

SILRES® BS 4004

MASONRY WATER REPELLENTS

Product description

SILRES® BS 4004 is a water-thinnable, solventless emulsion, based on a mixture of silane and siloxane.

Dilute solutions of SILRES® BS 4004 serve as highquality, general-purpose water repellents for hydrophobic impregnating and priming mineral surfaces. Mineral substrates treated with SILRES® BS 4004 are especially characterized by an excellent beading effect.

Moreover SILRES® BS 4004 can be used for the mass hydrophobation of non-load bearing concrete products.

Properties

SILRES® BS 4004 emulsion contains a stabilized mixture of silanes and siloxanes that are susceptible to hydrolysis. Hydrolysis occurs only after application to the substrate, which breaks the emulsion. Alcohol is released and the emulsion is converted into a silicone resin water repellent.

SILRES® BS 4004 reduces the capillary absorption of the building which it has penetrated, but does not clog pores or capillaries. There is therefore little or no impairment of the building material's ability to "breathe".

Special features

- good depth of penetration
- rapid development of water repellency
- highly durable and effective beading effect
- tack-free drying
- provides good adhesion for paints
- water-based and environmentally compatible
- stable in storage, even when diluted

Application

Dilute SILRES® BS 4004 is an excellent water repellent for many absorbent mineral substrates, such as bricks, sand-lime brick, natural sandstone and

mineral plasters. It is not so suitable for less absorbent, dense natural stone, especially limestone, marble and reinforced concrete for bridges and roads.

Owing to its aqueous consistency and storage stability when diluted, SILRES® BS 4004 is ideal for in plant hydrophobation of building materials made of clay, aerated concrete, sand-lime brick, mineral fibers and lightweight aggregate.

SILRES® BS 4004 may also serve as a water-repellent primer for emulsion paints and plasters, silicone resin emulsion paints and silicone resin plasters.

Processing

Processing as a Hydrophobic Impregnating Agent:

Tap water is suitable for preparing solutions of SILRES® BS 4004 for use as facade water repellent primer. We recommend an active substance content of 5-10% (dilute the product in the ratio 1:4 to 1:9), the exact figure depending on how absorbent the substrate is. Always homogenize the concentrate and also the diluted product before use (short mixing).

Apply the ready-to-use solution in the usual way; flooding is the preferred way. Two "wet on wet" coats are needed to ensure complete coverage. If it starts to rain, stop treatment and cover the impregnated areas.

Processing as a Concrete Admixture (Water Resisting Admixture):

The recommended admixture range of a 1 : 4 dilution of SILRES® BS 4004 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. SILRES® BS 4004 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 WACKER subsidiaries or may be printed via WACKER web site <http://www.wacker.com>.

Product data

Typical general characteristics	Inspection Method	Value
Appearance		milky, white
Active substance		50 wt. %
Density		0,95 g/cm ³
Viscosity, dynamic at 25 °C		approx. 12 mPa.s

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

The data presented in this medium 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 medium 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 information provided by us does 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 product for a particular purpose.

The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001

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For technical, quality, or product safety questions, please contact:

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