



**LEXAN™ Resin HFD4271**  
**Americas: COMMERCIAL**

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.

TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>MECHANICAL</b>			
Tensile Stress, yld, Type I, 5 mm/min	540	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	390	kgf/cm <sup>2</sup>	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	3	%	ASTM D 638
Tensile Modulus, 5 mm/min	37700	kgf/cm <sup>2</sup>	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	960	kgf/cm <sup>2</sup>	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	33600	kgf/cm <sup>2</sup>	ASTM D 790
Tensile Stress, yield, 5 mm/min	59	MPa	ISO 527
Tensile Stress, break, 5 mm/min	48	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	3	%	ISO 527
Tensile Strain, break, 5 mm/min	9	%	ISO 527
<b>IMPACT</b>			
Izod Impact, unnotched, 23°C	173	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	23	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	367	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*3 +23°C	93	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	68	kJ/m <sup>2</sup>	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	20	kJ/m <sup>2</sup>	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	9	kJ/m <sup>2</sup>	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	18	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	9	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	110	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	102	kJ/m <sup>2</sup>	ISO 179/1eU

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(2) Only typical data for selection purposes. Not to be used for part or tool design.  
 (3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.  
 (5) Measurements made from laboratory test coupon. Actual shrinkage may vary outside of range due to differences in processing conditions, equipment, part geometry and tool design. It is recommended that mold shrinkage studies be performed with surrogate or legacy tooling prior to cutting tools for new molded article.  
 (6) Needs hard coat to consistently pass 60 sec Vertical Burn.

Source GMD, last updated:

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TYPICAL PROPERTIES <sup>1</sup>	TYPICAL VALUE	Unit	Standard
<b>THERMAL</b>			
HDT, 0.45 MPa, 3.2 mm, unannealed	131	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, unannealed	125	°C	ASTM D 648
CTE, -40°C to 40°C, flow	4.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.E-05	1/°C	ASTM E 831
CTE, 23°C to 80°C, flow	3.E-05	1/°C	ISO 11359-2
CTE, 23°C to 80°C, xflow	8.E-05	1/°C	ISO 11359-2
Ball Pressure Test, 125°C +/- 2°C	PASSES	-	IEC 60695-10-2
Vicat Softening Temp, Rate B/120	135	°C	ISO 306
Relative Temp Index, Elec	80	°C	UL 746B
Relative Temp Index, Mech w/impact	80	°C	UL 746B
Relative Temp Index, Mech w/o impact	80	°C	UL 746B
<b>PHYSICAL</b>			
Specific Gravity	1.26	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.2 - 0.3	%	SABIC Method
Mold Shrinkage, xflow, 3.2 mm (5)	0.4 - 0.5	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	15	g/10 min	ASTM D 1238
Density	1.25	g/cm <sup>3</sup>	ISO 1183
Water Absorption, (23°C/sat)	0.13	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.04	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	14	cm <sup>3</sup> /10 min	ISO 1133
<b>FLAME CHARACTERISTICS</b>			
UL Recognized, 94HB Flame Class Rating (3)	0.4	mm	UL 94

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
<b>Injection Molding</b>		
Drying Temperature	120	°C
Drying Time	3 - 4	hrs
Drying Time (Cumulative)	48	hrs
Maximum Moisture Content	0.02	%
Melt Temperature	290 - 310	°C
Nozzle Temperature	280 - 305	°C
Front - Zone 3 Temperature	290 - 310	°C
Middle - Zone 2 Temperature	275 - 300	°C
Rear - Zone 1 Temperature	265 - 290	°C
Mold Temperature	70 - 95	°C
Back Pressure	0.3 - 0.7	MPa
Screw Speed	40 - 70	rpm
Shot to Cylinder Size	40 - 60	%
Vent Depth	0.025 - 0.076	mm

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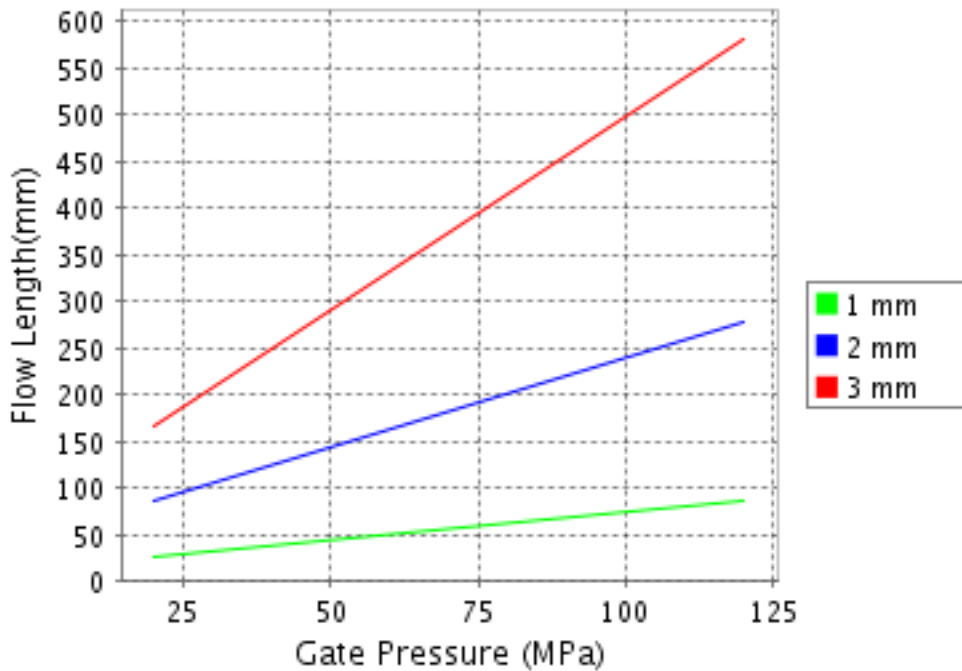
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**CALCULATED FLOW LENGTH INDICATION**  
**Moldflow® Radial Flow Analysis**  
**LEXAN® HFD4271**  
**Melt Temperature : 300°C**  
**Mold Temperature : 85°C**



**Note: Technical support is recommended if Gate Pressure is greater than 80 MPa. Contact your local representative.**  
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