# Westlake Radel® R

### Polyethersulfone

#### Westlake Plastics Company

#### Message:

Hardness

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.

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

General Information			
Features	Combustion Resistant		
	Good Thermal Stability		
	High ESCR (Stress Crack Resist.)		
	High Impact Resistance		
	Hydrolysis Resistant		
	Ultra High Toughness		
Uses	Aircraft Applications		
	Automotive Applications		
	Connectors		
	Non-specific Food Applications		
Appearance	Clear/Transparent		
	Off-White		
Forms	Film		
	Rod		
	Sheet		
	Slab		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.29	g/cm³	ASTM D792
Water Absorption (24 hr)	0.37	%	ASTM D570

Unit

Nominal Value

Test Method

Rockwell Hardness (R-Scale)	122		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2340	MPa	ASTM D638
Tensile Strength (Yield)	69.6	MPa	ASTM D638
Tensile Elongation			ASTM D638
Yield	7.2	%	
Break	60 to 120	%	
Flexural Modulus	2410	MPa	ASTM D790
Flexural Strength (Yield)	91.0	MPa	ASTM D790
Compressive Modulus	1730	MPa	ASTM D695
Compressive Strength	98.9	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	690	J/m	ASTM D256
Unnotched Izod Impact	No Break		ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed	214	°C	
1.8 MPa, Unannealed	207	°C	
CLTE - Flow	5.6E-5	cm/cm/°C	ASTM D696
Thermal Conductivity	0.35	W/m/K	ASTM C177
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+15	ohms·cm	ASTM D257
Dielectric Strength	14	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	3.45		ASTM D150
Dissipation Factor (1 kHz)	9.0E-4		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.787 mm)	V-0		UL 94
Oxygen Index	38	%	ASTM D2863
Optical	Nominal Value	Unit	Test Method
Transmittance	50.0	%	ASTM D1746
Haze	15	%	ASTM D1746

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