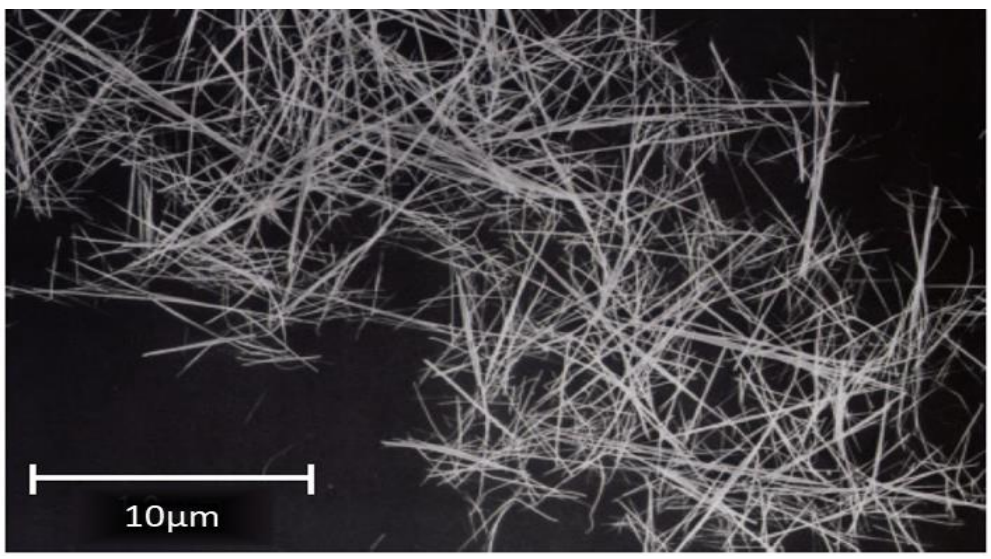
Fibrous Magnesium Oxysulfate

Features of MOS-HIGE® Part 1

MOS-HIGE® is Fibrous Magnesium Oxysulfate obtained by using magnesium hydroxide which is manufactured from sea water and sulfuric acid as raw materials. MOS-HIGE® is used to reinforce plastics. MOS-HIGE® achieves higher rigidity than other fillers. It helps reducing the weight of automobiles thanks to reducing amount of fillers and thickness of parts.

SEM Image



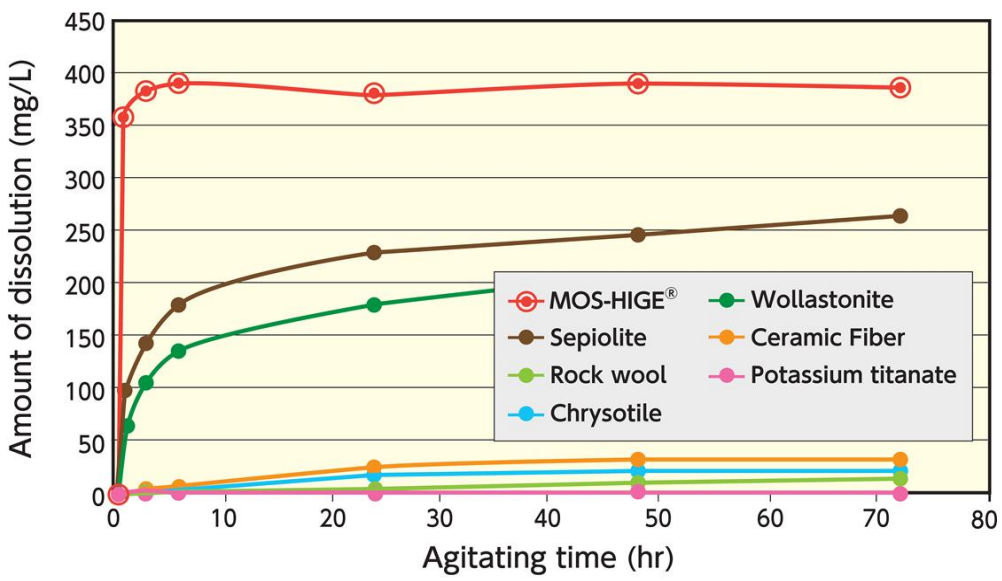
Average Fiber Length: 15 μm
Average Fiber Diameter: 0.5 μm

