

SILRES® BS 3003

MASONRY WATER REPELLENTS

Product description

SILRES® BS 3003 is a water-thinnable, solventless emulsion, based on a mixture of silane and siloxane.

Dilute solutions of SILRES® BS 3003 serve as highquality, general-purpose water repellents for impregnating and priming mineral surfaces.

Moreover SILRES® BS 3003 can be used for the mass treatment of non-load bearing concrete products.

Properties

SILRES® BS 3003 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 3003 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

SILRES® BS 3003 shows the following special features:

- good depth of penetration
- resistance to alkalis
- rapid development of water repellency
- provides good adhesion for paints
- water based and environmentally friendly
- stable in storage, even when diluted

Application

Dilute SILRES® BS 3003 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 3003 is ideal for inplant impregnation of building materials made of clay, aerated concrete, sand-lime brick, fibrous cement, mineral fibers and lightweight aggregate.

SILRES® BS 3003 may also serve as a water-repellent primer for emulsion paints and plasters, silicone resin emulsion paints and silicone resin plasters.

Moreover SILRES® BS 3003 can be used for the mass treatment of non-load bearing concrete products.

Processing

Tap water is suitable for preparing solutions of SILRES® BS 3003 for use as facade water repellent primer. We recommend an active substance content of 5-10% (dilute the product in the ratio 1:5 to 1:11), the exact figure depending on how absorbent the substrate is.

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. Owing to the content of wetting agent in SILRES® BS 3003, reimpregnation at a later date does not present any difficulties.

If it starts raining, stop treatment and cover the freshly impregnated areas.

For the mass impregnation of concrete products an active agent concentration of 10 % per weight is recommended. The dosage of the diluted product can be related to the overall mass or the amount of binding agents of the concrete product. If related to overall mass, a dosage between 0.1 to 1.0 % of the 10 % dilution of SILRES® BS 3003 is recommended. If related to the amount of binding agent, a dosage between 1.0 to 4.0 % of the 10 % dilution of SILRES® BS 3003 is recommended. In order to keep the water-cement-ratio on a constant level, reduce the amount of mixing water by the amount of water added with the diluted emulsion.

Even though an evaluation exhibited no negative influence of SILRES® BS 3003 on the mechanical properties of selected concrete recipes, an

independent evaluation of the mechanical properties 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.

The more dilute they are, the more they tend to cream. However, this phase separation may be

reversed by brief stirring or agitation. This will restore it to a homogeneous emulsion, without loss of efficacy.

SILRES® BS 3003 contains minor amounts of a preservative that protects the emulsion against microbial contamination and fungal attack. The quality of the water used may make it necessary to add a biocide after dilution; in principle, nearly any water-based preservative may be used.

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 content		60 wt. %
Density		0,95 g/cm ³
Viscosity, dynamic at 25 °C		approx. 12 mPa.s
pH-Value		approx. 8

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

Approvals

Centre Scientifique et Technique de la Construction (CSTC)

Hydrofuges:

Efficacité initiale, effets secondaires et durabilité du produit d'hydrofugation de surface.

Hydrophobic Impregnation:

Initial effectiveness, secondary effects and durability of water repellent agents on brick and limestone surfaces.

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 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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