SILRES® BS 1001

Silane Emulsions

SILRES® BS 1001 is a water-thinnable, solventless emulsion, based on a mixture of silane and siloxane.

Dilute solutions of SILRES® BS 1001 serve as high-quality, general-purpose water repellents for impregnating and priming mineral surfaces.

SILRES® BS 1001 can be combined with polymer based primers for substrate consolidation.

Properties

SILRES® BS 1001 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 1001 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”.

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

General Characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Condition</th>
<th>Value</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Content</td>
<td>-</td>
<td>approx. 50 wt. %</td>
<td>-</td>
</tr>
<tr>
<td>Appearance</td>
<td>-</td>
<td>milky, white</td>
<td></td>
</tr>
<tr>
<td>Density</td>
<td>20 °C</td>
<td>0.95 g/cm³</td>
<td></td>
</tr>
<tr>
<td>Viscosity dynamic</td>
<td>25 °C</td>
<td>approx. 12 mPa·s</td>
<td>-</td>
</tr>
</tbody>
</table>

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

All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product’s fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties’ rights.

Applications

- Primer
- Impregnation of New and Existing Buildings
- Construction Materials
- Hydrophobic Impregnation
- Silicone Primers

Application details

Dilute SILRES® BS 1001 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 1001 is ideal for in-plant impregnation of building materials made of clay, aerated concrete, sand-lime brick, fibrous cement, mineral fibers and lightweight aggregate.

SILRES® BS 1001 may also serve as a water-repellent primer for emulsion paints and plasters, silicone resin emulsion paints and silicone resin plaster as well as for concrete coatings.

Processing

Tap water is suitable for preparing solutions of SILRES® BS 1001 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.

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.
Packaging and storage

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 1001 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.

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

Wacker Chemie AG, Hanns-Seidel-Platz 4, 81737 Munich, Germany
info@wacker.com, www.wacker.com

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.