



LEXAN™ Resin BFL4000U

Americas: COMMERCIAL

LEXAN BFL4000U Polycarbonate resin is an injection moldable grade. It contains non-brominated, non-chlorinated flame retardant systems with UL-94 V0 rating and good impact/flow balance. Designed for high light reflectance and light shielding applications with good UV weathering capability.

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	470	kgf/cm ²	ASTM D 638
Tensile Strain, yld, Type I, 5 mm/min	5	%	ASTM D 638
Tensile Strain, brk, Type I, 5 mm/min	56	%	ASTM D 638
Tensile Modulus, 5 mm/min	22800	kgf/cm ²	ASTM D 638
Flexural Stress, yld, 1.3 mm/min, 50 mm span	910	kgf/cm ²	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	20900	kgf/cm ²	ASTM D 790
Tensile Stress, yield, 5 mm/min	50	MPa	ISO 527
Tensile Stress, break, 5 mm/min	44	MPa	ISO 527
Tensile Strain, yield, 5 mm/min	6	%	ISO 527
Tensile Strain, break, 5 mm/min	74	%	ISO 527
Tensile Modulus, 1 mm/min	2040	MPa	ISO 527
Flexural Stress, yield, 2 mm/min	83	MPa	ISO 178
Flexural Modulus, 2 mm/min	2170	MPa	ISO 178
IMPACT			
Izod Impact, notched, 23°C	47	cm-kgf/cm	ASTM D 256
Izod Impact, notched, -30°C	24	cm-kgf/cm	ASTM D 256
Instrumented Impact Total Energy, 23°C	693	cm-kgf	ASTM D 3763
Izod Impact, notched 80*10*4 +23°C	30	kJ/m ²	ISO 180/1A
Izod Impact, notched 80*10*4 -30°C	20	kJ/m ²	ISO 180/1A
Charpy 23°C, V-notch Edgew 80*10*4 sp=62mm	30	kJ/m ²	ISO 179/1eA
THERMAL			
Vicat Softening Temp, Rate B/50	136	°C	ASTM D 1525



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TYPICAL PROPERTIES ¹	TYPICAL VALUE	Unit	Standard
THERMAL			
HDT, 0.45 MPa, 3.2 mm, unannealed	131	°C	ASTM D 648
HDT, 1.82 MPa, 3.2mm, annealed	115	°C	ASTM D 648
HDT, 0.45 MPa, 6.4 mm, unannealed	134	°C	ASTM D 648
HDT, 1.82 MPa, 6.4 mm, unannealed	124	°C	ASTM D 648
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, xflow	7.5E-05	1/°C	ASTM E 831
CTE, -40°C to 40°C, flow	7.5E-05	1/°C	ISO 11359-2
CTE, -40°C to 40°C, xflow	7.5E-05	1/°C	ISO 11359-2
Vicat Softening Temp, Rate B/50	137	°C	ISO 306
Vicat Softening Temp, Rate B/120	139	°C	ISO 306
HDT/Bf, 0.45 MPa Flatw 80*10*4 sp=64mm	130	°C	ISO 75/Bf
HDT/Af, 1.8 MPa Flatw 80*10*4 sp=64mm	115	°C	ISO 75/Af
PHYSICAL			
Specific Gravity	1.38	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm (5)	0.5 - 0.7	%	SABIC Method
Melt Flow Rate, 300°C/1.2 kgf	24	g/10 min	ASTM D 1238
Density	1.38	g/cm ³	ISO 1183
Water Absorption, (23°C/sat)	0.35	%	ISO 62
Moisture Absorption (23°C / 50% RH)	0.15	%	ISO 62
Melt Volume Rate, MVR at 300°C/1.2 kg	22	cm ³ /10 min	ISO 1133
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	1.5	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	270 - 295	°C
Nozzle Temperature	265 - 290	°C
Front - Zone 3 Temperature	270 - 295	°C
Middle - Zone 2 Temperature	260 - 280	°C
Rear - Zone 1 Temperature	250 - 270	°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