

# HA-BE SILICA FLUID

**Liquid microsilica for high quality and durable concrete**

Item No 3300/D

## FIELDS OF APPLICATION

HA-BE SILICA FLUID is a high quality concrete additive for the production of tight and durable concrete. Therefore the main application area is concrete meeting the highest standards as far as strength, water tightness and resistance against chemical attack are concerned.

For the production of high performance concrete with a low water/cement ratio especially adapted superplasticisers such as PANTARHIT® series recommended.

## DOSAGE

The generally dosage range is 5.0 – 20.0 mass-% of the cement content.

## STANDARD COMPLIANCE

HA-BE SILICA FLUID complies with the requirements of ASTM C-1240.

The chemical and physical requirements are regularly tested.

## WORKING PRINCIPLE

Due to its very even dispersion, HA-BE SILICA FLUID is a very effective admixture that reacts intensively with the calcium hydroxide out of the cement hydration.

In fresh concrete the addition of HA-BE SILICA FLUID improves the cohesive strength and the water retaining ability of the mixture.

In hardened concrete it contributes to the improvement of tightness, strength and resistance against chemical and mechanical attack.

## TECHNICAL DATA

Homogeneity	homogenous
Colour	Grey
State	liquid
Density	1.37 ± 0.03 g/cm <sup>3</sup>
Solid Content	50.0 +/- 2.5 %
Chloride content*	< 0.3 mass-%
SiO <sub>2</sub> content *	> 85 %
Loss on ignition*	max. 6.0
SO <sub>3</sub> content *	< 1.0 %
Na <sub>2</sub> O equivalent *	< 2.0 %
Oversize 45 µm*	max. 10 %
Pozzolanic activity index	min. 105 %
Specific surface area *	min. 15 m <sup>2</sup> /g
Shelf life	approx. 1 year from date of production if stored properly
Storage conditions	Protect from frost and direct sunlight. Circulation must be done regularly!

\*Tested in dry form

## PROCESSING INDICATIONS

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HA-BE SILICA FLUID should be regularly agitated to remain homogenous (every 2 -3 weeks). The suspension has to be homogenised by agitation or circulation every time before using it.

HA-BE SILICA FLUID should be added to the mixture after the water has been added.

For the recommended mixing time the definitions and regulations of EN 206-1 apply.

In order to distribute the microsilica slurry thoroughly it is suggested to increase the mixing time compared to concrete without microsilica.

Because of the abrasive properties of HA-BE SILICA FLUID especially membrane pumps, eccentric worm conveyors or hose pumps are to be used.

## COMPATIBILITY

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HA-BE SILICA FLUID is compatible with all types of Portland cements, SRC cements and other cementitious materials including PFA, GGBS and lime stone powder. HA-BE SILICA FLUID is compatible with all Ha-Be concrete admixtures. The addition of HA-BE SILICA FLUID and the Ha-Be PANTAPOR air entraining agents is recommended where a resistance against freezing- and thawing cycles is required. All Ha-Be admixtures should be added separately to concrete and should not be mixed prior to the addition.

## PACKAGING

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- 30 l can
- 200 l barrel
- 1000 l container
- loose by bulk supply

## HEALTH & SAFETY

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This product is not classified as hazardous according to the current regulations. Refer to the corresponding Material Safety Data Sheet for further advice.

## REMARKS

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This information describes the application- and processing possibilities of a product and its operation principles under regular conditions. Having no influence on the further application and processing, especially in conjunction with other construction materials, the given indications are neither a warranty in respect of the product's properties or its fitness for a particular purpose nor a full instruction of use. This information, any other recommendation or verbal advice are not binding and do not infer to any liability or legal demand.

Due to continuous further development, the most recent Technical Data Sheet is valid and will be supplied on request. All orders are accepted subject to our current general terms and conditions.

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**SUITABILITY- AND PRELIMINARY TESTS ARE NECESSARY BEFORE APPLYING THE CONCRETE ADMIXTURE!**