

# CABELEC<sup>®</sup> CA6115 Conductive Compound



### **Conductive Glass-Fibre Filled Polyethylene Compound**

CABELEC CA6115 conductive compound is made from conductive carbon black and glass fibre dispersed in a modified high density polyethylene resin. Its electrical and mechanical properties are not impacted by normal atmospheric conditions.

### **Applications**

CABELEC CA6115 conductive compound is used for injection moulding applications. It is suitable for product handling applications where it is desirable to mitigate the hazard of electrostatic discharge, such as the handling and packaging of explosive powders and liquids, pigments or electronic components.

### **Processing**

#### **Pre-drying**

CABELEC CA6115 conductive compound absorbs moisture under normal storage conditions and this can result in surface blemishes in the final product. It is therefore advisable to dry the compound prior to use. Typically 2-4 hours in a dryer at 80°C is sufficient time to reduce the moisture content to an acceptable level.

#### **Injection Moulding**

CABELEC CA6115 conductive compound can be processed on most types of injection moulding machinery. Low shear conditions are nevertheless required in order to achieve good electrical conductivity. The precise processing conditions depend on the machinery and output rate and complexity of the injected part under consideration. As a general guidance, the following injection moulding conditions have been used successfully: barrel to nozzle: 220°C / 260°C, mould: 35-45°C, screw speed: 50-60 rpm, injection speed: low, and injection pressure: moderate.

#### **Mould Design**

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

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

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## Physical Properties

Typical values for CABELEC CA6115 conductive compound are presented in the following table. Some of them are characteristic of injection moulded pieces.

PROPERTY	TEST METHOD	UNIT	VALUE
Density @ 23°C	CTM E023*	kg/m <sup>3</sup>	1217
Hardness (15 second value)	ASTM D2240	Shore D	66
Heat Distortion Temperature @ 1.80 MPa	ISO 75	°C	92
Vicat Softening Point @ 10 N	ISO 306	°C	120
Mould Shrinkage	ASTM D955	%	0.2 - 0.3
Melt Flow Index (190°C/10 kg)	ISO 1133	g/10 min	2
Melt Flow Index (190°C/21.6 kg)	ISO 1133	g/10 min	11
Volume Resistivity	CTM E043B*	Ohm.cm	28
Surface Resistivity	CTM E042E*	Ohm/sq	159
Flexural Modulus	ISO 178	MPa	2958
Tensile Strength at Break	ISO 527	MPa	36
Elongation at Break	ISO 527	%	5
Notched Izod Impact @ 23°C	ISO 180	kJ/m <sup>2</sup>	15

\*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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