

## Technical data

### KEBAPEAK FE 160203 (Development product\*)

KEBAPEAK FE 160203 is a high-performance carbon fiber-reinforced compound based on PEKK (polyether ketone ketone) with outstanding mechanical properties, especially at high temperatures, since the glass transition temperature is 176°C and the melting temperature is 396°C.

**Polymer:** PEKK

**ISO designation:** PEKK-CF30

**Productgroup:** PEEK, PEK, PEKK

#### **Brief description of the product family:**

KEBAPEAK is the trade name for a group of high-performance compounds based on polyaryletherketones (PEEK, PEK and PEKK). KEBAPeak products exhibit exceptionally high thermal resistance, extremely good chemical resistance, and excellent sliding and wear characteristics. They are inherently flame retardant and are particularly suitable for aerospace applications due to very low smoke toxicity.

#### **Properties:**

dimensionally stable, good gliding properties, good aging behavior, good fire behavior, High strength, High wear resistance, Very high continuous used temperature, semi-crystalline, PFAS-free

#### **Typical areas of application:**

Fasteners, Housing, Sliding elements, Piston, Rotors, Plug, Valves, Gears

#### **Industries:**

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

## Physical properties

Moisture absorption 23°C/50% r.h. in %.   in Anlehnung an ISO 62	0.05
Density in kg/m <sup>3</sup>   ISO 1183-1	1410.00

## Mechanical properties

E-modulus in MPa   ISO 527-1	24500
Breaking stress in MPa   ISO 527-1	250.0
Elongation at break in %   ISO 527-1	1.5
Impact strength (Charpy) at 23°C in kJ/m <sup>2</sup>   ISO 179-1eU	46.0
Notched impact strength (Charpy) at 23°C in kJ/m <sup>2</sup>   ISO 179-1eA	6.0

## Rheological properties

Shrinkage in flow direction in %   ISO 294-4	0.15
Shrinkage transverse to the flow direction in %   ISO 294-4	0.75

## Thermal properties

Melting temperature (DSC, 10°C/min) in °C   ISO 11357-1/-3	396.0
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## Thermal properties

Heat deflection temperature HDT (1.80 MPa) in °C   ISO 75-1/-2	370.0
Fire behavior (0.8 mm wall thickness)   IEC 60695-11-10	V0
Glass transition temperature in °C   DIN EN ISO 11357-1	176

## Electrical properties

Contact resistance in Ohm*m   IEC 60093	1e+3
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**Processing instructions:****Pre-drying:**

Drying temperature: 150°C

Typical drying time: 4 – 6 hours

Recommended moisture content:  $\leq 0.02\%$ .

**Temperature settings:**

Cylinder temperatures: 400-445°C

Nozzle temperature: 430 – 445°C

Infeed: 60-80°C

Mold temperature: 200-220°C

**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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