



Material: PPSU 1000 (Radel®)

PPSU 1000 stock shapes are produced from RADEL® R resin. Properties of this material include; High max allowable service temperatures, high strength and stiffness, excellent hydrolysis resistance, dimensional stability and resistance against high energy radiation (gamma and x-rays). Good electrical insulating and dielectric properties. Better impact strength and chemical resistance than PSU 1000 and PEI 1000. Virtually unlimited steam sterilisability. Raw material used for the production of PPSU 1000 stock shapes is USP Class VI compliant.

Technical Specification

Property	Test Method	Units	Value
Colour	-	-	Black
Density	ISO 1183	g/cm ³	1.29
Water Absorption - saturation in air (23°C/50%RH)	-	%	0.6
Water Absorption - saturation in water (23°C)	-	%	1.2
Tensile stress at yield/break*1	ISO 527	Mpa	-76/-
Tensile modulus of elasticity*1	ISO 527	Mpa	2500
Tensile strain at break*1	ISO 527	%	30
Impact - Charpy	179/1eU	kJ/m ²	No Break
Impact – Charpy notched	179/1eA	kJ/m ²	10
Hardness	Rockwell ISO 2039-2	-	M80
Glass transition temperature	-	°c	220
Max service temp in air short periods	-	°c	210
Max service temp continuously for 20000hrs	-	°c	180
Linear thermal expansion coefficient (23-100°C)	-	m/(m.k)	55x10 ⁻⁶
Linear thermal expansion coefficient (23-150°C)	-	m/(m.k)	55x10 ⁻⁶
Linear thermal expansion coefficient (+150°C)	-	m/(m.k)	55x10 ⁻⁶
Thermal Conductivity	-	W/(K.m)	0.35
Flammability (3mm thickness)	-	-	VO
Electric Strength	ISO 60243	kV/mm	-
Volume resistivity*1	ISO 60093	Ohm.cm	10 ¹⁵
Surface resistivity*1	ISO 60093	Ohm	10 ¹⁵

*1 Measured on dry test specimens (where applicable)

Availability:

Please call for further details.

Applications:

Sterilisation Trays, Dental and surgical instrument handles, fluid handling and fitting applications, Medical devices