

Cyclo-Olefin Polymer Diagnostic Grades

Property	Test Standard	Unit	ZEONOR® 1020R*	ZEONOR® 1060R	ZEONOR® 1420R	ZEONOR® 1430R
Physical Properties						
Specific gravity	ASTM D792	-	1.01	1.01	1.02	1.02
Melt flow rate (MFR) (280 °C, 21.18 N)	ISO 1133	g/10min	18.2	12.6 (230 °C)	16.9	30
Water absorption (23 °C/24 hrs)	ASTM D570	%	0.01	0.01	0.01	0.01
Water vapor transmission (40 °C, 90% rh, @100µm)	ASTM F1249	g/m²·day	1.1	/	1.0	/
Oxygen transmission (23 °C, 0% rh, @100µm)	ASTM D3985	cm³/ (m²·day·atm)	365.5	/	346.5	/
Optical Properties						
Light transmittance (3mm thickness)	ASTM D1003	%	91.5	91.5	91.5	91.5
Mechanical Properties						
Tensile strength	ISO 527	MPa	51.81	52.01	63.33	63.87
Tensile modulus	ISO 527	MPa	2141	2204	2450	2467
Flexural strength	ISO 178	MPa	2065	2078	2282	2302
Flexural modulus	ISO 178	MPa	81.13	82.04	100.7	101.7
Elongation at break	ISO 527	%	89.1	99.3	60.6	61.1
Izod impact strength (3.2 mm with notch)	ASTM D256	J/m	40	34	25	24
Thermal Properties						
Glass transition temperature	JIS K7121	°C	101.7	98.8	136	134.5
Heat deflection temperature (1.82 MPa)	ASTM D648	°C	88	88	120	119
Coefficient of linear thermal expansion	ASTM E831	cm/cm °C	6E-05	6E-05	6E-05	6E-05
Solvent Compatibility						
Alcohols			Good	Good	Good	Good
Acids/Bases			Good	Good	Good	Good

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

*ZEONOR® 1020R has 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 Drug Master File and more information available upon request.

ZEON | www.zeonsmi.com | customerservice@zeonsmi.com | +1-408-641-7899 (USA) | +49.211.52.67.0 (EU) | +81.3.3216.1769 (Asia)