

Technical data

KEBABLEND / WR FE 170905 PPS (Development product*)

Plain bearing material based on PPS, PPS + carbon fiber + graphite

Polymer: PPS

ISO designation: PPS-XCF-XMD

Productgroup: Tribocompounds, Functionalized compounds

Brief description of the product family:

KEBABLEND is a wide range of functional compounds, often tailor-made to customer requirements. Under the trade name KEBABLEND, we market magnetizable, thermally or electrically conductive compounds, high-density injection molding materials, compounds for radiation protection applications, detectable plastics and much more.

Properties:

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

Typical areas of application:

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

Industries:

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

Physical properties

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|--|---------|
| Water absorption in % in Anlehnung an ISO 62 | 0.02 |
| Density in kg/m ³ ISO 1183-1 | 1500.00 |

Mechanical properties

| | |
|---|-------|
| E-modulus in MPa ISO 527-1 | 23000 |
| Breaking stress in MPa ISO 527-1 | 145.0 |
| Elongation at break in % ISO 527-1 | 0.9 |
| Impact strength (Charpy) at 23°C in kJ/m ² ISO 179-1eU | 17.0 |

Rheological properties

| | |
|---|--------------------|
| Melt flow rate MFR (test condition) | 300°C / 2.16 kg |
| Melt flow rate MFR in g/10min ISO 1133 | 14.0 |
| Shrinkage in flow direction in % ISO 294-4 | 0.10 |
| Shrinkage transverse to the flow direction in % ISO 294-4 | 0.30 |

Thermal properties

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|--|-------|
| Melting temperature (DSC, 10°C/min) in °C ISO 11357-1/-3 | 285.0 |
| Heat deflection temperature HDT (1.80 MPa) in °C ISO 75-1/-2 | 260.0 |
| Glass transition temperature in °C DIN EN ISO 11357-1 | 90 |

Electrical properties

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|---|------|
| Surface resistivity in ohms IEC 60093 | 1e+2 |
|---|------|

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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