

LEXAN™ 505RU resin

Polycarbonate

SABIC Innovative Plastics

Message:

LEXAN 505RU is a 10% glass reinforced, flame retardant (FR) grade with non brominated and non chlorinated FR systems and UV stabilization packages. This product is intended for applications to meet WEEE/RoHS regulations as well as various voluntary environmental labels.

General Information			
UL YellowCard	E45329-100059996		
Filler / Reinforcement	Glass fiber reinforced material, 10% filler by weight		
Additive	UV stabilizer		
Features	Chlorine Free		
	Bromine-free		
	Flame retardancy		
RoHS Compliance	RoHS compliance		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.26	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	8.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	7.00	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 - 0.60	%	Internal method
Water Absorption			ISO 62
Saturated, 23°C	0.30	%	ISO 62
Equilibrium, 23°C, 50% RH	0.15	%	ISO 62
Outdoor Suitability	f1		UL 746C
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
-- ¹	3600	MPa	ASTM D638
--	3500	MPa	ISO 527-2/1
Tensile Strength			
Yield ²	74.0	MPa	ASTM D638
Yield	72.0	MPa	ISO 527-2/5
Fracture ³	62.0	MPa	ASTM D638
Fracture	60.0	MPa	ISO 527-2/5
Tensile Elongation			
Yield ⁴	4.0	%	ASTM D638
Yield	3.0	%	ISO 527-2/5
Fracture ⁵	6.0	%	ASTM D638
Fracture	6.0	%	ISO 527-2/5

Flexural Modulus			
50.0mm span ⁶	3200	MPa	ASTM D790
-- ⁷	3500	MPa	ISO 178
Flexural Stress			
--	122	MPa	ISO 178
Yield, 50.0mm span ⁸	114	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁹			ISO 179/1eA
-30°C	7.0	kJ/m ²	ISO 179/1eA
23°C	10	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength ¹⁰			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact			
-30°C	70	J/m	ASTM D256
23°C	90	J/m	ASTM D256
-30°C ¹¹	8.0	kJ/m ²	ISO 180/1A
23°C ¹²	10	kJ/m ²	ISO 180/1A
Unnotched Izod Impact			
23°C	1200	J/m	ASTM D4812
-30°C ¹³	73	kJ/m ²	ISO 180/1U
23°C ¹⁴	No Break		ISO 180/1U
Instrumented Dart Impact (23°C, Total Energy)	25.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
1.8 MPa, unannealed, 3.20mm	137	°C	ASTM D648
1.8 MPa, unannealed, 64.0mm span ¹⁵	136	°C	ISO 75-2/Af
Vicat Softening Temperature			
--	149	°C	ASTM D1525, ISO 306/B120 11 ¹⁶
--	147	°C	ISO 306/B50
Ball Pressure Test (125°C)	Pass		IEC 60695-10-2
Linear thermal expansion coefficient			
Flow: -40 to 40°C	5.0E-5	cm/cm/°C	ASTM E831, ISO 11359-2
Lateral: -40 to 40°C	7.4E-5	cm/cm/°C	ASTM E831
Lateral: -40 to 40°C	8.5E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Comparative Tracking Index (CTI)	PLC 3		UL 746
Comparative Tracking Index	175	V	IEC 60112
High Amp Arc Ignition (HAI)	PLC 0		UL 746
Hot-wire Ignition (HWI)	PLC 3		UL 746
Flammability	Nominal Value	Unit	Test Method

Flame Rating			UL 94
0.750 mm, Testing by SABIC	V-2		UL 94
1.50 mm, Testing by SABIC	V-0		UL 94
	5VB		
3.00 mm, Testing by SABIC	5VA		UL 94
Glow Wire Flammability Index (0.750 mm)	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature			IEC 60695-2-13
1.00 mm	850	°C	IEC 60695-2-13
3.00 mm	875	°C	IEC 60695-2-13
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	
Drying Time	3.0 - 4.0	hr	
Drying Time, Maximum	48	hr	
Suggested Max Moisture	0.020	%	
Suggested Shot Size	40 - 60	%	
Rear Temperature	288 - 310	°C	
Middle Temperature	299 - 321	°C	
Front Temperature	310 - 332	°C	
Nozzle Temperature	304 - 327	°C	
Processing (Melt) Temp	310 - 332	°C	
Mold Temperature	82.2 - 116	°C	
Back Pressure	0.345 - 0.689	MPa	
Screw Speed	40 - 70	rpm	
Vent Depth	0.025 - 0.076	mm	
NOTE			
1.	5.0 mm/min		
2.	Type 1, 5.0 mm/min		
3.	Type 1, 5.0 mm/min		
4.	Type 1, 5.0 mm/min		
5.	Type 1, 5.0 mm/min		
6.	1.3 mm/min		
7.	2.0 mm/min		
8.	1.3 mm/min		
9.	80*10*3 sp=62mm		
10.	80*10*3 sp=62mm		
11.	80*10*3		
12.	80*10*3		
13.	80*10*3		
14.	80*10*3		
15.	80*10*4 mm		

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