SABIC Innovative Plastics Lexan® HFD4472 PC

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan* HFD4472 is a 20% glass filled, medium flow, impact modified, injection moldable grade designed for high flow and superior surface appearance. HFD4472 has enhanced mold release, impact ductility and broad color space.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-HFD4472-PC.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.33 g/cc	1.33 g/cc	ASTM D792
Density	1.33 g/cc	0.0480 lb/in³	ISO 1183
Moisture Absorption	0.0400 %	0.0400 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.12 %	0.12 %	ISO 62
Linear Mold Shrinkage, Flow	0.0020 - 0.0030 cm/cm @Thickness 3.20 mm	0.0020 - 0.0030 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0040 - 0.0050 cm/cm @Thickness 3.20 mm	0.0040 - 0.0050 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	10 g/10 min @Load 1.20 kg, Temperature 300 °C	10 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	9.0 g/10 min @Load 1.20 kg, Temperature 300 °C	9.0 g/10 min @Load 2.65 lb, Temperature 572 °F	MVR [cm^3/10 min]; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	56.0 MPa	8120 psi	5 mm/min; ISO 527
	56.0 MPa	8120 psi	Type I, 5 mm/min; ASTM D638
Tensile Strength, Yield	54.0 MPa	7830 psi	5 mm/min; ISO 527
	54.0 MPa	7830 psi	Type I, 5 mm/min; ASTM D638
Elongation at Break	2.0 %	2.0 %	5 mm/min; ISO 527
Elongation at Yield	2.0 %	2.0 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	5.50 GPa	798 ksi	5 mm/min; ASTM D638
	93.0 MPa	13500 psi	1.3 mm/min, 50 mm span; ASTM

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength			D790
Flexural Modulus	4.90 GPa	711 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	1.90 J/cm	3.56 ft-lb/in	ASTM D256
Izod Impact, Unnotched	8.00 J/cm	15.0 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	18.0 kJ/m²	8.57 ft-lb/in²	80*10*3; ISO 180/1A
	13.0 kJ/m² @Temperature -30.0 °C	6.19 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	47.0 kJ/m²	22.4 ft-lb/in²	80*10*3; ISO 180/1U
	43.0 kJ/m² @Temperature -30.0 °C	20.5 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched	5.90 J/cm²	28.1 ft-lb/in²	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	5.90 J/cm² @Temperature -30.0 °C	28.1 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	2.10 J/cm²	9.99 ft-lb/in²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.30 J/cm² @Temperature -30.0 °C	6.19 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	30.0 J @Temperature 23.0 °C	22.1 ft-lb @Temperature 73.4 °F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	30.0 µm/m-°C @Temperature 23.0 - 80.0 °C	16.7 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
	30.0 µm/m-°C @Temperature -40.0 - 40.0 °C	16.7 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
CTE, linear, Transverse to Flow	80.0 µm/m-°C @Temperature 23.0 - 80.0 °C	44.4 µin/in-°F @Temperature 73.4 - 176 °F	ISO 11359-2
	80.0 µm/m-°C @Temperature -40.0 - 40.0 °C	44.4 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	132 °C @Thickness 3.20 mm	270 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	128 °C @Thickness 3.20 mm	262 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	135 °C	275 °F	Rate B/120; ISO 306
UL RTI, Electrical	80.0 °C	176 °F	UL 746B
UL RTI, Mechanical with Impact	80.0 °C	176 °F	UL 746B
UL RTI, Mechanical without Impact	80.0 °C	176 °F	UL 746B
Flammability, UL94	HB @Thickness 0.400 mm	HB @Thickness 0.0157 in	UL 94

Descriptive Properties	Value	Comments
Ball Pressure Test, 125°C +/- 2°C	PASSES	IEC 60695-10-2

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