

MOS-HIGE®

Fibrous Magnesium Oxysulfate

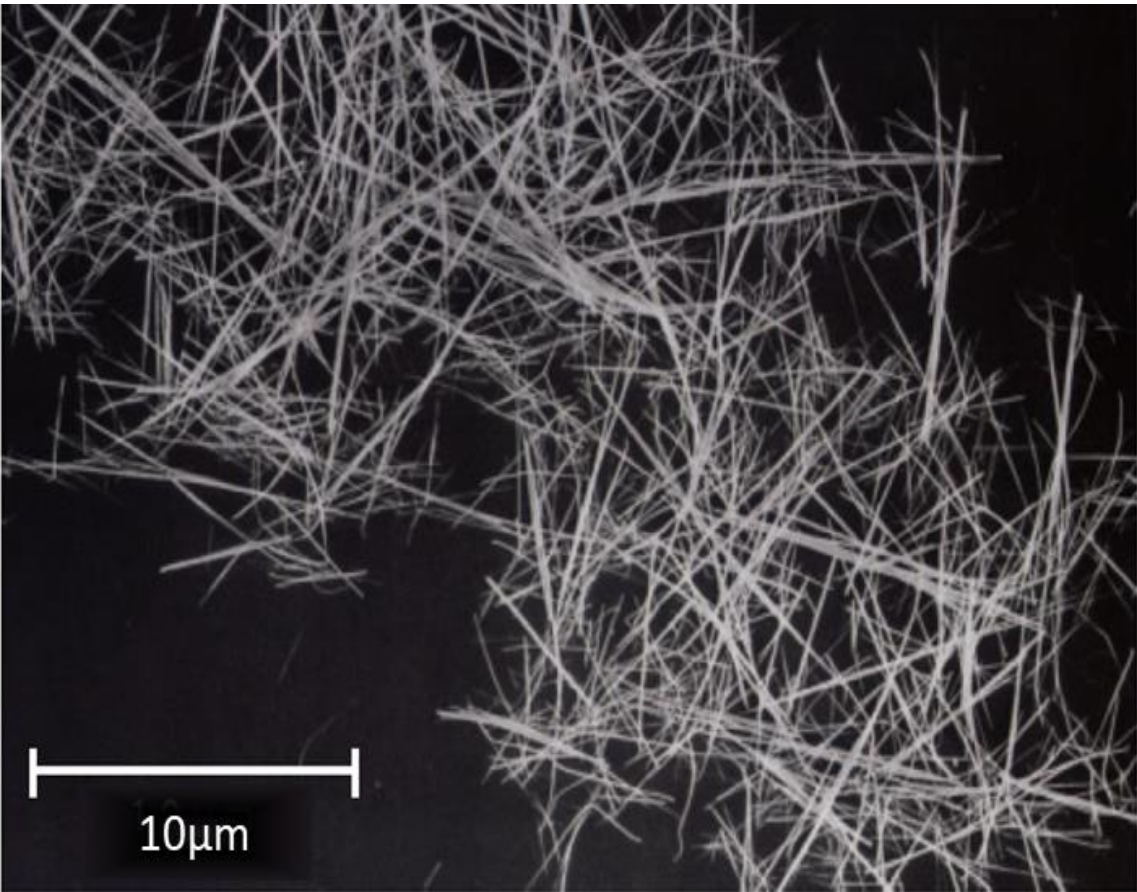
Features

MOS-HIGE® is a basic magnesium sulfate inorganic fiber obtained by hydrothermal synthesis. using magnesium hydroxide manufactured from sea water and sulfuric acid as raw materials, and the formula is $MgSO_4 \cdot 5Mg(OH)_2 \cdot 3H_2O$. Crystalline structure of MOS-HIGE® is whisker with a mean fiber length of $15\mu m$ and a mean fiber diameter of $0.5\mu m$. MOS-HIGE® is easily soluble in body fluid. Even in a case it enters the lung, it is also easily soluble and does not remain. Therefore, MOS-HIGE® is considered to be a very safe whisker (Registered by US TSCA and EU-REACH)

Applications and additional effects

Applications	Target	Effect
Filler for resin reinforcement	PP resin, thermoplastic resin, rubber	Lightweight by reduction in filler quantity, improvement of mechanical property (stiffness in particular) and better appearance of molded product, dimensional stability
Fibrous additives	Special paper, gasket, friction material	Higher safety in comparison with conventional fibrous filler
Thickener	Interior mortar material, paint adhesive, thermosetting resin	Control of flow property by giving thixotropy (pursuit of coasting easiness) , light weight, high strength, prevention of cracks

Particle shape



Physical properties table

Items	Physical property
Fiber length (µm)	8~30
Fiber diameter (µm)	0.5~1.0
Bulk specific gravity	Granule : 0.2~0.3
	Powder : 0.04~0.1
Thermal decomposition temperature (°C) inside of () represents decomposed matter	280~300 (3H ₂ O)
	380~400 (5H ₂ O)
	880~900 (SO ₃)
True specific gravity	2.3
Specific surface area (m ² /g)	7~15
Mohs hardness	2.5
Refractive index	1.53
Whiteness	> 93
pH	9.5
Solubility (g/L)	Water : 0.03
(g/L)	Gamble's solution : 0.46
(g/L)	Normal saline : 0.047

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