. To keep a constant w/c value the total mixing water is reduced by amount required earlier for dilution.

We recommend testing compatibility with other concrete admixtures separately. A longer mixing time will thoroughly distribute the product within the overall system, which in turn will make it highly effective.

When used in concrete goods or similar concrete products according to EN 1338, 1339 or EN 1340, an initial-type test (cf. section 6.2 of the respective standard) is recommended.

Storage

The 'Best use before end' date of each batch is shown on the product label.


Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Safety notes

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from Abolin Co Greece subsidiaries.

Product data

Typical general characteristics	Inspection Method	Value
Appearance		clear, yellowish
Active siliane		approx. 100 %
Density at 25 °C	DIN 51757	0,900 - 1,000 g/cm ³
Flash Point	DIN 53213	25 °C
Viscosity, dynamic at 25 °C	DIN 51562	1 - 10 mPa.s
These figures are only intended as a guide and should not be used in preparing specifications		

	
0921	
Abolin Co Greece Athens 18 Galaxia Str 12462 Haidari	
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EN 1504-2:2004	
Surface protection products - Hydrophobic impregnation EN 1504-2:ZA.1a	
No. 0921 - CPR - 2171	
Depth of penetration	Class I < 10mm
Water absorption and resistance to alkali	Absorption ratio < 7,5% compared with the untreated specimen < 10% after immersion in alkali solution
Drying rate for hydrophobic impregnation	Class I > 30%
Loss of mass after freeze-thaw salt stress	NPD
Release of dangerous substances	NPD

The data presented in this leaflet are in accordance with the present state of our knowledge, but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this leaflet should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The recommendations do not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the products for a particular purpose.

The management system has been certified according to EN ISO 9001
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