

SiSiB[®] FS-0250 SILICA

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COMPOSITION

SiSiB® FS-0250 is a hydrophilic fumed silica with a specific surface area of 250 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) | $250\pm15~\text{m}^2/\text{g}$ |
| Average primary particle size | 5~40 nm |
| SiO ₂ content, wt.% (based on the substance heated at 1000°C for 2 h) | > 99.8% |
| Loss on drying , ex works (2h at 105 °C) wt.% | <2.0% |
| Ignition loss (Loss of weight at 1000°C / 2h), wt.% (based on the substance dried at 105°C for 2 h) | <2.0% |
| pH-Value (in 4 % aqueous dispersion) | 3.6~4.3 |
| Tamped density | ~50g/l |

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APPLICATIONS

SiSiB® FS-0250 can be applied as a thickening and thixotropic agent in many organic systems, e.g. in unsaturated polyesters, coatings, printing inks, adhesives, cosmetics and others. It is used as a reinforcing filler in elastomers, mainly silicone-elastomers, like HTV and RTV-2K.

SiSiB® FS-0200 can act as a free flow additive in the production of technical powders, in food and feed and in pharmaceutical products.

PACKING AND STORAGE

SiSiB® FS-0250 is supplied in multiple layer 10 kg bags.

In the original unopened packaging, SiSiB® FS-0250 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.

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Please send all technical questions concerning quality and product safety to: silica@PCC.asia

