Characteristics

SILRES® BS Creme C is an aqueous, solventless, creamy, silane-based water repellent. It is a high-quality specialty product for impregnating both normal and reinforced concrete.

Features

• Dramatic reduction in chloride and water absorption
• Comprehensive protection against frost / road salt attack
• Optimum resistance to alkalis
• Good depth of penetration
• Provides good adhesion for paints
• Solventless, aqueous and environmentally compatible
• Low volatility
• Thixotropic and so may be applied without loss of material

SILRES® BS Creme C is a unique impregnating agent because it is thixotropic. It has an outstanding ability to impregnate high-quality concrete and reinforced concrete. Unlike conventional liquid products, SILRES® BS Creme C can be applied in just one coat of the desired thickness (at the very most, two coats). The silane active ingredient penetrates the substrate within 30 minutes to several hours, the exact time depending on the porosity and thus quality of the concrete. On reaction with the substrate, it releases ethanol and is converted into a polymeric silicone resin. A creamy layer forms initially, but this then disappears completely. As the active ingredient is the same as in conventional liquid impregnating agents, impregnation with SILRES® BS Creme C does not clog the pores or capillaries, nor does it affect its ability to "breathe".

SILRES® BS Creme C is designed to penetrate deeply into concrete so as to afford optimum protection against absorption of water and pollutants as well as freeze / thaw cycles. This effect should not be confused with the "beading" effect imparted by impregnating agents that is often referred to as water repellency. Beading is only a surface effect, and it plays a secondary role in protecting the substrate. Concrete treated with SILRES® BS Creme C has initially only a moderate beading effect, but this increases after the surface has been wetted.

Application

SILRES® BS Creme C is recommended particularly for impregnating and priming concrete and reinforced concrete used in building bridges, roads and buildings. In principle, SILRES® BS Creme C may be used on any alkaline substrate that has been treated previously with concentrated or undiluted impregnating agents, such as alkoxy silanes.

Processing

SILRES® BS Creme C is best applied to the concrete by the airless technique, undiluted and in the desired thickness. Brushes, lambskin rollers or spatulas may be used for smaller areas.

Up to 300 g/m² may be applied in one operation to vertical surfaces and roofs, without loss off material. The exact amount depends on the absorbency of the substrate. If the substrate is of high quality and hence not very absorbent, do not apply more than roughly 200 g/m² in one operation, as it may take several hours to penetrate completely. At higher application rates, the impregnating film might liquefy because of the concrete’s alkalinity and it might start to run off. A second coat of SILRES® BS Creme C may be applied at any time, but is usually unnecessary.

To ensure that the cement sets properly, it is best to wait at least two weeks, and preferably four, before impregnating it. Remove coarse particles and dust from new unsoiled surfaces with a brush or compressed air. Use superheated steam to clean weathered surfaces that are heavily soiled with oil or abraded rubber, etc., prior to treatment.

Product data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>white to yellowish cream</td>
</tr>
<tr>
<td>Active substance content, approx.</td>
<td>[wt %] 80</td>
</tr>
<tr>
<td>Density at 25 °C, approx.</td>
<td>[g/cm³] 0.9</td>
</tr>
<tr>
<td>pH, approx.</td>
<td>7</td>
</tr>
<tr>
<td>Flash point, approx.</td>
<td>[°C] 74</td>
</tr>
</tbody>
</table>

These figures are intended as a guide and should not be used in preparing specifications.
Only impregnate concrete that has a uniformly dry surface with no damp patches. Should it suddenly start to rain, stop treatment and cover the impregnated areas.

SILRES® BS Creme C should not get into direct contact with bitumen. The resistance of insulant against SILRES® BS Creme C has to be determined dependend on temperature.

Storage

SILRES® BS Creme C has a shelf life of at least 12 months when stored between 0 °C and 30 °C in the tightly closed original container. The 'Best use before end' date of each batch appears 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 information

Detailed safety information is contained in each material data safety sheet, which can be obtained from our sales offices.

Approval

The efficiency of SILRES® BS Creme C is borne out in the following laboratory test report:

- IBAC Test report A 3299 (30.04.1999)
- BRE, TCR 63/99 acc. prEN 104 (25.03.1999)
- Stockholm Konsult, Report 2297577 (03.07.1999)
- AGRA Earth Ltd. Alberta Test report EA 14913 (21.06.2000)
- TRL Ltd., Report PR PR/CSS/34/03, August 2003 „Early age application of silanes to concrete and repair mortar“
- Polymer Institut Dr. Stenner GmbH, Flörsheim, Deutschland „Prüfungen an dem Stoff SILRES® BS 1701 für die Verwendung als hydrophobierende Imprägnierung nach DIN EN 1504-2“

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

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