SPECIAL CONSTRUCTION CHEMICALS GRIP SILICONES

COOL BARRIER GRIP SWR

MASONRY WATER REPELLENTS

Product description

COOL BARRIER GRIP SWR is a mixture of octyltrieth-oxysilanes isomers, with isooctyltriethoxysilane as the main component.

COOL BARRIER GRIP SWR is used in undiluted form for the hydrophobic priming and impregnation of concrete and reinforced concrete or as an admixture for the integral waterproofing of fresh concrete.

In addition COOL BARRIER GRIP SWR is suitable for the hydrophobic treatment of fillers and pigments.

Special features

COOL BARRIER GRIP SWR is characterised by:

- Excellent penetrating power
- (when applied retroactively)
- no solvents, environmentally compatible
- low volatility
- high resistance to alkalis

Treated concrete will have the following permanent properties:

- dramatic reduction in chloride and water absorption
- no loss in breathability
- reduces loss of concrete due to freeze / thaw action in the presence of de-icing salt
- enhanced durability
- provides good adhesion for paints

In the construction material, COOL BARRIER GRIP SWR 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 additional treatment), but without blocking any pores or capillaries. The impregnated building material retains very high water-vapor permeability.

Application

COOL BARRIER GRIP SWR is recommended for the hydrophobic impregnation and priming of concrete and reinforced concrete in road, bridge and building construction. It is also ideal as a waterproofing concrete admixture. In addition it is suitable for the hydrophobic treatment of fillers and pigments.

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. 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.
- COOL BARRIER GRIP SWR should never come in direct contact with bitumen.

The resistance of insulating materials to COOL BARRIER GRIP SWR must be tested on a case-by-case basis for the required temperatures.

Processing as a Concrete Admixture (Water Resisting Admixture)

COOL BARRIER GRIP SWR is approved as a water resisting admixture under EN 934-2:2009 Tab. 9.

The recommended admixture range is 0.1 % to 1.0 % of the cement content. A significant reduction in water uptake can already be achieved at a concentration of 0.2 % of the cement.
COOL BARRIER GRIP SWR is added either simultaneously with or immediately after the mixing water – it should never be added along with other additives. 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.

An initial test according to EN 206-1 and EN 1045-2 must be conducted for each new concrete composition. Finer adjustment of the fresh and set concrete properties by, for instance, varying the binder content pursuant to EN 206-1 and EN 1045-2 is recommended on a case-by-case basis. The concrete may harden more slowly during the first days in isolated cases.

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 containers must be protected against sunlight.
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, colorless
Active sIliane		approx. 99 wt. %
Density at 25 °C		approx. 0,879 g/cm³
Flash Point	ISO 3679	> 40 °C
Molecular weight		approx. 276 g/mol
Viscosity, dynamic at 25 °C	DIN 51562	1,9 mPa.s
Boiling point / Boiling range at 1013 hPa		236 °C

These figures are only intended as a guide and should not be used in preparing specifications

CE	
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 II ≥ 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	**Fulfilled (weight loss at least 20 cycles later than treated sample)**
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
Abolin Co Greece 18 Galaxia Str. Afaia Skaramaga Haidari 12462
Tel: 0030 210 5575568 Fax: 0030 210 5570616
EMAIL: abolin@abolinco.com WEB: www.abolinco.com