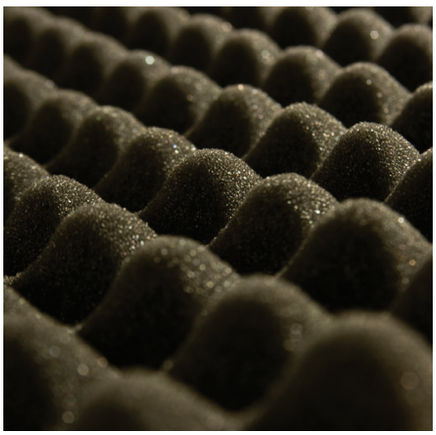
CABELEC® CA4676 Conductive Compound



Conductive Polyethylene Compound for Extrusion

CABELEC CA4676 electrically conductive compound is based on conductive carbon black dispersed in a modified low density polyethylene resin. Its electrical and mechanical properties are permanent and are not dependent on atmospheric conditions.

Applications

CABELEC CA4676 conductive compound has been specially designed for packaging and product handling applications where freedom from the hazard of electrostatic discharge is necessary. Examples of use are in handling of explosive powders, pigments and electronic components and it is particularly suitable for foam applications.

Processing

Pre-drying (Moisture)

CABELEC CA4676 conductive compound absorbs moisture under normal storage conditions and this can result in surface blemishes. It is therefore advisable to dry the compound prior to use. Usually 2 - 4 hours in a drier at 75°C is sufficient time to reduce the moisture content to an acceptable level.

Extrusion

CABELEC CA4676 conductive compound can be processed on conventional extrusion equipment. It should be processed under low shear conditions. Actual extrusion temperatures should be adapted according to the nature of the equipment and the manufactured article to give optimum extrusion quality.

As a general guide, extrusion temperatures of 120-160°C have been used successfully on extrusion lines. Temperatures in excess of 230°C should be avoided. To ensure good electrical and mechanical properties of the material it is nevertheless strongly recommended that high shear mixing elements be avoided.

This information should be used as a guide only as different equipment could need different conditions.

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Physical Properties

Typical values for CABELEC CA4676 conductive compound are as follows:

PROPERTY	TEST METHOD*	UNIT	VALUE
Density @ 23°C	CTM E023	kg/m^3	990
Hardness Shore D	CTM E030 (ASTM D2240)	Shore D	50
Melt Flow Index (190°C/5 kg)	CTM E005 (ISO 1133)	g/10 min	0.9
Melt Flow Index (190°C/10 kg)	CTM E005 (ISO 1133)	g/10 min	4.8
Melt Flow Index (190°C/21.6 kg)	CTM E005 (ISO 1133)	g/10 min	28.9
Surface resistivity on 100 µm film	CTM E042B	Ohm/sq	2.5 x 10^4
Volume Resistivity on 4 mm compressed plaque	CTM E043A	Ohm.cm	10
Tensile Strength at Break on 3 mm compressed plaque	CTM E041 (ISO 527)	MPa	13
Tensile Strength at Yield on 3 mm compressed plaque	CTM E041 (ISO 527)	MPa	11
Elongation at Break on 3 mm compressed plaque	CTM E041 (ISO 527)	%	385

*Tests are performed according to Cabot Test Methods (CTM) based on international standards.

Quoted test results should not be used for specification purposes but are typical test values intended for guidance only.

Packaging

CABELEC compounds are supplied in regular pellet form packed in 25 kg bags and should be stored in a dry place. Larger quantities can be packaged to suit customer's specific requirements.

Recommended storage life: up to 6 months provided it is stored as directed.

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