

TECHNICAL DATA SHEET

KEPSTAN® 8010C40

POLYETHERKETONEKETONE PELLET

KEPSTAN® is a high performance thermoplastic material, based on PolyEtherKetoneKetone (PEKK) highly stable chemical backbone. Its semi crystalline structure in solid state offers an outstanding combination of mechanical and thermal strength together with chemical and fire resistance.

KEPSTAN® 8010C40 is carbon fibre reinforced compound, based on the 8000 series of KEPSTAN® resins. This grade offers the highest glass transition temperature and the highest crystallization rate, leading to very high strength and stiffness.

KEPSTAN® 8010C40 is low flow grades, suitable for extrusion, compression and injection moulding.

KEPSTAN® 8010C40 is available in pellet form, and standard packaging is 20 kg boxes.

TYPE

PEKK-CF40

MAIN APPLICATIONS

- Industry - Composites

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

- Injection Molding
- Profile Extrusion

RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Melt volume flow rate (MVR), 380°C / 5 kg (716°F / 11 lb)	3.5 - 5.5	cm³/10min	ISO 1133

MECHANICAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Tensile modulus, 23°C (73°F), 1 mm/min (Flow direction, A12)	31500	MPa	ISO 527-1/-2
Yield stress, 23°C (73°F), 1 mm/min (Flow direction, A12)	240	MPa	ISO 527-1/-2
Nominal strain at break, 23°C (73°F), 1 mm/min (Flow direction, A12)	1.2	%	ISO 527-1/-2
Compression modulus, 23°C (73°F), 1 mm/min (Flow direction,)	13800	MPa	ISO 604
Compression strength, 23°C (73°F) (Flow direction, 5mm/min)	318	MPa	ISO 604

THERMAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Melting temperature, 20°C/min (DSC, 2nd Heating)	360	°C	
Glass transition temperature, 20°C/min (DSC)	165	°C	
Heat deflection temperature, 1.8 MPa	>330	°C	ISO 75-1/-2

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ELECTRICAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Surface resistivity, 23°C (73,4°F)	<10E+5	ohm.cm	ASTM D257
Volumic (transversal) resistivity, 23°C (73,4°F)	<10E+5	ohm/sq	ASTM D257

OTHER PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Apparent density, 23°C (73°F)	1.44	g/cm ³	ISO 1183-1
Water absorption, 23°C (73°F), immersion, equilibrium (2mm)	0.34	%	ISO 62
Water absorption, 23°C (73°F) (After 24h, immersion, 2mm)	0.07	%	ISO 62

PACKAGING

Available packaging:

- 20 kg / 44 lb boxes

SHELF LIFE

Indefinite when stored properly (sealed bags, appropriate UV protection and temperature)

PROCESSING CONDITIONS:

- Typical melt temperature (Min / Recommended / Max) - Injection Molding: Rear 350°C / Center 375°C / Front 375°C / Nozzle 385°C (660°F / 710°F / 710°F / 725°F)
- Typical mold temperature - Injection molding: 220-240°C (430-465°F), to facilitate skin & core cristallization
- Drying time and temperature: 150°C (300°F) / 3-4 hours

SPECIAL CHARACTERISTICS

- Halogen Free Flame Retardant (HFFR)