

LEXAN* ML4249 Resin

Polycarbonate
SABIC Innovative Plastics

Technical Data

Product Description

Polycarbonate for aircraft applications requiring FAR 25.853a compliance. Transparent, translucent and opaque colors. For blow molding.

General

Material Status	• Commercial: Active		
Literature ¹	• Technical Datasheet		
Search for UL Yellow Card	• SABIC Innovative Plastics • LEXAN*		
Availability	• North America		
Uses	• Aircraft Applications		
Agency Ratings	• FAR 25-25853A		
Appearance	• Clear/Transparent	• Opaque	• Translucent
Processing Method	• Injection Molding		

Physical	Nominal Value Unit	Test Method
Specific Gravity	1.28 g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	2.8 g/10 min	ASTM D1238

Mechanical	Nominal Value Unit	Test Method
Tensile Strength ³		ASTM D638
Yield	67.6 MPa	
Break	60.0 MPa	
Tensile Elongation ³ (Yield)	85 %	ASTM D638
Flexural Modulus ⁴ (50.0 mm Span)	2710 MPa	ASTM D790
Flexural Strength ⁴ (Yield, 50.0 mm Span)	105 MPa	ASTM D790

Impact	Nominal Value Unit	Test Method
Notched Izod Impact (23°C)	91 J/m	ASTM D256
Unnotched Izod Impact (23°C)	3200 J/m	ASTM D4812
Instrumented Dart Impact 23°C, Energy at Peak Load	49.7 J	ASTM D3763
Tensile Impact Strength ⁵	494 kJ/m²	ASTM D1822

Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load 1.8 MPa, Unannealed, 6.40 mm	146 °C	ASTM D648

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	299 to 321 °C
Middle Temperature	310 to 332 °C
Front Temperature	321 to 343 °C
Nozzle Temperature	316 to 338 °C
Processing (Melt) Temp	321 to 343 °C
Mold Temperature	82.2 to 116 °C
Back Pressure	0.345 to 0.689 MPa
Screw Speed	40 to 70 rpm
Vent Depth	0.025 to 0.076 mm