

SABIC Innovative Plastics Lexan® HFD4271 PC (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan® HFD4271 is a 10% glass filled, high flow, impact modified, injection moldable grade designed for high flow and superior surface appearance. HFD4271 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-HFD4271-PC-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.26 g/cc	1.26 g/cc	ASTM D792
Density	1.25 g/cc	0.0452 lb/in ³	ISO 1183
Moisture Absorption	0.0400 %	0.0400 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.13 %	0.13 %	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	15 g/10 min @Load 1.20 kg, Temperature 300 °C	15 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	14 g/10 min @Load 1.20 kg, Temperature 300 °C	14 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	39.0 MPa	5660 psi	Type I, 5 mm/min; ASTM D638
	48.0 MPa	6960 psi	5 mm/min; ISO 527
Tensile Strength, Yield	53.0 MPa	7690 psi	Type I, 5 mm/min; ASTM D638
	59.0 MPa	8560 psi	5 mm/min; ISO 527
Elongation at Break	9.0 %	9.0 %	5 mm/min; ISO 527
Elongation at Yield	3.0 %	3.0 %	5 mm/min; ISO 527
	3.0 %	3.0 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	3.70 GPa	537 ksi	5 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	95.8 MPa	13800 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	3.30 GPa	479 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	2.30 J/cm	4.31 ft-lb/in	ASTM D256
Izod Impact, Unnotched	17.0 J/cm	31.8 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	20.0 kJ/m ²	9.52 ft-lb/in ²	80*10*3; ISO 180/1A
	9.00 kJ/m ² @Temperature -30.0 °C	4.28 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	93.0 kJ/m ²	44.3 ft-lb/in ²	80*10*3; ISO 180/1U
	68.0 kJ/m ² @Temperature -30.0 °C	32.4 ft-lb/in ² @Temperature -22.0 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched	11.0 J/cm ²	52.3 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	10.2 J/cm ² @Temperature -30.0 °C	48.5 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	1.80 J/cm ²	8.57 ft-lb/in ²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	0.900 J/cm ² @Temperature -30.0 °C	4.28 ft-lb/in ² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	36.0 J @Temperature 23.0 °C	26.6 ft-lb @Temperature 73.4 °F	ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	30.0 µm/m-°C	16.7 µin/in-°F	ISO 11359-2
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
	40.0 µm/m-°C	22.2 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
CTE, linear, Transverse to Flow	70.0 µm/m-°C	38.9 µin/in-°F	ASTM E 831
	@Temperature -40.0 - 40.0 °C	@Temperature -40.0 - 104 °F	
	80.0 µm/m-°C	44.4 µin/in-°F	ISO 11359-2

Thermal Properties	@Temperature 23.0 - Metric 30.0 °C	@Temperature 73.4 - English 170 °F	Comments
Deflection Temperature at 0.46 MPa (66 psi)	131 °C @Thickness 3.20 mm	268 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	125 °C @Thickness 3.20 mm	257 °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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