LEXAN™ Copolymer HPH4404 - Americas

PC — Saudi Basic Industries Corporation (SABIC)

Product Texts

High heat specialty polycarbonate. For medical devices and pharmaceutical applications. Healthcare management of change, biocompatible (ISO10993 or USP Class VI). EtO, steam, gamma and e-beam sterilizable.

UL Yellow Card Link E121562-100967595

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	**29**	cm³/10min	ISO 1133
Temperature	**330**	°C	-
Load	**2.16**	kg	-
ASTM Data			
Melt Flow Index, MFI	**30**	g/10min	ASTM D 1238
Temperature	**330**	°C	-
Load	**2.16**	kg	-

Mechanical properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	**2150**	MPa	ISO 527
Yield stress	**65**	MPa	ISO 527
Yield strain	**7**	%	ISO 527
Stress at break	**60**	MPa	ISO 527
Strain at break	**50**	%	ISO 527
Flexural modulus	**2120**	MPa	ISO 178
Charpy impact strength, +23°C, 3mm	**N**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C, 3mm	**N**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C, 3mm	**57**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C, 3mm	**13**	kJ/m²	ISO 179/1eA
Izod impact strength, +23°C	**N**	kJ/m²	ISO 180/1U
Izod notched impact strength, +23°C, 3mm	**53**	kJ/m²	ISO 180/1A
Izod notched impact strength, -30°C, 3mm	**11**	kJ/m²	ISO 180/1A
ASTM Data			
Tensile Modulus	**2100**	MPa	ASTM D 638
Tensile Strength at Yield	**65**	MPa	ASTM D 638
Tensile Strength at Break	**70**	MPa	ASTM D 638
Elongation at Yield	**7**	%	ASTM D 638
Elongation at Break	**112**	%	ASTM D 638
Flexural Modulus	**2200**	MPa	ASTM D 790
Rockwell Hardness	**R 122**	-	ASTM D 785
Izod Impact notched, 1/8 in	**600**	J/m	ASTM D 256
Izod Impact notched, Low-Temperature	**120**	J/m	ASTM D 256
Temperature	**-30**	°C	-
Izod Impact unnotched, 1/8 in	**N**	J/m	ASTM D 256

Thermal properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load, 1.80 MPa	**125**	°C	ISO 75-1/-2
Vicat softening temperature, B	**154**	°C	ISO 306
Vicat softening temperature, 120°C/h 50N	**155**	°C	ISO 306
Burning behav. at thickness h	**HB**	class	IEC 60695-11-10
Thickness tested	**0.8**	mm	-
ASTM Data			
DTUL @ 264 psi	**142**	°C	ASTM D 648
Vicat Temperature	**160**	°C	ASTM D 1525
Thermal Conductivity, solid state	**0.0303**	W/(m K)	ASTM C 177
Specific Heat	**1250**	J/(kg K)	ASTM C 351

Electrical properties	Value	Unit	Test Standard
ASTM Data			

Dissipation Factor, 60 Hz	**0.0012**	-	ASTM D 150
Dielectric Constant, 60 Hz	**3.15**	-	ASTM D 150
Dielectric Constant, 1 MHz	**3**	-	ASTM D 150
Volume Resistivity	**>1E15**	Ohm*cm	ASTM D 257

Other properties	**Value**	**Unit**	**Test Standard**
Water absorption	**0.16**	%	Sim. to ISO 62
Humidity absorption	**0.35**	%	Sim. to ISO 62
Density	**1200**	kg/m³	ISO 1183
Density	**1200**	kg/m³	ASTM D 792

Processing Recommendation Injection Molding	**Value**	**Unit**	**Test Standard**
Pre-drying - Temperature	**120**	°C	-
Pre-drying - Time	**3 - 4**	h	-
Processing humidity	**≤0.02**	%	-
Melt temperature	**295 - 315**	°C	-
Mold temperature	**70 - 95**	°C	-
Zone 1	**270 - 295**	°C	-
Zone 2	**280 - 305**	°C	-
Zone 3	**295 - 315**	°C	-
Screw speed	**40 - 70**	rpm	-
Back pressure	**0.3 - 0.7**	MPa	-

Characteristics

Processing
Injection Molding

Special Characteristics
Ethylene Oxide (EtO) Sterilization, Steam sterilization, Gamma irradiation sterilization, Electron beam (e-beam) sterilization

Certifications
US Pharmacopeia Class VI Approved

Applications
Medical

Regional Availability
North America