

Radel® R-5800

PPSU

Syensqo

Processing/Physical Characteristics	Value	Unit	Test Standard
ASTM Data			
Melt Flow Index, MFI	24	g/10min	ASTM D 1238
Temperature	365	°C	-
Load	5	kg	-
Mold Shrinkage, MD	0.007	mm/mm	ASTM D 955

Mechanical properties	Value	Unit	Test Standard
ASTM Data			
Tensile Modulus	2340	MPa	ASTM D 638
Tensile Strength	69.6	MPa	ASTM D 638
Elongation at Yield	7.2	%	ASTM D 638
Elongation at Break	90	%	ASTM D 638
Flexural Modulus	2410	MPa	ASTM D 790
Flexural Strength	91	MPa	ASTM D 790
Izod Impact notched, 1/8 in	690	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ASTM Data			
UL 94 Flame rating	V-0	-	UL 94
Thickness tested	0.76	mm	-
Coefficient of Thermal Expansion, MD	56	E-6/K	ASTM D 696
DTUL @ 264 psi	207	°C	ASTM D 648
Glass Transition Temperature	220	°C	ASTM E 1356

Electrical properties	Value	Unit	Test Standard
ASTM Data			
Dielectric Strength, Short Time	15	kV/mm	ASTM D 149
Dielectric Constant, 60 Hz	3.44	-	ASTM D 150
Volume Resistivity	>1E15	Ohm*cm	ASTM D 257

Optical properties	Value	Unit	Test Standard
ASTM Data			
Index of Refraction	1.67	-	ASTM D 542

Other properties	Value	Unit	Test Standard
Water Absorption, 24hr	0.37	%	ASTM D 570
Water Absorption, Equilibrium	1.1	%	ASTM D 570
Density	1290	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	149	°C	-
Pre-drying - Time	2.5	h	-
Melt temperature	360 - 391	°C	-
Mold temperature	138 - 163	°C	-

Characteristics**Processing**

Injection Molding, Sheet Extrusion, Thermoforming

Delivery form

Pellets

Special Characteristics

Flame retardant, Heat stabilized or stable to heat, Sterilizable, Ethylene Oxide (EtO) Sterilization, Steam sterilization, Gamma

Chemical Resistance

Acid Resistance, General Chemical Resistance, Environmental Stress Crack Resistance, Hydrolytically Stable, Radiation Resistance

Certifications

Medical Grade, Biocompatibility ISO 10993

irradiation sterilization, Electron beam (e-beam) sterilization

Features

Thermal Stability

Applications

Medical

Regional Availability

North America, Europe, Asia Pacific, South and Central America