

CABELEC[®] CA6132 Conductive Compound



Conductive HDPE Compound for Blow Molding

CABELEC CA6132 electrically conductive compound is made from conductive carbon black dispersed in a modified HDPE resin. Its electrical and mechanical properties are not impacted by normal atmospheric conditions.

Applications

CABELEC CA6132 conductive compound is used in transport, packaging and product handling applications such as the handling and packaging of explosive powders, pigments and dangerous liquids, where it is desirable to mitigate the hazard of electrostatic discharge. Typical applications are jerricans, drums and other containers used in transportation of hazardous materials. CABELEC CA6132 conductive compound is also used in automotive applications, like conductive blow moulded fuel inlets.

Processing

Special Features

CABELEC CA6132 conductive compound absorbs very little moisture from the atmosphere during normal storage and usage conditions. Therefore, pre-drying of the compound before processing can usually be avoided. Nevertheless, for critical applications, if the compound is stored outside and/or used in climates with high relative humidity, it is advisable to pre-dry the material to reduce the moisture content to an acceptable level. Typically 2 - 4 hours in a dryer at 80°C is sufficient time to reduce the moisture content to an acceptable level.

Blow Moulding

CABELEC CA6132 conductive compound can be processed on conventional extrusion blow moulding equipment. It should be processed under low shear conditions to promote good electrical and mechanical properties. Extrusion temperatures should be adapted to the nature of the equipment and the manufactured article to give optimum extrusion quality. As general guidance, temperatures of 190-230°C have been used successfully on extrusion lines. Temperatures in excess of 250°C should be avoided.

To promote good electrical and mechanical properties of the material it is nevertheless strongly advised to avoid high shear mixing.

The information given in this section should be used for guidance only as different equipment could require different processing parameters.

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Physical Properties

Typical values for CABELEC CA6132 conductive compound are presented in the following table.

PROPERTY	TEST METHOD	UNIT	VALUE
Density @ 23°C	CTM E023*	kg/m ³	1048
Hardness (15 second value)	ASTM D2240	Shore D	64
Heat Distortion Temperature @ 1.80 MPa	ISO 75	°C	41
Vicat Softening Point @ 10 N	ISO 306	°C	126
Mould Shrinkage	ASTM D955	%	2.5 - 3.5
Melt Flow Index 190°C/21.6 kg	ISO 1133	g/10 min	3.6
Melt Flow Index 190°C/10kg	ISO 1133	g/10 min	0.6
Volume Resistivity	CTM E043B*	Ohm.cm	63
Surface Resistivity	CTM E042E*	Ohm/sq	208
Flexural Modulus	ISO 178	MPa	838
Tensile Strength at Break on compression moulded sample	ISO 527	MPa	27.4
Tensile Strength at Yield on compression moulded sample	ISO 527	MPa	20.6
Elongation at Break on compression moulded sample	ISO 527	%	918
Notched Izod Impact @ 23°C	ISO 180	kJ/m ²	65

*Tests are performed according to Cabot Test Methods (CTM).

The data in the table above are typical test values intended as guidance only, and are not product specifications. Product specifications are available from your Cabot representative.

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.

Storage life: up to 1 year provided it is stored as directed.



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