Properties

Chemical Formulation	$MgSO_4 \cdot 5Mg(OH)_2 \cdot 3H_2O$
True Specific Gravity	2.3
pH	9.5
Decomposition Temperature(℃) ( ) =Decomposition Component	280～300 ($3H_2O$)
	380～400 ($5H_2O$)
	880～900 (SO_3)

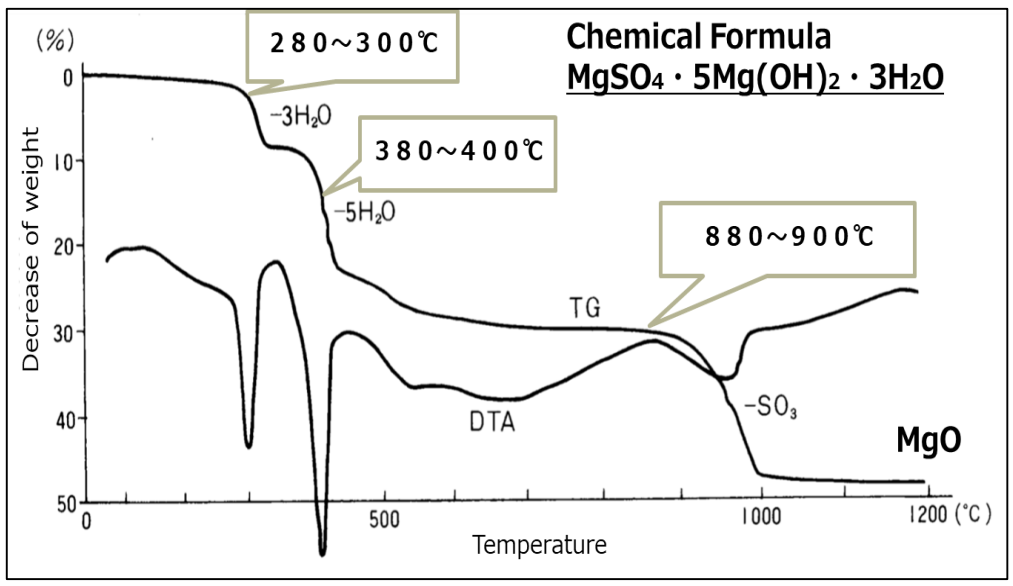
Registered REACH（EU）,TSCA（USA）

Safe Data



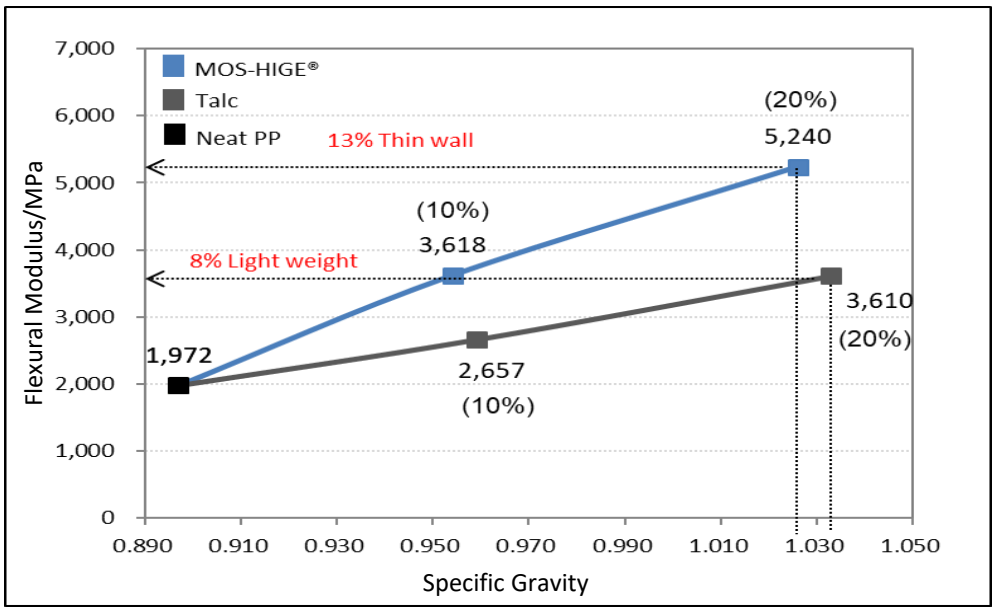
MOS-HIGE® is easily soluble in body fluid.
MOS-HIGE® is considered to be a very safe whisker.

