Hydrophilic Fumed Silica

CHEMICAL NAME

SiSiB® FS-0100 is a hydrophilic fumed silica with a specific surface area of 100 m²/g.

INTRODUCTION

Hydrophilic fumed silica is manufactured by hydrolysing volatile chlorosilanes in an oxyhydrogen flame. In chemical terms, the loose white powder consists of highly pure amorphous silicon dioxide. Hydrophilic silica is wetted by water and can be dispersed in water. Hydrophobic silica is produced by the chemical reaction of hydrophilic silica with reactive silanes, e.g. chlorosilanes or hexamethyldisilazane. It has water-repellent properties and is no longer dispersible in water.

$$SiCl_4 + 2H_2 + O_2 \xrightarrow{>1500^{\circ}C} SiO_2 + 4HCl$$

All untreated fumed silicas are characterized by:

- ♦ High purity
- ◆ Aggregated structure
- Submicron particle size
- Low bulk density
- Hydrophilic surface

TYPICAL PHYSICAL PROPERTIES

CAS No.	112945-52-5 or 7631-86-9
EINECS No.	231-545-4
Specific surface area (BET)	$100\pm15~\mathrm{m}^2/\mathrm{g}$
Average primary particle size	5~40 nm
SiO ₂ content, wt.% (1000°C, 2h)	> 99.8%
Loss on drying, (105°C, 2h) wt.%	<1.5%
Ignition loss (1000°C, 2h), wt.%	<1.0%
pH-Value (in 4 % aqueous dispersion)	3.6~4.3
Tamped density	~50g/l

APPLICATIONS

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SiSiB® FS-0100 can be used in aqueous dispersion for chemical mechanical planarization and as a reinforcing filler in elastomers, mainly silicone-elastomers.

PACKING AND STORAGE

SiSiB® FS-0100 is supplied in multiple layer 10 kg bags.

In the original unopened packaging, SiSiB® FS-0100 has a shelf life of 24 months under dry conditions.

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.

We specifically disclaim any other express or implied warranty of fitness for a particular purpose or merchantability. We disclaim liability for any incidental or consequential damages.

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



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