

GRAPHISTRENGTH[®] C M12-30

CNT MASTERBATCH

TECHNICAL DATA SHEET

Description:

Graphistrength[®] C M12-30 is a multipurpose CNT masterbatch that contains perfectly dispersed MWNT at a concentration of 30% by weight.

Graphistrength[®] C M12-30 is suited for the production of high performance engineering plastics intended for use in electrostatic discharge (ESD) protection.

Key features:

Graphistrength[®] C M12-30 is provided in pellet form with the following key characteristics.

Property	Method	Unit	Typical value ⁽¹⁾
MWNT content		wt%	30 ⁽²⁾
Ash content	TGA	wt%	35
Moisture content	Karl-Fisher	wt%	0.05 -0.10

⁽¹⁾ Data not intended for specification purposes

⁽²⁾ Graphistrength[®] C M12-30 contains Graphistrength[®] MWNT with purity > 90 %

Benefits and applications:

Graphistrength[®] C M12-30 is generally diluted in various thermoplastics of the melting temperature >150°C. Typical final MWNT loadings in the final compounds are in the range 0,5 to 4 wt% depending on the host matrix characteristics, the targeted performances, processing methods and conditions.

The typical electrical resistivity that can be achieved is in the range 10 – 10⁸ ohm.cm. The ESD properties obtained with Graphistrength[®] C M12-30 are outstandingly consistent and uniform.

Thanks to their low loading, and very small size, Graphistrength[®] MWNT offer several additional advantages: smooth surface aspect, low increase in density and, high preservation of the neat matrix's ductility and mechanical properties. With low particulate generation, Graphistrength[®] MWNT are also ideal fillers for applications where cleanliness is key.

Graphistrength[®] C M12-30 is particularly suited to electronic applications (semi-conductors and ESD-sensitive components handling, housings of electronic devices).

Dilution and processing:

The dilution of Graphistrength® C M12-30 into high quality compounds can be achieved with standard equipments used in thermoplastics compounding such as twin-screw extruders. In some cases, optimizing process conditions may be necessary to get well-dispersed compounds. More information is provided in our *Dilution Guide of Graphistrength® Thermoplastic Masterbatches*.

It is recommended to process Graphistrength® C M12-30 within the temperature range **150-380 °C**.

The compounds can be processed on most equipments (extrusion, blow molding, injection molding, melt spinning)

Safety and Handling:

Graphistrength® C M12-30 is provided in pellet form where MWNT are strongly embedded.

Graphistrength® C M12-30 doesn't present any specific health risk when using in thermoplastic processing.

Graphistrength® C M12-30 is provided in lined bags of 5 kg or 25 kg net. The product is indefinitely stable in its unopened original packaging when stored at normal temperatures. No additional drying needed if the product was stored in original packaging

Consult the product MSDS for additional information on properties, hazards and handling.

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