

Technical data

KEBATRON PPS L5530RC1 black (FE 200803 - development product*)

KEBATRON PPS L5530RC1 black is an impact modified, electrically conductive, 30% carbon fibre reinforced PPS compound, which is manufactured with post-industrial recycled carbon fibres. A large application potential lies in the substitution of metal housings (metal replacement/lightweight construction) with regard to EMC-compliant component design. As a housing material, KEBATRON PPS L5530RC1 black offers the advantage of electromagnetic shielding without additional surface treatments.

Polymer: PPS

ISO designation: PPS-L-CF30-I

Productgroup: PPS, Shielding compounds

Brief description of the product family:

Under the trade name KEBATRON, we offer a range of high-performance compounds based on PPS. KEBATRON offers high continuous service temperature, good aging behavior, high strength and stiffness, is inherently flame retardant and has exceptionally good chemical resistance.

Properties:

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

Typical areas of application:

Valve caps, Distributor, Fasteners, Gears, Housing, Sliding elements, Plain bearing, Piston, Couplings, Bearing bushes, Pumps and motors, Pump housing, Sensors, Bobbin, Structural components, Transport chains, Valves

Industries:

Automotive, Electrical and electronics industry, Household appliances, Industry, Aviation Industry, Mechanical Engineering, Sports & Recreation

Physical properties

Density in kg/m ³ ISO 1183-1	1300.00
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Mechanical properties

Breaking stress in MPa ISO 527-1	165
Elongation at break in % ISO 527-1	1.5
Impact strength (Charpy) at 23°C in kJ/m ² ISO 179-1eU	40.0
Notched impact strength (Charpy) at 23°C in kJ/m ² ISO 179-1eA	12.0

Rheological properties

Shrinkage in flow direction in % ISO 294-4	0.04
Shrinkage transverse to the flow direction in % ISO 294-4	0.19

Thermal properties

Melting temperature (DSC, 10°C/min) in °C ISO 11357-1/-3	278.0
Glass transition temperature in °C DIN EN ISO 11357-1	90

Electrical properties

Contact resistance in Ohm*m | IEC 60093

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Processing instructions:

Pre-drying:

Dryer type: dry air dryer (!).

Temperature: 120 – 140 °C

drying time: 4 – 8 h

Recommended max. residual moisture: < 0.02 %.

Recommended basic settings:

melt temperature: 320 – 340°C

Mold temperature: 140 – 180°C (As a rule of thumb, the higher the requirements, the higher the mold temperature).

Back pressure: < 10 bar (spec.)

The injection speed should be set as a slow – fast – slow profile. As a principle: as fast as possible, as slow as necessary.

Machine selection:

In the processing of KEBATRON PPS, wear- and corrosion-protected injection units have proven their worth. The injection unit should be selected so that the shot volume is 50 – 80% of the maximum metering volume. The dwell time should be kept as short as possible.

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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