

SiSiB[®] WR4006

Water Repellent Emulsion

COMPOSITION

Integral water repellent for cement-based construction materials

SiSiB[®] WR4006 is a water- dilutable solventless emulsion, based on a mixture of silane and siloxane. It is a general-purpose water repellent for hydrophobic impregnating and priming mineral surfaces. Substrates treated with SiSiB[®] WR4006 have excellent beading effect.

INTRODUCTION

SiSiB[®] WR4006 Emulsion is a 50% active nonionic emulsion containing alkoxy silanes. Silanes are well known for their ability to provide hydrophobicity and decrease dramatically the water ingress of cementitious materials. Silane supplied in emulsion can chemically react with cement hydrate during cement cure. Alcohol is released upon reaction of the silanes.

SiSiB[®] WR4006 is a water based silane emulsion which can be used as admixture in cementitious materials.

Silanes react chemically within the cementitious matrix and provide integral water repellent treatment.

Treated cement-based materials are resistant against water absorption throughout the material.

As a water-based emulsion, SiSiB[®] WR4006 Emulsion provides easy incorporation of silanes in cement-based slurry.

SiSiB[®] WR4006 Emulsion can be used as supplied or diluted in water prior to addition in cement slurry.

BENEFITS

When used as an additive to cementitious matrix, silane emulsion can impart the following benefit to the final material:

Significant reduction in capillary absorption of water.

Little to no reduction of water vapor permeability.

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Significant reduction of ingress and transfer of water-soluble salts through the matrix (i.e. efflorescence).

Reduction of water uptake is resistant to UV exposure.

TYPICAL PHYSICAL PROPERTIES

Color and Appearance	Milky White Liquid
Active Ingredient	50%
pH	5~7

APPLICATIONS

It is advised to stir SiSiB® WR4006 Emulsion prior to its application.

SiSiB® WR4006 Emulsion can be used as supplied or can be diluted in water before use. The water should be added to the emulsion with low shear mixing. Deionized water is recommended for dilution. After dilution, it is advised to make sure the pH is maintained in the 5-9 range. To prevent mold growth within the package, additional preservative may be required if the diluted emulsion is expected to be stored.

SiSiB® WR4006 Emulsion can be used as an admixture to cementitious mixtures at levels between 0.2 to 0.5% by weight of SiSiB® WR4006 Emulsion as supplied based on the dry composition weight.

If calculated to cement mass, an addition level of SiSiB® WR4006 Emulsion between 1 and 3% vs cement is advised.

It is however strongly advised to carry out an evaluation of SiSiB® WR4006 Emulsion addition on the physical properties of the targeted cement-based materials prior to any use in full scale application.

SiSiB® WR4006 is used as a surface modifier to generate hydrophobicity (e.g. concrete, glass, inorganic pigments, or mineral fillers).

PACKING AND STORAGE

SiSiB® WR4006 is supplied in 200Kg steel drum or 1000Kg IBC tote.

In the unopened container SiSiB® WR4006 has a shelf life of 6 months. Storage beyond

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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.

NOTES

All information in the leaflet is based on our present knowledge and experience. We reserve the right to make any changes according to technological progress or further developments. Performance of the product described herein should be verified by testing.

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January 2024 | [Technical Data Sheet](#) | [Edition LR](#)

Please send all technical questions concerning quality and product safety to: support@SiSiB.com.