CLOISITE-SE 3000

Specially modified phyllosilicate for use as a flame retardant synergist for halogen-free flame retardant thermoplastics as well as to improve the physical and barrier properties in thermoplastic compounds.

Product Data

Composition
Organophilic micronized phyllosilicate

Typical Properties
The values indicated in this data sheet describe typical properties and do not constitute specification limits.

Loss on ignition:	approx. 56 %
Bulk density:	approx. 450 kg/m³
Particle size D50:	< 10 µm
Moisture content:	< 3 %
Supplied as:	creamy white powder

Storage and Transportation
To be stored and transported at a temperature below 50 °C. Store dry.

Applications

Thermoplastics

Special Features and Benefits
CLOISITE-SE 3000 is particularly suitable for halogen-free flame retardant thermoplastic compounds. Its addition improves the flame retardant properties as well as the dripping behavior and char formation. The addition of CLOISITE-SE 3000 enables a reduction in the required amounts of other flame retardant additives such as aluminum or magnesium hydroxide. This improves processing and physical properties and reduces density. Compared to standard phyllosilicates, use of CLOISITE-SE 3000 results in higher melt flow rate, elongation, and electrical properties, especially in HFFR-cable formulations. Oxygen, water vapor, and hydrocarbon barrier properties can also be increased by using CLOISITE-SE 3000.

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Recommended Use

Aluminum hydroxide-filled ethylene-vinyl acetate (EVA)	■
Low density polyethylene (LDPE/LLDPE)	■
Magnesium hydroxide-filled polypropylene (PP)	■
Polypropylene (PP) films	■

■ especially recommended □ recommended

Recommended Levels

3-5 % additive (as supplied) based on the total formulation.

The above recommended levels can be used for orientation. Optimal levels are determined through a series of laboratory tests.

Incorporation and Processing Instructions

For optimum dispersion and exfoliation of the additive, the use of co-rotating twin-screw extruders or a BUSS continuous kneader is recommended when compounding thermoplastics. When compounding, it is beneficial to select the longest possible processing unit (> 40 L/D) and a screw geometry with a high dispersion performance. To avoid compaction of the additive, it should be added via a side feed or an inlet screw to the already melted polymer, if possible.

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