Technical data
KEBALLOY ECO FE 221101 black (development product*)

KEBALLOY ECO FE 221101 black is a 30% glass fiber reinforced, flame retardant PBT/PET blend with 25% post-consumer recycled content (R-PET).

Polymer: PBT/PET

ISO designation: PBT/PET-GF30 FR

Productgroup:

Brief description of the product family:

The name KEBALLOY ECO stands for a product range of engineering plastics and high-performance compounds based on post-consumer or post-industrial recyclate. KEBALLOY ECO compounds enable significant CO2 savings compared to virgin materials and meet the highest requirements in terms of product properties and their uniformity from batch to batch. KEBALLOY ECO compounds also enable customer- or application-specific microcycles of engineering plastic parts and are thus a valuable contribution on the way to a circular plastics economy.

Properties:

dimensionally stable, good chemical resistance, good fire behavior, High strength, High stiffness, semi-crystalline

Typical areas of application:

Covers, Electronic components, Connecting elements, Housings

Industries:

Automotive, Electrical and electronics industry, Household appliances, Mechanical Engineering, Sanitary industry

Physical properties

Density in kg/m³ | ISO 1183-1	1640

Mechanical properties

E-modulus in MPa | ISO 527-1	9000
Breaking stress in MPa | ISO 527-1	145.0
Elongation at yield in % | ISO 527-1	2.0
Notched impact strength (Charpy) at 23°C in kJ/m² | ISO 179-1eA	8.0

Rheological properties

Melt flow rate MFR in g/10min | ISO 1133	12.0
Melt flow rate MFR (test condition) |	250°C / 2,16kg
Shrinkage in flow direction in % | ISO 294-4	0.8
Shrinkage transverse to the flow direction in % | ISO 294-4	0.2

Thermal properties

Melting temperature (DSC, 10°C/min) in °C | ISO 11357-1/-3	225

Thermal properties	
Fire behavior (0.8 mm wall thickness) | IEC 60695-11-10	V0

Processing instructions:

Pre-drying:

Dryer type: dry air dryer
Temperature: 100 – 120°C°C
Drying time: 4 – 8 h
Residual moisture: < 0.04%.

Temperatures:

Melt temperature: 240 – 270°C
Mold temperature: 40 – 80°C
Back pressure: max. 40 bar (spec.)
Injection speed: medium to high

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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