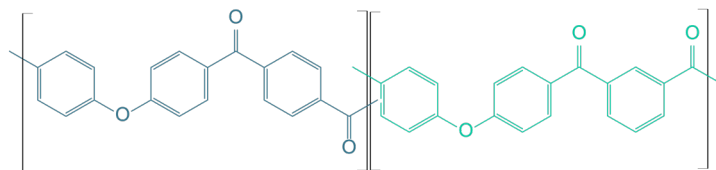


IMPEKK[®] 1G by Seqens



Technical Data – IMPEKK[®] 1G

Product description

IMPEKK[®] is a high-performance thermoplastic polymer.

Its chemical structure of 2 ketone groups gives IMPEKK[®] polymer an excellent polarity and allows for a great acceptance of functional fillers, providing a wide range of formulation choices for development of implantable medical devices.

IMPEKK[®] 1G is available in pellet form. Standard packaging is 5kg boxes.

Material properties

	Condition	Test method	Unit	Typical Value
General				
Density	23°C	ISO 1183	g/cm ³	1.28
Color	-	-	-	Cream/Grey beige
Water absorption	23°C, RH50% equilibrium	ISO 62	%	0.16
	23°C, RH50%, 24 h, 2 mm		%	0.03
	23°C, immersion, equilibrium		%	0.6
	23°C, immersion, 24 h, 2 mm		%	0.2
Melt volume flow rate	380°C / 5 kg	ISO 1133	cm ³ /10min	17
	380°C / 1 kg		cm ³ /10min	

Thermal

Melting point	20°C/min, 2 nd heating	DSC	°C	358
Glass transition	20°C/min		°C	165

Mechanical

Tensile modulus	23°C, 1 mm/min	ISO 527-1BA	GPa	3.7
Tensile strength (yield point)			MPa	115
Elongation at yield	23°C, 25 mm/min	ISO 527-1BA	%	5.5
Elongation at break			%	>30
Compression modulus	23°C, 1 mm/min	ISO 604	GPa	Tbd
Compression strength	23°C, 5 mm/min	ISO 604	MPa	Tbd
Charpy impact strength – Unnotched	23°C	ISO 179/1eU	kJ/m ²	180
Charpy impact strength – Notched	23°C	ISO 179/1eA	kJ/m ²	6

All data are typical values measured on injection molded specimens, without further annealing or tempering.



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Recommended processing conditions

Drying temperature and time	150°C during 3 to 4 hours, or 120°C during 8 to 10 hours
Processing temperature	375 – 385°C
Temperature settings – Injection	Rear 350°C / Centre 375°C / Nozzle 385°C
Mold temperature	220 to 240°C, to facilitate skin and core crystallization
Temperature settings – Extrusion	Zones 1/2/3/4 : 340°C / 360°C / 380°C / 380°C / Die : 370°C

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