

Panlite® AD-5503

TEIJIN LIMITED - Polycarbonate

General Information			
Product Description			
Optical grade			
General			
Properties	• Ultra Low Viscosity		
Uses	• Lenses	• Optical Applications	
Appearance	• Clear/Transparent		
Forms	• Pellets		
Processing Method	• Injection Molding		
ASTM & ISO Properties ¹			
Physical	Nominal Value	Unit	Test Method
Density	1.20	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)	54	cm³/10min	ISO 1133
Molding Shrinkage			Internal Method
Across Flow : 4.00 mm	0.50 to 0.70	%	
Flow : 4.00 mm	0.50 to 0.70	%	
Water Absorption (24 hr, 23°C)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (23°C)	2450	MPa	ISO 527-1/1
Tensile Stress (Yield, 23°C)	63.0	MPa	ISO 527-2/50
Tensile Strain (Yield, 23°C)	6.0	%	ISO 527-2/50
Nominal Tensile Strain at Break (23°C)	> 50	%	ISO 527-2/50
Flexural Modulus ² (23°C)	2400	MPa	ISO 178
Flexural Stress ² (23°C)	96.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	3.0	kJ/m²	ISO 179
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ISO 75-2/B
0.45 MPa, Unannealed	138	°C	
Deflection Temperature Under Load			ISO 75-2/A
1.8 MPa, Unannealed	124	°C	
Vicat Softening Temperature	143	°C	ISO 306/B50
CLTE - Flow	7.0E-5	cm/cm/°C	ISO 11359-2
CLTE - Transverse	7.0E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength ³	30	kV/mm	IEC 60243-1

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Electrical	Nominal Value	Unit	Test Method
Relative Permittivity			IEC 60250
100 Hz	3.10		
1 MHz	3.00		
Dissipation Factor			IEC 60250
100 Hz	1.0E-3		
1 MHz	9.0E-3		
Comparative Tracking Index	250	V	IEC 60112
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.585		ASTM D542
Light Transmittance (3000 μm)	89.0	%	ASTM D1003

Processing Information		
Injection	Nominal Value	Unit
Drying Temperature	120	°C
Drying Time	5.0 to 8.0	hr
Processing (Melt) Temp	260 to 320	°C
Mold Temperature	80 to 120	°C

Notes

- ¹ Typical properties: these are not to be construed as specifications.
- ² 2.0 mm/min
- ³ short time test