

GRAPHISTRENGTH[®] C M5-20

PC MASTERBATCH

TECHNICAL DATA SHEET

Description:

Graphistrength[®] C M5-20 is a black PC masterbatch that contains perfectly dispersed MWNT at a concentration of 20% by weight.

Graphistrength[®] C M5-20 is suited to the production of high performance PC compounds intended for use in electrostatic discharge (ESD) protection.

Key features:

Graphistrength[®] C M5-20 is provided in pellet form with the following key characteristics.

Property	Unit	Typical value ⁽¹⁾
MWNT content	wt%	20.0 ⁽²⁾
Moisture content	wt%	300-1000 ppm

⁽¹⁾ Data not intended for specification purposes

⁽²⁾ Graphistrength[®] C M1-20 contains Graphistrength[®] C100 MWNT with purity > 90 %

Benefits and applications:

Graphistrength[®] C M5-20 is generally diluted in PC. Typical final MWNT loadings in the final compounds are in the range 1 to 5 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 $10^1 - 10^8$ ohm.cm. The ESD properties obtained with Graphistrength[®] C M5-20 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 M5-20 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 M5-20 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 M5-20 within the temperature range 270 to 300 °C. A melt temperature increase above 310°C must be avoided.

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

Packaging and Storage:

Graphistrength® C M5-20 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.

Graphistrength® C M5-20 may absorb water if exposed for long periods of time to the atmosphere. In this case, the pellets must be dried at 80 °C preferably under vacuum for 12 to 24 hours before using.

Safety and Handling:

Graphistrength® C M5-20 is provided in pellet form where MWNT are strongly embedded.

Graphistrength® C M5-20 doesn't present any specific health risk when using in thermoplastic processing.

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

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