

Product Texts

LNP ELCRES HPC17 is based on high heat Polycarbonate (PC) copolymer resin with Vicat of 170°C, specially targeted for healthcare applications and is subject to Healthcare Management of Change, Biocompatible according to ISO 10993 or USP Class VI. This grade is optimized to reduce tendency of yellowing of transparent resins within a broad processing window. It is available in limited colors.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	55	cm ³ /10min	ISO 1133
Temperature	350	°C	-
Load	2.16	kg	-
ASTM Data			
Melt Flow Index, MFI	60	g/10min	ASTM D 1238
Temperature	350	°C	-
Load	2.16	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	2450	MPa	ISO 527
Yield stress	75	MPa	ISO 527
Yield strain	6.5	%	ISO 527
Stress at break	60	MPa	ISO 527
Strain at break	50	%	ISO 527
Flexural modulus	2500	MPa	ISO 178
Charpy impact strength, +23°C, 3mm	N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C, 3mm	10	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C, 3mm	7	kJ/m ²	ISO 179/1eA
Izod impact strength, +23°C	N	kJ/m ²	ISO 180/1U
Izod notched impact strength, +23°C, 3mm	8	kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C, 3mm	7	kJ/m ²	ISO 180/1A
ASTM Data			
Tensile Modulus	2500	MPa	ASTM D 638
Tensile Strength at Yield	75	MPa	ASTM D 638
Tensile Strength at Break	60	MPa	ASTM D 638
Elongation at Yield	7	%	ASTM D 638
Elongation at Break	40	%	ASTM D 638
Flexural Modulus	2450	MPa	ASTM D 790
Izod Impact notched, 1/8 in	80	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	75	J/m	ASTM D 256
Temperature	-30	°C	-

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	152	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	165	°C	ISO 75-1/-2
Vicat softening temperature, 120°C/h 50N	172	°C	ISO 306
Thermal Conductivity	0.2	W/(m K)	DIN 52616
ASTM Data			
DTUL @ 66 psi	165	°C	ASTM D 648
DTUL @ 264 psi	152	°C	ASTM D 648

Other properties	Value	Unit	Test Standard
Water absorption	0.3	%	Sim. to ISO 62
Humidity absorption	0.3	%	Sim. to ISO 62
Density	1210	kg/m ³	ISO 1183
Density	1210	kg/m ³	ASTM D 792

Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	135	°C	-
Pre-drying - Time	4 - 6	h	-

Processing humidity	≤0.02	%	-
Melt temperature	300 - 355	°C	-
Mold temperature	110 - 160	°C	-
Zone 1	280 - 335	°C	-
Zone 2	290 - 345	°C	-
Zone 3	300 - 355	°C	-
Screw speed	40 - 90	rpm	-
Back pressure	0.3 - 0.7	MPa	-

Characteristics

Processing

Injection Molding

Applications

Medical

Special Characteristics

Transparent, Ethylene Oxide (EtO) Sterilization, Gamma irradiation sterilization

Regional Availability

North America, Europe, Asia Pacific

Certifications

US Pharmacopeia Class VI Approved