

## ZEONOR® 1420R Diagnostic Grade

Cyclo-Olefin Polymer resin that is the most common grade for Life Sciences and Diagnostics consumables. Compatible with EtO, Gamma irradiation, vaporized hydrogen peroxide and steam/autoclave sterilization.

Property	Value	Unit	Test Standard
<b>Physical Properties</b>			
Specific gravity	1.02	-	ASTM D792
Melt flow rate (MFR) (280 °C, 21.18 N)	16.9	g/10min	ISO 1133
Water absorption (23 °C/24 hrs)	0.01	%	ASTM D570
Water vapor transmission (40 °C, 90% rh, @100µm thickness)	1.0	g/m <sup>2</sup> ·day	ASTM F1249
Oxygen transmission (23 °C, 0% rh, @100µm thickness)	346.5	cm <sup>3</sup> /(m <sup>2</sup> ·day·atm)	ASTM D3985
<b>Optical Properties</b>			
Light transmittance (3mm thickness)	91.5	%	ASTM D1003
<b>Mechanical Properties</b>			
Tensile strength	63.33	MPa	ISO 527
Tensile modulus	2450	MPa	ISO 527
Flexural modulus	2282	MPa	ISO 178
Flexural strength	100.7	MPa	ISO 178
Elongation at break	60.6	%	ISO 527
Izod impact strength (3.2 mm with notch )	25	J/m	ASTM D256
<b>Thermal Properties</b>			
Glass transition temperature	136	°C	JIS K7121
Heat deflection temperature (1.82 MPa)	120	°C	ASTM D648
Coefficient of linear thermal expansion	6E-05	cm/cm °C	ASTM E831
<b>Solvent Compatibility</b>			
Alcohols	Good		
Acids/Bases	Good		

Typical properties. Not to be used for purposes of establishing specification(s).