

Technical data

KEBAFLOW LCP HF140 (FE 180102*)

KEBAFLOW LCP HF140 is an LCP reinforced with 40% short glass fibers with very high heat resistance. The material is characterized by the following properties: Good flowability at thin wall thicknesses, very good toughness and strength, inherent flame retardancy, high heat deflection temperature (HDT ~300°C), good chemical resistance.

Polymer: LCP

ISO designation: LCP-GF40

Productgroup: LCP

Brief description of the product family:

The trade name KEBAFLOW stands for a range of liquid crystalline polymers (LCP). KEBAFLOW's outstanding flowability enables the realization of extremely thin wall thicknesses. KEBAFLOW LCP is inherently flame retardant and exhibits very high heat resistance and good aging behavior.

Properties:

dimensionally stable, Thin wall thicknesses, good aging behavior, good fire behavior, high continuous used temperature, semi-crystalline

Typical areas of application:

Pressure cans, LED housing, Luminaire housing, Relay, Bobbin, Plug

Industries:

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

Physical properties

Water absorption in % in Anlehnung an ISO 62	0.02
Density in kg/m ³ ISO 1183-1	1680.00

Mechanical properties

E-modulus in MPa ISO 527-1	15000
Breaking stress in MPa ISO 527-1	140.0
Elongation at break in % ISO 527-1	1.5

Rheological properties

Shrinkage in flow direction in % ISO 294-4	0.18
Shrinkage transverse to the flow direction in % ISO 294-4	0.50

Thermal properties

Heat deflection temperature HDT (1.80 MPa) in °C ISO 75-1/-2	308.0
Fire behavior (0.8 mm wall thickness) IEC 60695-11-10	V0

Electrical properties	
Contact resistance in Ohm*m IEC 60093	1e+13
Surface resistivity in ohms IEC 60093	1e+15

Processing instructions:

Pre-drying:

Dryer type: dry air dryer

Drying temperature: 150 – 170 °C

Typical drying time: 4 – 6 hours

Residual moisture content: < 0.01 %.

Basic settings of the injection molding machine:

Melt temperature: 335 – 345 °C

Mold temperature: 80 – 120 °C

Injection speed: very high

Back pressure (spec.): 0 – 30 bar

Machine selection recommendations:

Screw: 3-zone screw with non-return valve

Nozzle: open nozzle or shut-off nozzle (recommended)

Wear protection: Wear and corrosion protected according to machine manufacturer's recommendations for LCP glass-fiber reinforced

The most important processing instructions in brief:

- Ensure good drying! Ensure moisture content < 0.01%.
- Inject as fast as possible, if necessary use machine with pressure accumulator
- Injection speed has a very strong influence on the achievable flow path length
- Avoid excessively thick walls
- Ensure good venting
- Place weld lines in areas of the component subject to low stresses

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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