CONDUCTIVE COMPOUNDS AND CONCENTRATES

# CABELEC® CA6744 CONDUCTIVE COMPOUND

**Product highlights**

CABELEC CA6744 conductive compound is based on carbon black and a polypropylene copolymer. Its electrical and mechanical properties are permanent and are not dependent on atmospheric conditions.

**Key applications**

CABELEC CA6744 conductive compound is suitable for use in sensitive extrusion applications such as sheets and corrugated sheets for packaging electronics, where freedom from the hazard of electrostatic discharge is required.

**Processing**

## Pre-drying

CABELEC CA6744 conductive compound absorbs very little water from the atmosphere during normal storage and usage conditions. Pre-drying of the compound before processing can thus usually be avoided. Nevertheless, for critical applications, in case of external storage and when the compound is used in climates with high relative humidity it is still recommended to pre-dry the material to achieve a good product quality. Usually, 2-3 hours in a drier at 90°C is sufficient time to reduce the moisture content to an acceptable level.

## Extrusion

CABELEC CA6744 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 optimum extrusion quality. As a general guide, extrusion temperatures of 190-220°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 that high shear mixing elements be avoided.

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

| TYPICAL PROPERTIES | | | |
|---|---|---|---|
| **PROPERTY** | **TYPICAL VALUE** | **UNITS** | **TEST METHOD** |
| **Density @23°C** | 1060 | $kg/m^3$ | ISO 1183 |
| **Hardness (15 second value)** | 65 | Shore D | ISO 868 |
| **Heat distortion temperature @1.80 MPa** | 50 | °C | ISO 75 |

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|---|---|---|---|
| **Vicat softening point @ 10 N** | 155 | °C | ISO 306 |
| **MFI (230°C/5.0 kg)** | 2.0 | g/10 min | ISO 1133 |
| **MFI (230°C/10.0 kg)** | 10 | g/10 min | ISO 1133 |
| **Volume resistivity on injection molded plaque** | $< 10^2$ | Ohm.cm | IEC 61340-2-3 |
| **Surface resistivity on injection molded plaque** | $< 10^4$ | Ohm/sq | IEC 61340-2-3 |
| **Surface resistivity on 400µm extruded tape** | $< 10^3$ | Ohm/sq | IEC 61340-2-3 |
| **Flexural modulus** | 1200 | MPa | ISO 178 |
| **Tensile strength at yield** | 27 | MPa | ISO 527 |
| **Tensile strength at break** | 18 | MPa | ISO 527 |
| **Elongation at break** | 58 | % | ISO 527 |
| **Notched izod impact @23°C** | 70 | $kJ/m^2$ | 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 option: 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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