



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
Physical Properties			
Specific gravity	1.02	-	ASTM D792
Melt flow rate (MFR) (280 °C, 21.18 N)	17	g/10min	ISO 1133, JIS K719
Water absorption (23 °C/24 hrs)	<0.01	%	ASTM D570
Water vapor transmission (40 °C, 90% rh, @100µm thickness)	1.0	g/m ² ·day	ASTM F1249
Oxygen transmission (23 °C, 0% rh, @100µm thickness)	347	cm ³ /(m ² ·day·atm)	ASTM D3985
Optical Properties			
Light transmittance (3mm thickness)	>90	%	ASTM D1003
Mechanical Properties			
Tensile strength	9100	psi	ISO 527
Tensile modulus	360	kpsi	ISO 527
Flexural strength	15000	psi	ISO 178
Flexural modulus	330	kpsi	ISO 178
Elongation at break	61	%	ISO 527
Izod impact strength (23 °C, 3.2 mm with notch)	25	J/m	ASTM D256
Thermal Properties			
Glass transition temperature	136	°C	JIS K7121
Heat deflection temperature (0.45 MPa)	120	°C	ASTM E831
Coefficient of linear thermal expansion (1.82 mPa)	6E-05	cm/cm °C	ASTM D648
Solvent Compatibility			
Alcohols	Good		
Acids/Bases	Good		

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

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