

Technical data

KEBALLOY ECO R-PET E302

KEBALLOY ECO R-PET E302 is a recycled, low-viscosity PET (polyethylene terephthalate) grade approved for direct food applications with improved flowability. The material is supplied as crystallized granules and has an optimized bluish color. This grade is produced from 100% post-consumer bottle flakes.

Polymer: PET

ISO designation: PET(REC)

Productgroup: Recycling Compounds

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:

amorphous, dimensionally stable, Thin wall thicknesses, compliant for food contact (according to 10/2011 EC), easy flow, semi-crystalline, approved for food contact (EU and FDA)

Typical areas of application:

Glasses frames, Cover, Filter cups, Housing, Crockery and cutlery, industrial goods, Cosmetic packaging, Food packaging, Toys, Sports & Leisure Articles

Industries:

Household appliances, Industry, Agriculture, Food processing industry, Sanitary industry, Sports & Recreation

Physical properties

Density in kg/m ³ ISO 1183-1	1390.00
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Mechanical properties

E-modulus in MPa ISO 527-1	2500
Breaking stress in MPa ISO 527-1	55.0
Elongation at break in % ISO 527-1	100.0
Impact strength (Charpy) at 23°C in kJ/m ² ISO 179-1eU	100.0
Notched impact strength (Charpy) at 23°C in kJ/m ² ISO 179-1eA	3.5

Rheological properties

Melt flow rate MFR (test condition)	285°C / 2.16kg
Melt flow rate MFR in g/10min ISO 1133	41.0

Thermal properties

Melting temperature (DSC, 10°C/min) in °C ISO 11357-1/-3	255.0
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Thermal properties

Heat deflection temperature HDT (1.80 MPa) in °C ISO 75-1/-2	61.0
Heat deflection temperature HDT (0.45 MPa) in °C ISO 75-1/-2	68.0
Vicat softening temperature (50°C/h 50N) in °C DIN EN ISO 306	74

Processing instructions:**Pre-drying:**

Type of dryer: Dry air dryer.

Processing residual moisture: <0.005%.

drying temperature: max. 160°C

typical drying time: 4 – 6h

Processing recommendations for amorphous processing:

Melt temperature: 270 – 300°C

hot runner temperature: 280 – 290°C

mold temperature: <20°C

Injection speed: slow to medium

Back pressure: 40 to 80 bar specific

Holding pressure profile: hold 50 to 70 % of the injection pressure for 1 to 2 s and then allow to fall over a ramp. For very thin-walled or thick-walled parts, the optimum holding pressure may differ from the percentage recommendation.

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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