

SILRES® BS 1802



Silane Emulsions

SILRES® BS 1802 is used in undiluted form as an admixture for the integral waterproofing of fresh concrete.

Moreover SILRES® BS 1802 can be used as water resisting admixture for non-load bearing manufactured concrete products.

SILRES® BS 1802 effectively prolongs service life of concrete structures by inhibiting the so called ASR (alkali-silica-reaction).

Properties

In the fresh concrete, SILRES® BS 1802 reacts with the water in the mixture. The so formed active substance greatly reduces the concrete's water absorbency after hardening, but without blocking any pores or capillaries. Building materials treated integrally with SILRES® BS 1802 retain very high water-vapor permeability.

One of the main degradation mechanisms in concrete, the so called ASR (alkali-silica-reaction) is effectively inhibited by an integral treatment with SILRES® BS 1802, extending the service life of the construction material significantly.

Technical data

General Characteristics

Property	Condition	Value	Method
Active content	-	approx. 50 wt. %	-
Appearance	-	milky, white	-
Density	20 °C	0.95 g/cm ³	not specified
Viscosity, dynamic	25 °C	approx. 12 mPa·s	not specified

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

- Concrete Admixtures

Application details

SILRES® BS 1802 is recommended as a waterproofing concrete admixture.

Processing of undiluted product as a water resisting admixture for load-bearing concrete

The recommended dosage range is 0.2 % to 1.0 % with respect to the cement content in the concrete. A significant reduction in water uptake can already be achieved at these low concentrations. Best results for inhibiting ASR were obtained at 0.5 %, however final dosage needs to be adjusted depending on the cement quality and formulation.

SILRES® BS 1802 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 DIN Technical Report 100, section 9.5, (alternative: 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.

Processing as a Concrete Admixture (Water Resisting Admixture) in non-loadbearing concrete goods

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. For that application the use of diluted SILRES® BS 1802 is permitted.

The recommended admixture range of a 1 : 4 dilution of SILRES® BS 1802 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 1802 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 ratio, 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.

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.

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>.

QR Code SILRES® BS 1802



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

Wacker Chemie AG, Gisela-Stein-Strasse 1, 81671 Munich, Germany
productinformation@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.