

# GRAPHISTRENGTH® C M1-20

## PA 12 MASTERBATCH

### TECHNICAL DATA SHEET

#### Description:

Graphistrength® C M1-20 is a black PA12 master-batch that contains perfectly dispersed MWNT at a concentration of 20% by weight.

Graphistrength® C M1-20 is suited to the production of high performance PA12 compounds intended for use in electrostatic discharge (ESD) protection.

#### Key features:

Graphistrength® C M1-20 is provided in pellet form with the following key characteristics.

Property	Method	Unit	Typical value <sup>(1)</sup>
MWNT content	TGA	wt%	20.0 <sup>(2)</sup>
Moisture content	Karl-Fisher	wt%	0.10-0.15

<sup>(1)</sup> Data not intended for specification purposes %

<sup>(2)</sup> Graphistrength® C M1-20 contains Graphistrength® C100 MWNT with purity > 90 %

#### Benefits and applications:

Graphistrength® C M1-20 is generally diluted in PA12. 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 M1-20 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 M1-20 is particularly suited to industrial and automotive applications.

#### Dilution and processing:

The dilution of Graphistrength® C M1-20 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 M1-20 and compounds based on Graphistrength® C M1-20 within the temperature range 260 to 290 °C.

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

## Packaging and Storage:

Graphistrength® C M1-20 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 M1-20 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 M1-20 is provided in pellet form where MWNT are strongly embedded.

Graphistrength® C M1-20 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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