

Technical data

KEBALLOY ECO FE 191103 R-PET (Development product*)

KEBALLOY ECO FE 191103 PET is an electrically conductive PET compound with glass and carbon fiber reinforcement. The PET base polymer is made from 100% post-consumer recycled PET bottles and the carbon fibers are 100% post-industrial recycled. KEBALLOY ECO FE 191103 PET is thus a sustainable alternative to other electrically conductive structural materials.

Polymer: PET

ISO designation: PET-GF-CF(REC)

Productgroup: Electrically conductive compounds, Functionalized compounds

Brief description of the product family:

Properties:

dimensionally stable, electrically conductive, good chemical resistance, good aging behavior, high continuous used temperature, High strength, High stiffness, semi-crystalline

Typical areas of application:

Fasteners, Hardware, Housing, Sliding elements, Bearing bushes, Structural components

Industries:

Automotive, Railroad industry, Electrical and electronics industry, Industry, Agriculture, Mechanical Engineering, Furniture industry, Sports & Recreation

Physical properties

Density in kg/m ³ ISO 1183-1	1520
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Mechanical properties

E-modulus in MPa ISO 527-1	20000
Breaking stress in MPa ISO 527-1	160.0
Elongation at break in % ISO 527-1	1.0
Impact strength (Charpy) at 23°C in kJ/m ² ISO 179-1eU	26.0
Notched impact strength (Charpy) at 23°C in kJ/m ² ISO 179-1eA	9.0

Thermal properties

Melting temperature (DSC, 10°C/min) in °C ISO 11357-1/-3	249.0
Fire behavior (0.8 mm wall thickness) IEC 60695-11-10	HB

Processing instructions:**Pre-drying:**

Dryer type: dry air dryer

Temperature: 80°C

Drying time: 4-8 h

Moisture content during processing: < 0.02%.

Recommended basic settings:

Melt temperature: 260 – 290°C

Mold temperature: 140 – 160 °C

Injection speed: high

Back pressure: 40 – 80bar (spec.)

Machine selection:

Screw: 3-zone screw with non-return valve

Nozzle: Open nozzle or shut-off nozzle

Wear protection: Wear protected according to machine manufacturer's recommendation, suitable for processing fiber reinforced plastics

Injection unit: Shot volume = 50-80% of the maximum metering volume

Legal notices:

The information in this data sheet is based on our current knowledge and experience. Due to the wide range of possible influences during processing and application of our products, they do not exempt the processor from carrying out his own tests and trials. A legally binding assurance of certain properties or suitability for a specific application cannot be derived from our information.

* FE products are development products which are still in the trial phase. Technical data may still change in the course of product and process development. No final decision has yet been made on the commercialization of FE products. We reserve the right to discontinue the manufacture of FE products without giving further reasons.

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