Thermolysis Behavior（TG-DTA）



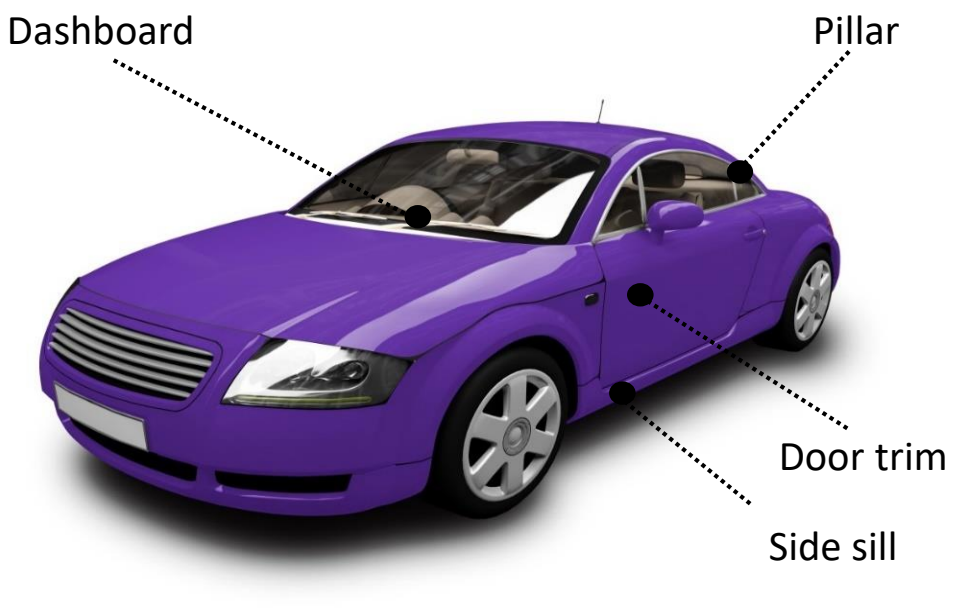
MOS-HIGE® is effective as flame retardant.
Compound material of MOS-HIGE® is easy of incineration treatment.

Performance to PP Compounds（Flexural Modulus）



MOS-HIGE®added PP has high rigidity and low specific gravity.

Application for Automotive Parts



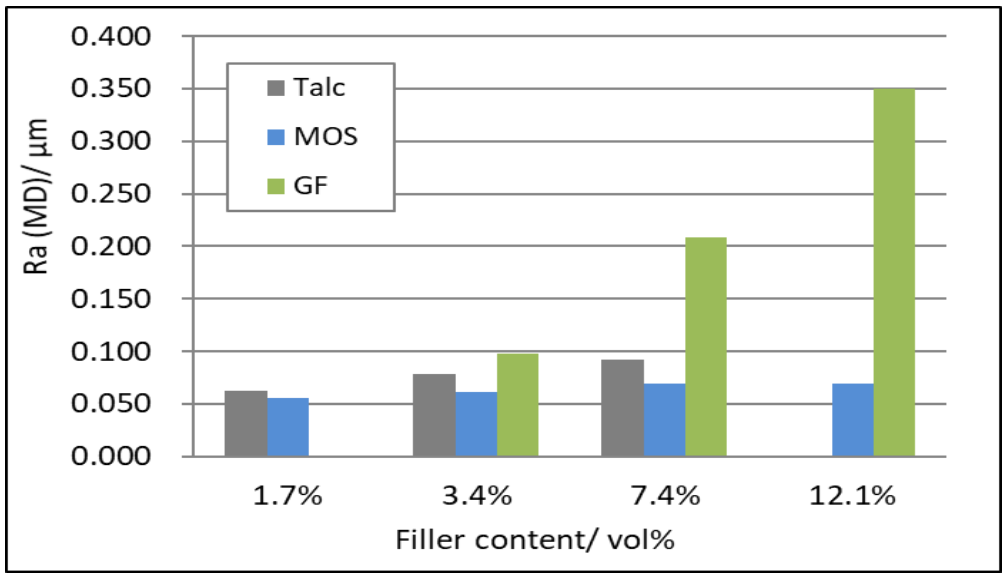
E.g. Use of MOS-HIGE® in automotive weight reduction

