

Composite Magnesium Hydroxide

“Composite Magnesium Hydroxide,” which was developed through our composite technology, has functions superior to conventional products and can be used for a wide variety of uses.

■ Properties of Composite Magnesium Hydroxide

We have developed the product with two types of average particle size that enable appropriate application depending on the particular use.

Currently, we provide the following three grades of the product.

(1) General-purpose flame-retardant grade

Special surface treatment was adopted aiming at high dispersion on various polyolefin resins. Mechanical properties of the compound (tensile strength) were improved compared with conventional products (treated with higher fatty acid).

(2) Highly flame-retardant fine grade

Micronization of the primary particles provided higher efficiency of the endothermic reaction on particle surface leading to an improvement in the fire retardancy. In addition, compound-formation with multiple elements provided a high inhibitory effect against char production and oxygen during combustion.

(3) Special grade

Special surface treatment provides high acid resistance for molded resins.

■ Uses

○ PVC substitute for cable insulation

Industrial cables, automobile cables, electrical equipment cables (including those within equipment)

○ PVC substitute for fire retardant construction materials

This can be applied to flooring, wallpaper, and decorative laminates.

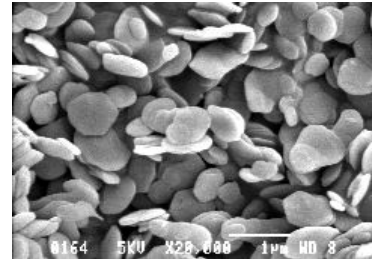
○ PVC substitute for various flame-retardant molded products

This can be applied to sheets and films.

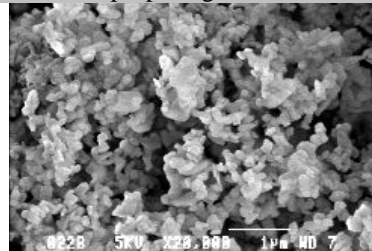
Powder properties (representative values)

Properties	Grade		
	General-purpose	High flame-retardant fine	Special
Mean particle size (μm)	0.8	0.1	0.8
specific surface area (m ² /g)	8	21	10
Oil absorption (ml/g)	35	40	37
Color	White	White	White
Refractive index	1.57	1.57	1.57

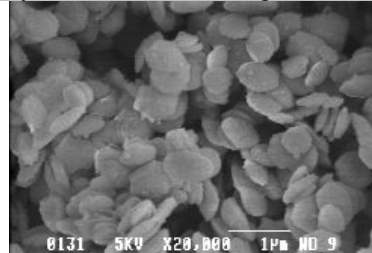
The above values were obtained through analysis and are not guaranteed figures.



General-purpose grade



Highly flame-retardant fine grade



Special grade

Scanning electron micrograph (x 20,000)

Composition achieving V-0 (1/16-inch thick)

Parameters	Grades	General-purpose	High flame-retardant fine	Special	Conventional	
		Proportion (phr)	Matrix resin ^(Note)	100	100	100
		Magnesium hydroxide	250	180	250	280
Mechanical properties	tensile strength (MPa)	6.2	7.8	7.6	3.8	

Note: Matrix resin was made of ethylene resin (EEA) as a representative covering material for cable.

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