

CABELEC® CA6141 CONDUCTIVE COMPOUND

Product highlights

CABELEC CA6141 electrically conductive compound is made from conductive carbon black dispersed in a modified polycarbonate and suitable for injection moulding applications. It provides a good balance of electrical and mechanical properties that are not impacted by normal atmospheric conditions.

Key applications

CABELEC CA6141 conductive compound is used for packaging and electronic product handling applications where it is desirable to mitigate the hazard of electrostatic discharge. Examples of use are the handling and packaging of explosive powders, pigments and electronic components.



Processing

Pre-drying

CABELEC CA6141 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. Typically, 4 hours in a dryer at 120°C is sufficient time to reduce the moisture content to an acceptable level.

Injection molding

CABELEC CA6141 conductive compound can be processed on most types of injection molding machinery. Low shear conditions are nevertheless required to achieve good electrical conductivity. The precise processing conditions depend on the machinery, output rate and complexity of the injected part being manufactured. As general guidance, the following injection molding temperatures have been used successfully:

- ♦ barrel/nozzle: 270°C/290°C
- ♦ mold: 80°C

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

Mold design

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

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

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TYPICAL PROPERTIES			
PROPERTY	TYPICAL VALUE	UNITS	TEST METHOD
Density @ 23°C	1200	kg/m ³	ISO 1183
Hardness (15 second value)	80	Shore D	ISO 868
Heat distortion temperature at 1.80 MPa	121	°C	ISO 75/2
Vicat Softening Point at 10 N	149	°C	ISO 306
Mold Shrinkage	0.7 – 0.9	%	ASTM D955
Melt Flow Index (260°C/2.16 kg)	0.6	g/10 min	ISO 1133
Melt Flow Index (260°C/5 kg)	4	g/10 min	ISO 1133
Melt Flow Index (260°C/10 kg)	12	g/10 min	ISO 1133
Volume Resistivity	< 10 ⁴	Ohm.cm	IEC 61340-2-3
Surface Resistivity	< 10 ⁶	Ohm/sq	IEC 61340-2-3
Flexural Modulus	2168	MPa	ISO 178
Tensile Strength at Break	47	MPa	ISO 527
Tensile Strength at Yield	54	MPa	ISO 527
Elongation at Break	24	%	ISO 527
Notched Izod Impact @ 23°C	22	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.

NORTH AMERICA

Cabot Plastics Canada
707 Pierre Tremblay Boulevard
Saint-Jean-sur-Richelieu
QC, J2X 5G5
Canada
T +1 450 347 4371
F +1 450 347 9936

SOUTH AMERICA

Cabot Brasil Industria e
Comercio Ltda.
Rua do Paraíso 148 - 5º andar
LV-1004 Riga
04103-000 São Paulo
Brazil
T +55 11 2144 6400
F +55 11 3253 0051

EUROPE

SIA Cabot Latvia
101 Mukusalas Street
LV-1004 Riga
Latvia
T +371 670 50 900
F +371 670 50 985

MIDDLE EAST/AFRICA

Cabot Specialty Chemicals
Jebel Ali Free Zone
LOB 15, Office 424, Dubai
United Arab Emirates
T +971 4 8871 800
F +971 4 8871 801

ASIA PACIFIC

Cabot China Ltd.
558 Shuangbai Road
Minghang District
Shanghai 201108
China
T +86 21 5175 8800
F +86 21 6434 5532

JAPAN

Cabot Specialty Chemicals, Inc.
Sumitomo Chiba-Daimon Bldg, 3F
2-5-5 Shiba Daimon,
Minato-ku, Tokyo 105-0012
Japan
T +81 6820 0255
F +81 3 5425 4500

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