Ube Material Industries,Ltd.

Fibrous Magnesium Oxysulfate

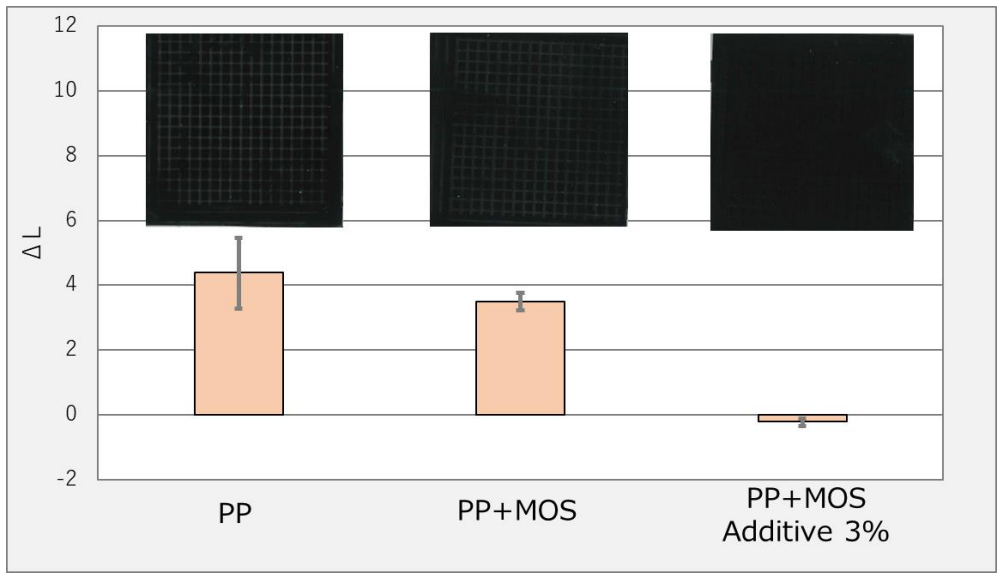
Features of MOS-HIGE® Part 2

Performance to PP （Surface Smoothness)



