

LEXAN™ HFD4271 resin

Polycarbonate

SABIC Innovative Plastics Asia Pacific

Message:

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.

General Information			
UL YellowCard	E207780-101177358		
Filler / Reinforcement	Glass Fiber,10% Filler by Weight		
Additive	Impact Modifier		
Features	Ductile		
	Good Mold Release		
	Good Surface Finish		
	High Flow		
	Impact Modified		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.26	g/cm ³	ASTM D792
--	1.25	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	14.0	cm ³ /10min	ISO 1133
Molding Shrinkage			Internal Method
Flow : 3.20 mm	0.20 to 0.30	%	
Across Flow : 3.20 mm	0.40 to 0.50	%	
Water Absorption			ISO 62
Saturation, 23°C	0.13	%	
Equilibrium, 23°C, 50% RH	0.040	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹	3700	MPa	ASTM D638
Tensile Strength			
Yield ²	53.0	MPa	ASTM D638
Yield	59.0	MPa	ISO 527-2/5
Break ³	39.0	MPa	ASTM D638
Break	48.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	3.0	%	ASTM D638
Yield	3.0	%	ISO 527-2/5

Break	9.0	%	ISO 527-2/5
Flexural Modulus ⁵ (50.0 mm Span)	3300	MPa	ASTM D790
Flexural Strength ⁶ (Yield, 50.0 mm Span)	95.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁷			ISO 179/1eA
-30°C	9.0	kJ/m ²	
23°C	18	kJ/m ²	
Charpy Unnotched Impact Strength ⁸			ISO 179/1eU
-30°C	100	kJ/m ²	
23°C	110	kJ/m ²	
Notched Izod Impact			
23°C	230	J/m	ASTM D256
-30°C ⁹	9.0	kJ/m ²	ISO 180/1A
23°C ¹⁰	20	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	1700	J/m	ASTM D4812
-30°C ¹¹	68	kJ/m ²	ISO 180/1U
23°C ¹²	93	kJ/m ²	ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	36.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 3.20 mm	131	°C	
1.8 MPa, Unannealed, 3.20 mm	125	°C	
Vicat Softening Temperature	135	°C	ISO 306/B120
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
CLTE			
Flow : -40 to 40°C	4.0E-5	cm/cm/°C	ASTM E831
Flow : 23 to 80°C	3.0E-5	cm/cm/°C	ISO 11359-2
Transverse : -40 to 40°C	7.0E-5	cm/cm/°C	ASTM E831
Transverse : 23 to 80°C	8.0E-5	cm/cm/°C	ISO 11359-2
RTI Elec	80.0	°C	UL 746
RTI Imp	80.0	°C	UL 746
RTI Str	80.0	°C	UL 746
Flammability	Nominal Value		Test Method
Flame Rating (0.400 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 to 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 to 60	%	

Rear Temperature	266 to 288	°C
Middle Temperature	277 to 299	°C
Front Temperature	288 to 310	°C
Nozzle Temperature	282 to 304	°C
Processing (Melt) Temp	288 to 310	°C
Mold Temperature	71.1 to 93.3	°C
Back Pressure	0.345 to 0.689	MPa
Screw Speed	40 to 70	rpm
Vent Depth	0.025 to 0.076	mm

NOTE

1.	5.0 mm/min
2.	Type I, 5.0 mm/min
3.	Type I, 5.0 mm/min
4.	Type I, 5.0 mm/min
5.	1.3 mm/min
6.	1.3 mm/min
7.	80*10*3 sp=62mm
8.	80*10*3 sp=62mm
9.	80*10*3
10.	80*10*3
11.	80*10*3
12.	80*10*3

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