

Radel® R (Polyphenylsulfone - PPSU)

Stock shapes extruded from Radel® R resins offer a superior combination of high performance properties that include excellent thermal stability, outstanding toughness, and good environmental stress cracking resistance. These properties make Radel® R stock shapes attractive for a variety of demanding applications. The standard color of Radel® R is off white, but a transparent grade is available.

The following physical property information is based on typical values of the base Radel® R polyphenylsulfone resin.

Applications Include:

- Dairy connectors
- Automotive fuses
- Food service trays
- Aircraft interior parts
- Sockets and connectors

Advantages of Radel® R:

- Outstanding impact resistance
- Resistance to hydrolysis
- Transparent grade available
- Excellent thermal stability
- Combustion resistance without additives

Property	ASTM Test Method	Units	Radel® R
Physical			
Specific Gravity	D792	—	1.29
Water Absorption @24 hours	D570	%	0.37
Mechanical			
Tensile Strength @yield	D638	psi	10,100
Tensile Modulus	D638	psi	340,000
Tensile Elongation @yield	D638	%	7.2
Tensile Elongation @break	D638	%	60.0-120.0
Flexural Strength @yield	D790	psi	13,200
Flexural Modulus	D790	psi	350,000
Compressive Strength @yield	D695	psi	14,350
Compressive Modulus	D695	psi	251,000
Izod Impact Strength Un-Notched	D256	ft-lb/in	No Break
Notched @73°F	D256	ft-lb/in	13.0
Hardness	D785	—	R122
Thermal			
Heat Deflection Temperature @66 psi	D648	°F	417
@264 psi	D648	°F	405
Coefficient of Thermal Expansion	D696	in/in/°F	3.1x10 ⁻⁵
Flammability Rating—UL94 @.031"	—	—	V-0
Thermal Conductivity	C177	(BTU-in)/(hr-ft ² -°F)	2.42
Limiting Oxygen Index	D2863	%	38.0
Electrical			
Dielectric Strength	D149	V/mil	360
Dielectric Constant @1kHz	D150	—	3.45
Dissipation Factor @1kHz	D150	—	0.0009
Volume Resistivity	D257	ohm-cm	>10 ¹⁵
Optical			
Haze	D1746	%	15.0
Transparency	D1746	%	50

NOTE: The information contained herein are typical values intended for reference and comparison purposes only. They should NOT be used as a basis for design specifications or quality control. Contact us for manufacturers' complete material property datasheets. All values at 73°F (23°C) unless otherwise noted.