

CABELEC® CA4857 CONDUCTIVE COMPOUND

Product highlights

CABELEC CA4857 is an electrically conductive compound based on conductive carbon black dispersed in a modified styrenic resin. The electrical properties are permanent and are not dependent on atmospheric conditions.

Key applications

CABELEC CA4857 conductive compound has been specially designed for packaging and electronic product handling where freedom from the hazard of electrostatic discharge is necessary. Examples of use are in handling of explosives, electronic components and pigments.

Processing

Pre-drying

CABELEC CA4857 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, 2-3 hours in a drier at 80°C is sufficient time to reduce the moisture content to an acceptable level.

Extrusion

CABELEC CA4857 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 an optimum extrusion quality.

As a general guide, extrusion temperatures of 170-200°C have been used successfully on extrusion lines. Temperatures above 230°C should be avoided. To ensure good electrical and mechanical properties of the material it is nevertheless strongly recommended avoiding high shear mixing elements.

The information given in this section should be used as a guide only as different equipment could need different conditions.

Physical properties

Typical values for CABELEC CA4857 conductive compound are presented in the following table. Some of them are characteristic of injection molded pieces:

TYPICAL PROPERTIES			
PROPERTY	TYPICAL VALUE	UNITS	TEST METHOD
Density @23°C	1090	kg/m ³	ISO 1183



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Hardness (15 second value)	73	Shore D	ISO 868
Heat distortion temperature @ 1.80 MPa	67	°C	ISO 75
Vicat softening point @ 10N	100	°C	ISO 306
MFI (200°C/5 kg)	1	g/10 min	ISO 1133
MFI (200°C/10 kg)	6	g/10 min	ISO 1133
MFI (200°C/21.6 kg)	67	g/10 min	ISO 1133
Volume resistivity on injection molded parts	< 10 ²	Ohm.cm	IEC 61340-2-3
Surface resistivity on injection molded parts	< 10 ³	Ohm/sq	IEC 61340-2-3
Surface resistivity on 400 µm extruded tape	< 10 ³	Ohm/sq	IEC 61340-2-3
Flexural modulus	2015	MPa	ISO 178
Tensile strength at break	20	MPa	ISO 527
Tensile strength at yield	26	MPa	ISO 527
Elongation at break	25	%	ISO 527
Notched Izod Impact @ 23°C	9	kJ/m ²	ISO 180A

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

Product form and logistics

- ◆ Product form: pellets
- ◆ Regional availability: global
- ◆ Packaging options: 25 kg bags

For information on product-specific storage conditions, please refer to the applicable Safety Data Sheet (SDS) available from your Cabot representative or at cabotcorp.com.

The CABELEC name is a registered trademark of Cabot Corporation.

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