SABIC Innovative Plastics Lexan® HFD4413 PC (Asia Pacific)

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Lexan* HFD4413 is a 30% glass filled, injection moldable grade designed for high flow and superior surface appearance. Internal mold release.

Order this product through the following link:
http://www.lookpolymers.com/polymer_SABIC-Innovative-Plastics-Lexan-HFD4413-PC-Asia-Pacific.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.43 g/cc	1.43 g/cc	ASTM D792
Density	1.44 g/cc	0.0520 lb/in³	ISO 1183
Moisture Absorption	0.120 %	0.120 %	23°C / 50% RH; ISO 62
Water Absorption at Saturation	0.30 %	0.30 %	ISO 62
Linear Mold Shrinkage, Flow	0.0010 - 0.0030 cm/cm @Thickness 3.20 mm	0.0010 - 0.0030 in/in @Thickness 0.126 in	SABIC Method
Linear Mold Shrinkage, Transverse	0.0010 - 0.0030 cm/cm @Thickness 3.20 mm	0.0010 - 0.0030 in/in @Thickness 0.126 in	SABIC Method
Melt Flow	16 g/10 min @Load 1.20 kg, Temperature 300 °C	16 g/10 min @Load 2.65 lb, Temperature 572 °F	ASTM D1238
Melt Index of Compound	18 g/10 min @Load 1.20 kg, Temperature 300 °C	18 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	111 MPa	16100 psi	Type I, 5 mm/min; ASTM D638
	125 MPa	18100 psi	5 mm/min; ISO 527
Tensile Strength, Yield	111 MPa	16100 psi	Type I, 5 mm/min; ASTM D638
	115 MPa	16700 psi	5 mm/min; ISO 527
Elongation at Break	2.1 %	2.1 %	5 mm/min; ISO 527
Elongation at Yield	2.5 %	2.5 %	5 mm/min; ISO 527
	3.0 %	3.0 %	Type I, 5 mm/min; ASTM D638
Tensile Modulus	7.87 GPa	1140 ksi	5 mm/min; ASTM D638

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	182 MPa	26400 psi	1.3 mm/min, 50 mm span; ASTM D790
Flexural Modulus	7.76 GPa	1130 ksi	1.3 mm/min, 50 mm span; ASTM D790
Izod Impact, Notched	1.33 J/cm	2.49 ft-lb/in	ASTM D256
Izod Impact, Unnotched	8.52 J/cm	16.0 ft-lb/in	ASTM D4812
Izod Impact, Notched (ISO)	10.0 kJ/m²	4.76 ft-lb/in²	80*10*3; ISO 180/1A
	10.0 kJ/m² @Temperature -30.0 °C	4.76 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1A
Izod Impact, Unnotched (ISO)	37.0 kJ/m²	17.6 ft-lb/in²	80*10*3; ISO 180/1U
	30.0 kJ/m² @Temperature -30.0 °C	14.3 ft-lb/in² @Temperature -22.0 °F	80*10*3; ISO 180/1U
Charpy Impact Unnotched	4.00 J/cm²	19.0 ft-lb/in²	Edgew 80*10*3 sp=62mm; ISO 179/1eU
	4.90 J/cm² @Temperature -30.0 °C	23.3 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eU
Charpy Impact, Notched	1.20 J/cm²	5.71 ft-lb/in²	Edgew 80*10*3 sp=62mm; ISO 179/1eA
	1.10 J/cm² @Temperature -30.0 °C	5.23 ft-lb/in² @Temperature -22.0 °F	Edgew 80*10*3 sp=62mm; ISO 179/1eA
Dart Drop, Total Energy	17.0 J @Temperature 23.0 °C	12.5 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	70.0 µm/m-°C @Temperature -40.0 - 40.0 °C	38.9 µin/in-°F @Temperature -40.0 - 104 °F	ASTM E 831
	70.0 µm/m-°C	38.9 µin/in-°F	ISO 11359-2

Thermal Properties	Metric	English	Comments
	@Temperature 23.0 - 80.0 °C	@Temperature 73.4 - 176 °F	
Deflection Temperature at 0.46 MPa (66 psi)	130 °C @Thickness 3.20 mm	266 °F @Thickness 0.126 in	unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	129 °C	264 °F	Flatw 80*10*4 sp=64mm; ISO 75/Af
	125 °C @Thickness 3.20 mm	257 °F @Thickness 0.126 in	unannealed; ASTM D648
Vicat Softening Point	143 °C	289 °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 0.300 mm	HB @Thickness 0.0118 in	UL 94
Glow Wire Test	850 °C	1560 °F	IEC 60695-2-13
	960 °C @Thickness 2.00 mm	1760 °F @Thickness 0.0787 in	IEC 60695-2-12

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

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