

CABELEC® CA3842 CONDUCTIVE COMPOUND

Product highlights

CABELEC CA3842 is an electrically conductive compound based on carbon black and a polypropylene copolymer. It has very good mechanical properties and can be easily processed on conventional molding equipment.

Key applications

CABELEC CA3842 conductive compound is recommended for the manufacture of containers and specialized moldings. Typical areas of applications are electronics packaging, ammunition works, mines, petroleum plants, and other environments where it is important to mitigate the hazard of electrostatic discharge.



Processing

Pre-drying

CABELEC CA3842 conductive compound absorbs moisture under normal storage conditions, and this can result in surface blemishes on moldings. It is therefore advisable to dry the compound prior to use. Usually, 2-3 hours in a drier at 90°C is sufficient time to reduce the moisture content to an acceptable level.

Injection molding

CABELEC CA3842 conductive compound can be processed on most types of injection molding machine. Low shear conditions are nevertheless strongly recommended in order to achieve good electrical conductivity. The precise processing conditions depend on the machinery, output rate and complexity of the injected part under consideration. As a general guide, the following injection molding temperatures have been used successfully:

- ◆ Barrel/nozzle: 200°C/220°C
- ◆ Mold: 30°C

Mold design

Generous gates are helpful for the molding of filled CABELEC as for other highly filled thermoplastics.

The information given in this section is provided as guidance only as different equipment could require different processing conditions to achieve the desired results.

TYPICAL PROPERTIES

PROPERTY	TYPICAL VALUE	UNITS	TEST METHOD
Density @23°C	1090	kg/m ³	ISO 1183
Hardness (15 second value)	66	Shore D	ISO 868

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Heat distortion temperature @ 1.80 MPa	46	°C	ISO 75
Vicat softening point @ 10 N	148	°C	ISO 306
Mold shrinkage	0.8-1.0	%	ASTM D955
MFI (230°C/2.16 kg)	0.4	g/10 min	ISO 1133
MFI (230°C/5.0 kg)	5	g/10 min	ISO 1133
MFI (230°C/10.0 kg)	22	g/10 min	ISO 1133
Volume resistivity	< 10 ²	Ohm.cm	IEC 61340-2-3
Surface resistivity	< 10 ⁴	Ohm/sq	IEC 61340-2-3
Flexural modulus	1500	MPa	ISO 178
Tensile strength at break	16	MPa	ISO 527
Tensile strength at yield	21	MPa	ISO 527
Elongation at break	20	%	ISO 527
Notched izod impact @ 23°C	31	kJ/m ²	ISO 180A
Flammability class (3mm)	HB 40	rating	UL94

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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