

CONDUCTIVE GLASS-FIBRE FILLED
POLYETHYLENE COMPOUND



CABELEC® XS6115



CABELEC® XS6115 is a conductive compound based on conductive carbon black and glass fibre dispersed in a modified high density polyethylene resin. Its electrical and mechanical properties are permanent and are not dependent on atmospheric conditions

APPLICATIONS

It is designed for injection moulding applications. It is recommended for product handling applications where freedom from the hazard of electrostatic discharge is necessary, such as handling of explosive powders and liquids, pigments or electronic components.

PROCESSING

Pre-drying (moisture)

CABELEC® XS6115 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 2-4 hrs in a hopper drier at 80°C is sufficient time to reduce the moisture content to an acceptable level.

Injection Moulding

CABELEC® XS6115 can be processed on most types of injection moulding 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 & complexity of the injected part under consideration. As a general guide, the following temperatures have been used successfully:

Barrel/nozzle: 225°C /
255°C - Mould: 45°C

Mould design:

Generous gates are helpful for the moulding of filled CABELEC 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.



Cabot Corporation

www.cabot-corp.com/plastics

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PHYSICAL PROPERTIES

Typical values for CABELEC® XS6115 are presented in the following table. Some of them are characteristic of injection moulded pieces.

| PROPERTY | CABOT TEST METHOD | UNIT | VALUE |
|--|-----------------------|-------------------|-----------|
| Density @ 23°C | CTM E023 | kg/m ³ | 1218 |
| Hardness (15 second value) | CTM E030 (ASTM D2240) | Shore D | 66 |
| Heat Distortion Temperature @ 1.80 MPa | CTM E038 (ISO 75) | °C | 92 |
| Vicat Softening Point @ 10 N | CTM E039 (ISO 306) | °C | 120 |
| Mould Shrinkage | CTM E047 (ASTM D955) | % | 0.2 - 0.3 |
| Melt Flow Index (190°C/10 kg) | CTM E005 (ISO 1133) | g/10 min | 2.0 |
| Melt Flow Index (190°C/21.6 kg) | CTM E005 (ISO 1133) | g/10 min | 11 |
| Volume Resistivity | CTM E043B | Ohm.cm | 24 |
| Surface Resistivity | CTM E042E | Ohm/sq | 149 |
| Flexural Modulus | CTM E040A (ISO 178) | MPa | 2793 |
| Tensile Strength at Break | CTM E041 (ISO 527) | MPa | 36 |
| Tensile Strength at Yield | CTM E041 (ISO 527) | MPa | 39 |
| Elongation at Break | CTM E041 (ISO 527) | % | 4 |
| Notched Izod Impact @ 23°C | CTM E044A (ISO 180) | kJ/m ² | 13 |

Tests are performed according to Cabot Test Methods (CTM) based on international Standards.

Quoted test results should not be used for specification purposes but are typical test values intended for guidance only.

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

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