

Technical data

KEBABLEND / TC FE 190802 PPS (Development product*)

KEBABLEND / TC FE 190802 PPS is a functionalized compound based on PPS, which is thermally conductive and electrically insulating.

Polymer: PPS

ISO designation: PPS-I-GF+MD65

Productgroup: THERMALLY CONDUCTIVE COMPOUNDS, 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:

dimensionally stable, electrically isolating, good chemical resistance, high continuous used temperature, High stiffness, hydrolysis stable, semi-crystalline, thermally conductive

Typical areas of application:

Heat sink, Pumps and motors, Pump housing, Structural components, Connecting elements

Industries:

Automotive, Household appliances, Industry, Mechanical Engineering, Furniture industry

Physical properties

| | |
|---|------|
| Density in kg/m ³ ISO 1183-1 | 1840 |
|---|------|

Mechanical properties

| | |
|---|-------|
| E-modulus in MPa ISO 527-1 | 18500 |
| Breaking stress in MPa ISO 527-1 | 115 |
| Elongation at break in % ISO 527-1 | 0.7 |
| Impact strength (Charpy) at 23°C in kJ/m ² ISO 179-1eU | 18 |
| Notched impact strength (Charpy) at 23°C in kJ/m ² ISO 179-1eA | 5.5 |

Rheological properties

| | |
|---|------|
| Shrinkage in flow direction in % ISO 294-4 | 0.20 |
| Shrinkage transverse to the flow direction in % ISO 294-4 | 0.65 |

Thermal properties

| | |
|--|-------|
| Melting temperature (DSC, 10°C/min) in °C ISO 11357-1/-3 | 280.0 |
| Continuous operating temperature in °C ISO 2578 | 200.0 |

Thermal properties

| | |
|---|-----|
| Thermal conductivity in plane in W/mK DIN EN 821 | 1.0 |
| Thermal conductivity through plane in W/mK DIN EN 821 | 1.1 |
| Fire behavior (0.8 mm wall thickness) IEC 60695-11-10 | V0 |

Electrical properties

| | |
|--|------|
| Surface resistivity in ohms IEC 60093 | 1E14 |
| Dielectric strength in kV/mm IEC 60243-1 | 27 |

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 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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