

KEPSTAN®

8001

KEPSTAN® PEKK resin 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.

The **8000 Series** offers the highest glass transition temperature and the highest degree of crystallinity, leading to the best tensile and compression strengths among the wide range of PEKK copolymers within the KEPSTAN® product range.

KEPSTAN® 8000 Series includes a low flow grade, KEPSTAN® 8001, and a medium flow grade, KEPSTAN® 8002, both unfilled pure PEKK resins designed to meet the requirements of a broad range of melt processing technologies, including among others extrusion of stock shapes, tubes, films, extrusion compression, compression molding, injection molding of thick or complex and thin-walled parts.

KEPSTAN® PEKK resin is available in pellet form and in powder form with different particle sizes. Standard packaging includes 20 kg boxes for pellets and 10 kg boxes for powders.

PROPERTIES	VALUE	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	12	cm ³ /10 min	ISO 1133
Temperature	380	°C	-
	716	°F	-
Load	5	kg	-
	11	lb	-
MECHANICAL PROPERTIES			
Tensile Modulus	3600	MPa	ISO 527-1/-2
	522000	psi	
Tensile Strength (Yield Point), 23°C, 25 mm/min	110	MPa	ISO 527-1BA
	16000	psi	
Tensile Strength (Yield Point) at HT, 125°C, 25 mm/min	59	MPa	ISO 527-1BA
	8560	psi	
Elongation at Yield, 23°C, 25 mm/min	5.5	%	ISO 527-1BA
Elongation at Break, 23°C, 25 mm/min	30	-	-
Elongation at Break at HT, 125°C, 25 mm/min	≥50	%	ISO 527-1BA
Flexural Modulus, 23°C	3.5	GPa	ISO 178-93
	508000	psi	
Flexural strength (max), 23°C	167	MPa	ISO 178-93
	24200	psi	
Charpy Impact Strength, +23°C	No Break	kJ/m ²	ISO 179/1eU
Charpy Impact Strength, -30°C	No Break	kJ/m ²	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	7.5	kJ/m ²	ISO 179/1eA
	3.57	ftlb/in ²	

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Charpy Notched Impact Strength, -30°C	6			
	2.85			
THERMAL PROPERTIES				
Melting Point, 20°C/min, 2 nd heating	355		°C	DSC
	671		°F	
Glass Transition, 20°C/min	165		°C	-
	329		°F	
Temp. of Deflection Under Load, 1.80 MPa	162		°C	ISO 75-1/-2
	324		°F	
Temp. of Deflection Under Load, 0.45 MPa	242		°C	ISO 75-1/-2
	468		°F	
Coefficient of Thermal Expansion, Average, -100°C to Tg	23		µm/(m K)	DMA, tension
Flammability Rating	V-0 @ 0.8 mm		-	UL 94
Limiting Oxygen Index, 1.6 mm	38		%O ₂	ISO 4589-2
Specific Heat Capacity, 23°C	1.02		J/(g K)	-
ELECTRICAL PROPERTIES				
Relative Permittivity, 1MHz	2.6		-	IEC 60250
Volume Resistivity, 23°C	1E16		Ohm*c m	ASTM D257
Surface Resistivity, 23°C	1E16		Ohm	ASTM D257
Dielectric Strength, 100 µm thickness	84		kV/mm	IEC 60243-1
	2130		kV/in	
OTHER PROPERTIES				
Flow Level	Low		-	-
Water Absorption, 23°C, immersion, equilibrium	0.7		%	ISO 62
Humidity Absorption, 23°C, RH50%, equilibrium	0.4		%	ISO 62
Density	1290		kg/m ³	ISO 1183
	1.29		g/cm ³	

Drying temperature and time: 150°C for 3 to 4 hours or 120°C for 6 to 8 hours

Processing temperature: 375 – 385°C

Temperature settings - Injection: Rear 350°C / Center 375°C / Front 375°C / Nozzle 385°C

Mold temperature (to facilitate filling of the cavity and polymer crystallization): 220 - 240°C

Temperature settings - Extrusion: Zones 1/2/3/4: 340°C/ 360°C/ 380°C/ 380°C Die: 370°C

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PROCESSING Injection Molding, Profile Extrusion, Sheet Extrusion, Blow Molding, Calandring, Thermoforming	Headquarters: Arkema France 420 rue d'Estienne d'Orves 92705 Colombes Cedex France T +33 (0)1 49 00 80 80 hpp.arkema.com Arkema Inc. – High Performance Polymers 900 First Avenue King of Prussia, PA 19406 Tel.: +1 610 205 7000 hpp.arkema.com
DELIVERY FORM Pellets, Powder	
REGIONAL AVAILABILITY North America, Europe, Asia Pacific, South and Central America, Near East/Africa	

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