CLOISITE-20 A

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

Product Data

Composition
Organophilic phyllosilicate

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

Bulk density:	350 kg/m³
Density (20 °C):	1.80 g/cm³
Particle Size, D_{50}:	< 10 µm
Moisture content:	< 2.5 %
Supplied as:	White powder
Lamellar spacing (XRD, d_{001}):	2.7 nm

Food Contact Legal Status
For the current food contact legal status, please contact our product safety department or visit www.byk.com for further information.

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

Applications

Thermoplastics

Special Features and Benefits
CLOISITE-20 A is particularly suitable for halogen-free flame retardant thermoplastic compounds, as its addition improves the flame retardant properties as well as the dripping behavior and char formation. By the use of CLOISITE-20 A the filler content of, for example, aluminum or magnesium hydroxide can be reduced. This improves process and physical properties, and reduces the overall weight. The barrier properties towards oxygen, water vapor and hydrocarbons can be increased by using CLOISITE-20 A. In thermoplastics such as polyamides (PA) and bioplastics such as polylactides (PLA), the melt viscosity is increased, enabling an improvement in the dimensional stability during profile extrusion.

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Data Sheet
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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	■
Polylactide (PLA) 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

To achieve an 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 materials. 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, if possible it should be added via a side feed or an inlet screw to the already melted polymer.

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