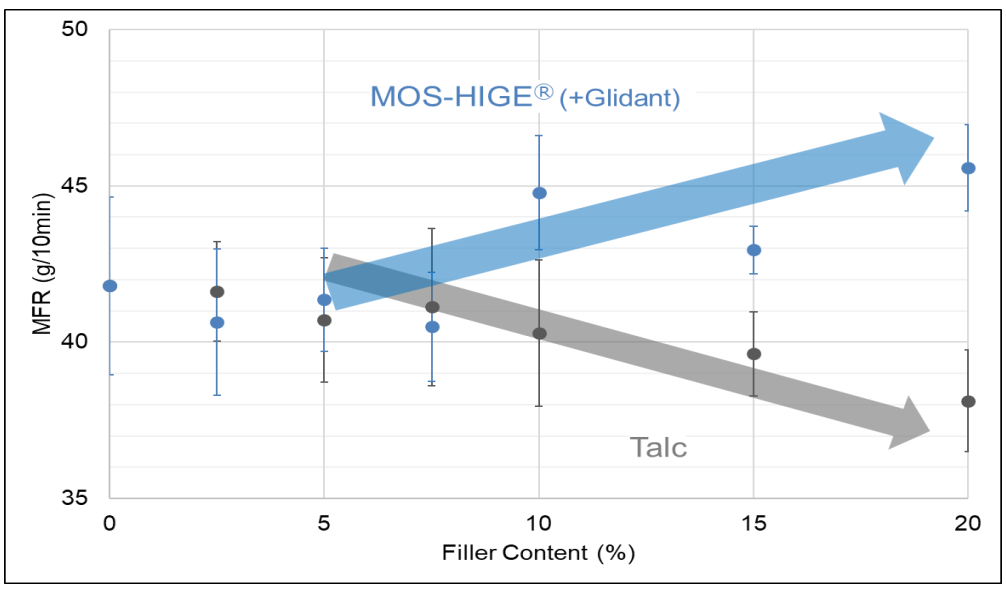
Surface smoothness : MOS-HIGE® ＜Talc＜GF

Performance for PP （Scratch Resistance）



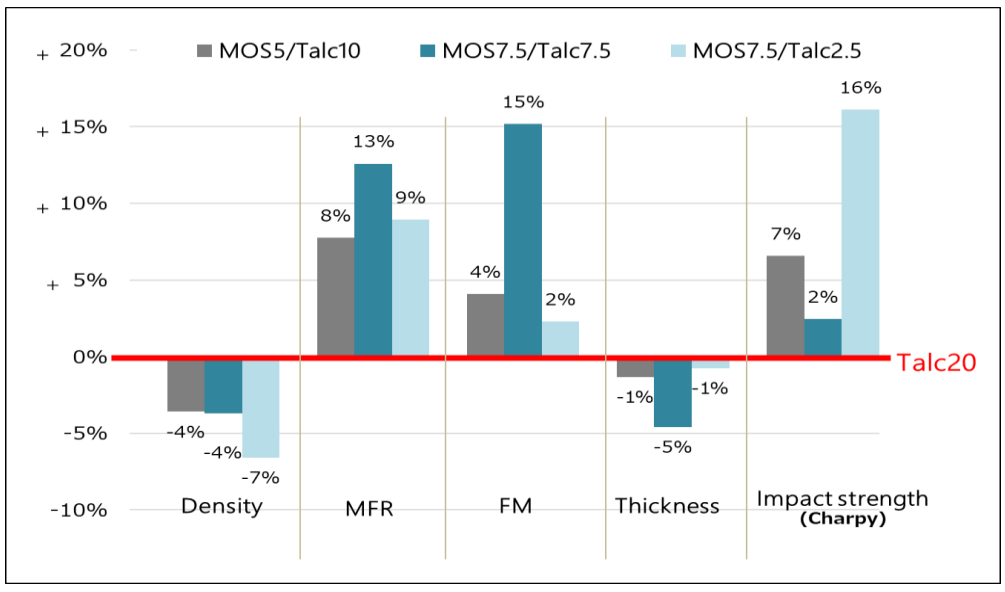
MOS contributed to improve the scratch resistance.

Performance to PP（MFR Improvement）



MOS-HIGE® helps MFR improvement

Performance for PP （Summary）



Replace a part of talc with MOS-HIGE®, it can improve physical properties of PP compounds.

Performance to PP （Foaming Molding）

Foaming Method	Blending Ratio		Specific Gravity	Flexural test (MPa)	
	PP	MOS		FS	FM
Chemical Foaming	100	-	0.718	26.9	1,100
	90	10	0.763	**29.0**	**2,230**
Physical Foaming (MuCell)	100	-	0.718	26.6	1,110
	90	10	0.763	**30.3**	**2,500**
None	90	10	0.954	41.2	2,800

There are improvements on both chemical and physical foaming molding.

Picture of MOS-HIGE®

MOS-HIGE® is granulated for good handling.

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