

Hydrophilic & Hydrophobic Fumed Silica

chemionag.com







Company Profile

Chemion AG, founded in Switzerland to supply specialty chemical raw materials and aims to spread its activities to a wide world geography. The company keeps the deep know-how of a family that has been involved in the chemical industry since 1950s.

Chemion AG aims to make a difference in the field of chemical raw materials trading with its new and flexible company structure, experienced and proactive team, supply chain that caters to a broad spectrum of sectoral basis, laboratories, product control and quality of its technical support.

Chemion AG, offers its products and services in paint, construction chemicals, plastics, ink, paper, cosmetics and personal care sectors. The company also develops formulas for the specific needs of its clients.

Chemion AG, who stands out with its comprehensive knowledge of Chinese raw material market and keeps a know-how that is almost 70 year old in its foundations. Chemion AG offers the best quality product to ensure the most affordable price to its clients all over the world.

In the founding philosophy of Chemion AG, a global understanding of the Western trade model and the productivity of the East lies together. With this understanding, the company is launching a new era in the trade of chemical raw materials.

HYDROPHILIC AND HYDROPHOBIC FUMED SILICA

CISIL Fumed Silica is Synthetic, amorphous silica with features such as small particle size, large BET surface area,

Hydrophilic Fumed Silica CISIL

- CISIL 150
- CISIL200
- CISIL300
- CISIL380

Hydrophobic Fumed Silica CISIL

- CISIL R120
- CISIL R170



CISIL Hydrophilic Fumed Silica

	CISIL 150	CISIL 200	CISIL 300	CISIL 380
BET surface area[m ² /g]	150 ±25	200±25	300±25	380±25
Loss on drying [wt.%]	≤ 1.5	≤ 1.5	≤ 1.5	≤ 1.5
pH	3.8-4.5	3.8-4.5	3.8-4.5	3.8-4.5
SiO ₂ content	≥99.8	≥99.8	≥99.8	≥99.8
Tamped density [g/L]	25 60	25 60	25 60	25 60
Loss on ignition	~ ≤ 2.5	~ ≤ 2.5	~ ≤ 2.5	~ ≤ 2.5
Sieve residue (45Kμm)(%)	<0.05	<0.05	<0.05	<0.05
Carbon content [wt%]	<0.2	<0.2	<0.2	<0.2



CISIL Hydrophobic Fumed Silica

	CISIL R120	CISIL R170
Specific Surface Area(BET)	120±20	170±20
pH Value (in 4% dispersion)	6.0-7.5	6.0-7.5
Loss on Drying, Ex Works (2h @ 105)	≤ 1.0	≤ 1.0
Loss on ignition	≤ 1.0	≤ 1.0
SiO2 content	≥99.8	≥99.8
Carbon content	1.0-2.0	1.0-2.0
Surface modification	Hexamethyldisilazane	Hexamethyldisilazane

Functions

- Anti-settling, thickening and sag resistance
- Scratch and abrasion resistance
- Free-flow and anti-caking
- Corrosion resistance
- Enhanced adsorbency
- Reinforcement

Applications

- Adhesive & Sealant
- Paints and Coatings, Ink
- Unsaturated Polyester Resin
- Construction
- Silicone Rubber
- Thermal Insulation
- Plastic and Thermoplastic Elastomers (TPE)
- Technical Powders



Adhesive and Sealant

Fumed silica used as additives for thickening and thixotropy, reinforcement, anti-settling, rheology control and anti-sag in reactive, solvent, water-based adhesives and hotmelts.



Paints and Coatings, Ink

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Unsaturated Polyester Resin

Fumed silica is added to Unsaturated Polyester resins for viscosity control and to achieve the desired thixotrope effect. Furthermore fumed silica works as an anti-settling agent and can be used in transparent applications.





Construction

Fumed silica can be used to improve mechanical properties of concrete, plaster and mortar, their handling properties and fumed silica can act as stabilizing and reinforcing agent during plaster curing



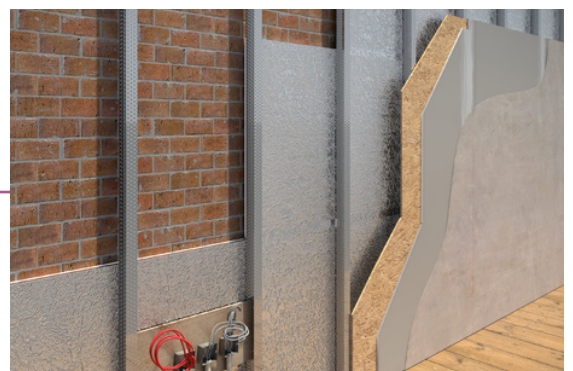
Silicone Rubber

Fumed silica is active reinforcing filler used in the production of silicon rubbers and provides improvement of rheological, mechanical and optical properties.



Thermal insulation (Vacuum-insulation panels)

The vacuum-insulation panels are made with vacuum-packed fumed silica encased in several layers of a special film that is impermeable to air and moisture. The better the quality of the structure of the fumed silica in its core, the better the insulation effect of VIP.



Plastic & Thermoplastic Elastomers (TPE)

Fumed silica can provide Antiblocking, Matting, Reinforcement, Rheology control, Thixotropic effect and Anti caking performance to thermoplastics, polymer compounds, composites and Thermoplastic Elastomers (TPE)



Technical Powders

Fume silica is acting as flow aid, carrier and anti-caking agent for chemical powders such as inorganic salts, construction chemicals, fire extinguishing powder, plastic additives and cellulose derivatives.



Application		Primary Performance Criteria	Suggest Grade	Suggest Addition (M/M%)
Rubber / Synthetic Rubber		Reinforcement	CISIL200	5.0~30
HTV Silicone Rubber		Reinforcement; Elongation Resistance; Ease of Compounding	CISIL150 CISIL200	15~50
RTV Silicone Rubber	RTV-silicone sealant (1 component)	Reinforcement; Thixotropy, Rheology control, dispersability	CISIL150 CISIL200	3.0~30
	RTV-molding compound			3.0~30
	Liquid Silicone Rubber			15~35
Adhesive	Polychloroprene	Thickening; Thixotropy; Anti-settling; Sag Resistance; Extrusion Rate; Rheology Control	CISIL200	1.0~2.0
	Epoxide Resin compound			
	Latex			
PVC	Plastisol	Thickening; Thixotropy; Anti-settling; Free-flow; Insulation	CISIL200	0.3~2.5
	Organosol			
	Plastisol PVC Mixture			0.1~1
	Cable Compound			1.0~2.0
	Membrane			0.1~1
Paints & Coating	Zinc Rich Paints	Thickening; Thixotropy;	CISIL150	0.5~2
	Alkyd Paints	Anti-settling	CISIL200	0.5~5
	Acrylics Paints		CISIL200	0.3~2.5
	Polyester Paints			0.5~2.5
	Powder Coating			0.5~5
	Gel Coating (Polyester)			2.0~3.0
Unsaturated Polyester Resin	Laminating Resin		Thickening; Thixotropy; Anti-settling;	CISIL 200
	Gel coating	2.0~3.0		
	Grouting mixture	0.5~2.0		
Print Ink	Relief Printing	Thickening; Thixotropy; Anti-settling; Sag Resistance; Rheology Control	CISIL200	0.5~2.0
	Intaglio Printing			
	Hectograph		CISIL150 CISIL200	0.5~2.5
Insulating Glue		Thickening; Thixotropy;	CISIL200	5.0~10

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