

Diakon® CMH454L

Polymethyl Methacrylate Acrylic

Lucite International Inc.

General		
Material Status	• Commercial: Active	
Availability	• Europe	
Features	• Good Chemical Resistance	• High Heat Resistance
Uses	• Automotive Applications	
Forms	• Granules	
Processing Method	• Extrusion	• Injection Molding

Physical	Nominal Value Unit	Test Method
Density	1.18 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)	1.0 g/10 min	ISO 1133
Water Absorption (Equilibrium, 23°C, 50% RH)	0.30 %	ISO 62

Mechanical	Nominal Value Unit	Test Method
Tensile Stress (Yield)	85.0 MPa	ISO 527-2
Tensile Strain (Yield)	5.0 %	ISO 527-2
Flexural Modulus	3400 MPa	ISO 178
Flexural Strength	120 MPa	ISO 178

Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength	2.2 kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength	23 kJ/m ²	ISO 179/1eU
Notched Izod Impact Strength	2.1 kJ/m ²	ISO 180/1A
Instrumented Dart Impact	0.600 J	ASTM D3763 ISO 6603-2

Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (M-Scale)	99	ISO 2039-2
Ball Indentation Hardness	190 MPa	ISO 2039-1

Thermal	Nominal Value Unit	Test Method
Heat Deflection Temperature		
0.45 MPa, Unannealed	106 °C	ISO 75-2/B
1.8 MPa, Unannealed	102 °C	ISO 75-2/A
Vicat Softening Temperature		
--	118 °C	ISO 306/A
--	109 °C	ISO 306/B
CLTE - Flow	0.000071 cm/cm/°C	ASTM D696

Flammability	Nominal Value Unit	Test Method
Flame Rating - UL	HB	UL 94
Glow Wire Ignition Temperature	650 °C	IEC 60695-2-13

Optical	Nominal Value Unit	Test Method
Refractive Index	1.490	ASTM D542 ISO 489
Transmittance	92.0 %	ASTM D1003
Haze	0.40 %	ASTM D1003

Additional Information		
Mold Shrinkage, H961/30: .4 to .7%.		
Craze Resistance (isopropanol), Ineos cantilever test: >3600 secs to break.		

Notes

¹ Typical properties: these are not to be construed as specifications.