

Radel® R

(polyphenylsulfone)

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.



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

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

Manufacturing Capabilities:

- Rod:** 1/4" to 8" diameter
- Sheet:** .035" to 1/4" thick
- Slab:** 3/8" to 4" thick
- Film:** .001" to .029" thick

Colors/Grades:

Off white or transparent

*In addition to our standard capabilities, Westlake also has the ability to process custom resins in various sizes and colors with some exceptions.



World Headquarters
P.O. Box 127, Lenni, PA 19052
1-800-999-1700 • Fax: (610) 459-1084

www.westlakeplastics.com

West Coast Office
377 E. Chapman Ave., Suite 120, Placentia, CA 92870
1-800-440-0597 • Fax: (714) 961-0978

This information is offered solely for your consideration, examination and verification, and is to be construed neither as a warranty nor guarantee that the same results as those stated herein will be obtained by the use to which others may put the material. Each user of the material should make his own tests to determine the characteristics and suitability of the material for his own particular use and the use which will be made of the completed product. This publication is not to be taken as a license to operate under, or a recommendation to infringe

any patents. The observance of all legal regulations and patents is the responsibility of the user. The buyer's exclusive remedy against the seller shall be for the repair or replacement of defective stock. No other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or other incidental or consequential loss) shall be available to the buyer.

EXCLUSION OF WARRANTIES: THERE ARE NO WARRANTIES AS TO THE MATERIAL DESCRIBED HEREIN, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE. ANY VALUES STATED IN SELLER'S LITERATURE ARE TYPICAL PROPERTIES ONLY.

Radel® R is the Registered Trademark of Amoco Performance Products, Inc.