



LEXAN™ Resin HFD4472
Americas: COMMERCIAL

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.

TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 5 mm/min	550	kgf/cm ²	ASTM D 638
Tensile Stress, brk, Type I, 5 mm/min	570	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	2	%	ASTM D 638
Tensile Modulus, 5 mm/min	56000	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	940	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	49900	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 5 mm/min	54	MPa	ISO 527
Tensile Stress, break, 5 mm/min	56	MPa	ISO 527
Tensile Strain, break, 5 mm/min	2	%	ISO 527
IMPACT			
Izod Impact, unnotched, 23°C	81	cm-kgf/cm	ASTM D 4812
Izod Impact, notched, 23°C	19	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	305	cm-kgf	ASTM D 3763
Izod Impact, unnotched 80*10*3 +23°C	47	kJ/m ²	ISO 180/1U
Izod Impact, unnotched 80*10*3 -30°C	43	kJ/m ²	ISO 180/1U
Izod Impact, notched 80*10*3 +23°C	18	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*3 -30°C	13	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*3 sp=62mm	21	kJ/m ²	ISO 179/1eA
Charpy -30°C, V-notch Edgew 80*10*3 sp=62mm	13	kJ/m ²	ISO 179/1eA
Charpy 23°C, Unnotch Edgew 80*10*3 sp=62mm	59	kJ/m ²	ISO 179/1eU
Charpy -30°C, Unnotch Edgew 80*10*3 sp=62mm	59	kJ/m ²	ISO 179/1eU
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	132	°C	ASTM D 648

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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 ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
HDT, 1.82 MPa, 3.2mm, unannealed	128	°C	ASTM D 648
CTE, -40°C to 40°C, flow	3.E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	8.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
PHYSICAL			
Specific Gravity	1.33	-	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	10	g/10 min	ASTM D 1238
Density	1.33	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.12	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.04	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	9	cm ³ /10 min	ISO 1133
ELECTRICAL			
Dielectric Constant, 1.9 GHz	3.16	-	SABIC Method
Dissipation Factor, 1.9 GHz	0.0099	-	SABIC Method
FLAME CHARACTERISTICS			
UL Recognized, 94HB Flame Class Rating (3)	0.4	mm	UL 94

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PROCESSING PARAMETERS	TYPICAL VALUE	Unit
Injection Molding		
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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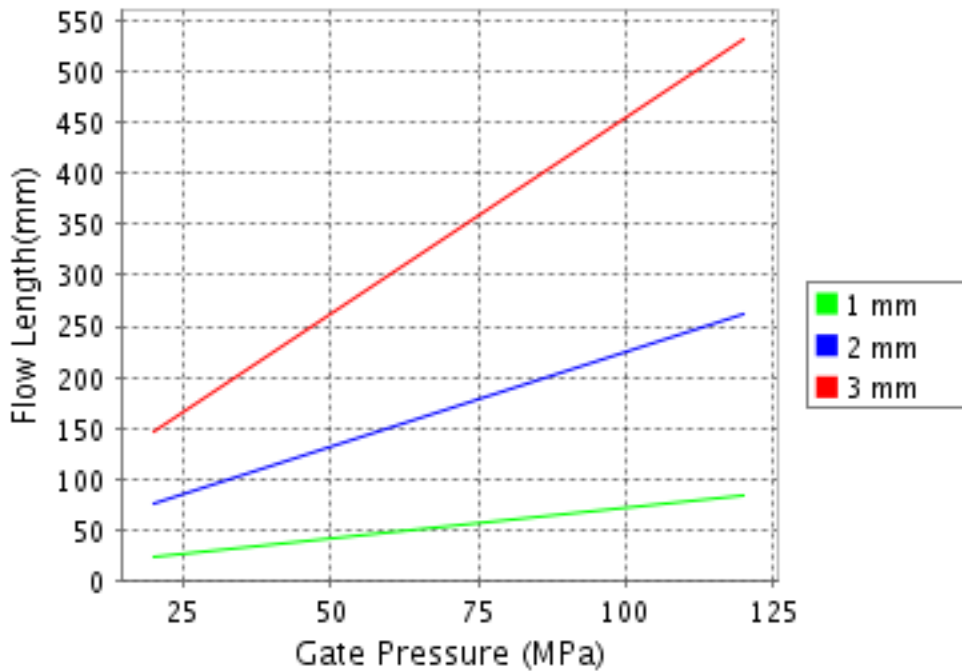
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CALCULATED FLOW LENGTH INDICATION
Moldflow® Radial Flow Analysis
LEXAN® HFD4472
Melt Temperature : 295°C
Mold Temperature : 100°C



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