



## ZEONEX® 790R Medical Grade

Cyclo-Olefin Polymer resin with a high Tg (161.7 °C), optimal for higher temperature applications. Compatible with EtO, Gamma irradiation, vaporized hydrogen peroxide and steam/autoclave sterilization.

Property	Value	Unit	Test Standard
<b>Physical Properties</b>			
Density	1.01	kg/m <sup>3</sup>	ASTM D792
Melt flow rate (MFR) (280 °C, 21.18 N)	6	g/10min	JIS K719 ISO 1133
Water absorption (23 °C-sat)	<0.01	%	ASTM D570
Water vapor transmission (40 °C, 90% rh, @100µm thickness)	1.1	g/(m <sup>2</sup> ·day)	ASTM F1249
Oxygen transmission (23 °C, 0% rh, @100µm thickness)	/	cm <sup>3</sup> / (m <sup>2</sup> ·day·atm)	ASTM D3985
<b>Optical Properties</b>			
Deg. of light transmission (t = 3mm)	>90	%	ASTM D1003
<b>Mechanical Properties</b>			
Tensile strength	11000	psi	ISO 527
Tensile modulus	390	kpsi	ISO 527
Flexural strength	17000	psi	ISO 178
Flexural modulus	360	kpsi	ISO 178
Elongation at break	43	%	ISO 527
Charpy impact strength @ 23 °C	/	ft-lbs/in <sup>2</sup>	ISO 179/1eU
Charpy impact strength @ -20 °C	/	ft-lbs/in <sup>2</sup>	ISO 179/1eU
Charpy impact strength @ -80 °C	/	ft-lbs/in <sup>2</sup>	ISO 179/1eU
Charpy impact strength @ -194 °C	/	ft-lbs/in <sup>2</sup>	ISO 179/1eU
Izod impact strength (23 °C, 3.2 mm with notch )	22	J/m	ASTM D256
<b>Thermal Properties</b>			
Glass transition temperature (20 °C/min)	158	°C	JIS K7121
DTUL @ 1.82 MPa	/	°C	ASTM D648
<b>Electrical Properties</b>			
Volume resistivity	3.15E+16	Ω·m	IEC 62631-3-1

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

COP medical grades (ZEONEX®5000, ZEONEX®690R, ZEONEX®790R, ZEONOR®1020R) have been assessed for compliance with USP Class VI <87>, <88> and <661.1> , ISO10993, EU 3.1.3 and 3.1.5, and JP 7.02. FDA DMF and more information available upon request.

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