

**Technical Data Sheet**

# FUMED SILICA W940U

## White Fumed Silica

### Description

**Fumed Silica W940U** is an extremely fine powder and very white of amorphous silica,  $\text{SiO}_2$ , with very high pozzolanic reactivity. The Fumed Silica react with the lime coming from the mineral binder producing insoluble calcium silicate products, similar to the cement reaction product. Less micro-defect a more and better and compacted cement binder matrix can be achieved.

Therefore an improvement of the mechanical properties like adhesion and abrasion strength can be reached. At the same time also better workability with less bleeding and segregation in fluid mortars and a very good thixotropic effect in vertical application.

The Very White colour of the **Fumed Silica W940U** allows to make white products by the use of white cement or light colour binders or to reduce the use of pigments for coloured material

### Application field

The use of **Fumed Silica W940U** can improve the following property:

**in the fresh mortar:**

- Better workability and easy application
- Much better resistance to sag tendency
- Very good control of bleeding and segregation
- Better pump ability

**in the hardened mortar:**

- White colour
- Higher density
- Lower water permeability
- Improving of adhesion and mechanical properties
- Improving of durability
- Better freeze thaw resistance
- Reduction of alkali/aggregate reaction
- Better resistance to sulphate attack

### Technical Data

<b>Appearance</b>	powder
<b>Colour</b>	bright white

**Technical Data Sheet**

## Further Technical Data

	Min	Standard value	MAX
<b>BULK Density [kg/m<sup>3</sup>]</b>	200	300	350
<b>Specific Surface, [m<sup>2</sup>/g]</b>	16	19	22
<b>pH [mm]</b>	4.5	6	7
<b>Smaller than a 45 µm</b>		>95 %	
<b>SiO<sub>2</sub>, [M. %]</b>	86	93	97
<b>K<sub>2</sub>O [M. %]</b>	0.30	0.60	1.3
<b>Na<sub>2</sub>O [M. %]</b>	0.30	0.35	0.50
<b>CaO<sub>2</sub> [M. %]</b>		< 0.80	
<b>SO<sub>3</sub> [M. %]</b>		< 2.0	
<b>H<sub>2</sub>O</b>	0.35	0.40	0.45
<b>LOI [at 750 °C]</b>	0.80	0.9	1.6

## Dosage and use

**Fumed Silica W940U** can be added to the premix powder with dosage levels of about 5% up to 25% on cement weight. An average dosage can be used around 10% on cement weight.  
The product is compatible with all the standard admixture used for mortar and concrete production.

The information and all further technical advice are based on our current knowledge and experience. It does not imply liability or other legal responsibility on our part, including with regard to existing third party intellectual proprieties rights and patent rights. No warranty, whether express or implied, or guarantee of product proprieties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct carefully inspection and testing of goods: The performances and suitability of the product must be verified by testing. The Tests must be carried out by qualified persons in the sole responsibility of the customer. References to trade names used by other company is neither a recommendation, nor does it imply that similar products could be used.

Issued: **November 2013**  
Valid until replaced by a new issue.