

# SILRES® BS 17040 A

## Silane Emulsions

SILRES® BS 17040 A is a water-thinnable, solventless silane emulsion. SILRES® BS 17040 A serves as highquality water repellent for impregnating and priming of alkaline mineral surfaces. Moreover SILRES® BS 17040 A can be used as water resisting admixture for non-load bearing manufactured concrete products.

## Properties

SILRES® BS 17040 A is characterised by:

- good depth of penetration
- high resistance to alkalis
- stable in storage, even when diluted
- dramatic reduction in chloride and water absorption
- no loss in breathability
- improved durability against freeze-thaw de-icing salt stress
- enhanced durability
- provides good adhesion for paints

In the construction material, SILRES® BS 17040 A reacts with atmospheric moisture and / or the water in the building material's pores, eliminating alcohol. The active thus substance formed greatly reduces the concrete's absorbency in the active zone (penetration depth after post treatment), but without blocking any pores or capillaries. The impregnated building material retains very high water-vapor permeability.

## Applications

- Concrete Protection

## Application details

Processing as a Hydrophobic Impregnating Agent for Concrete: The work performed (preparing the concrete surface, setting up a reference surface, application and quality control) must follow the applicable regulations.

- Concrete should not be impregnated until at least four weeks after it has been produced so that the setting of the cement is not affected.

- New surfaces that are still unsoiled must be cleansed of coarse particles and dust deposits by sweeping or, if necessary, using compressed air. Surfaces already weathered, and those heavily soiled by oil, rubber residue, etc., must first be cleaned using superheated steam or high-pressure water before commencing treatment. It is imperative that the water used be siphoned off immediately to prevent saturation of the concrete.

- Impregnation should always be performed on superficially dry concrete, i.e., when the surface of the concrete appears evenly dry, no more damp patches are visible and the moisture content equilibrium is established. To this end, moisture in the surface zone of the concrete is measured using a suitable technique. The surface-zone moisture content of the concrete (from the surface to a depth of 20 mm) should not exceed 4 wt%.

- Evenly apply the impregnating agent to the building material in two coats, wet-on-wet. The two coats are absolutely essential to prevent the formation of defects in the impregnated surface. Do not allow puddles to form. The impregnating agent is applied by flow coating at reduced pressure (1-2 bar). A lambskin roller may be used afterward for more even coverage. - In the event of unexpected rain, cover surfaces already impregnated and halt all further impregnation.

SILRES® BS 17040 A should not get into direct contact with bitumen. The resistance of insulant against SILRES® BS 17040 A has to be determined dependent on temperature.

Processing as a Concrete Admixture (Water Resisting Admixture) The recommended admixture range of a 1 : 3 dilution of SILRES® BS 17040 A 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 17040 A 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.

SILRES® BS 17040 A is recommended for the hydrophobic impregnation and priming of concrete and reinforced concrete in road, bridge and building construction as well as water resisting admixtures for non-load bearing manufactured concrete products.

## Packaging and storage

### Storage

The "Best use before end date" of each batch is shown on the Certificate of Analysis.

Storage beyond the date specified on the Certificate of Analysis 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.

## QR Code SILRES® BS 17040 A



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

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