

CHARGUARD™ 1000

Fire Retardant Synergist

GENERAL INFORMATION

CHARGUARD™ 1000 is an off-white organically modified mineral thickener suitable for thermoplastic melt extrusion compounding applications in combination with non-halogenated fire retardants. Use **CHARGUARD™ 1000** as a synergist at total formulation weight rates of addition of from 3.5% to 5% for improvement in fire retardant performance properties while reducing environmental impact.

CHEMICAL & PHYSICAL PROPERTIES

Composition: Organically Modified Hectorite Clay

Appearance: Off-white finely divided powder

Moisture: 3.0 % max

Density: 1.7 g/cm³

Bulk Density: 0.35 - 0.43

LOI (Loss on Ignition): 38%

Particle Size Distribution: 200 Mesh >80%

Note: These are typical properties not to be used for specification purposes

APPLICATIONS

CHARGUARD™ 1000 is particularly suitable for halogen-free flame-retardant thermoplastic compounds processed at temperatures not to exceed 250C:

- Ethylene-Vinyl Acetate co-polymer (EVA)
- Low Density Polyethylene (LDPE)
- High Impact Styrene (HIPS)
- Polypropylene (PP)
- Polyamide (Nylon 6)
- Polylactic Acid (PLA)

KEY PROPERTIES

- Does not contain intentionally added Per- and polyfluoroalkyl substances (PFAS).
- Enhances the effectiveness of non-halogenated and halogenated fire retardants by delaying the combustion process and stopping the spread of molten flame drip.
- Creates char layer oxygen barrier which is non-flammable and reduces the availability of combustible gases generated during thermal decomposition.
- Reduces the amount of smoke produced in a fire, a significant factor in improving fire safety and survivability.

CHARGUARD™ 1000

INCORPORATION

To achieve an optimum dispersion and exfoliation of the additive, the use of a co-rotating twin screw extruder is required when compounding with thermoplastic resins.

CHARGUARD™ 1000 should be added at the throat or in the initial zones of the twin screw extruder to ensure optimal mixing with other performance additives. Improved mixing is achieved with longer unit (>40 L/D) lengths and a screw geometry that provide high dispersion performance.

Notes:

- No pre-activate required.
- Use with coupling agent recommended.
- Compounding at >250C will produce acrid smell and accelerated decomposition.

LEVELS OF USE

- 3.5% and 5% as supplied based on total formulation weight.
- Masterbatch levels may vary depending on desired performance attributes.

HEALTH & SAFETY

Before using this product, please consult our Safety Data Sheet (SDS) for information on safe handling and storage. The SDS can be found on the company website.

SHELF LIFE

4 (four) years from date of manufacture.

STORAGE RECOMMENDATIONS

To be sorted and transported at a temperature below 50 °C in a cool, dry location.

QUALITY ASSURANCE

Quality system at the site manufacturing this product complies with and is certified to ISO 9001 quality standards.

SUSTAINABILITY

Located in the heart of the California Mojave Desert, Elementis' hectorite clay mining operation is the largest and highest-quality single global source of sodium hectorite. Elementis' hectorite mining operation is managed insuring high human rights and bio-diversity standards throughout its life cycle.

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