

General Information
Product Description

LUPLOY PC 1303AH-22 Tint Polycarbonate Resin is designed for injection molding of auto-headlamps. It exhibits an excellent physical property balance of heat resistance, transparency and impact strength.

Main Characteristics

- UV Stabilizer
- Low viscosity
- Good mold release
- Listed on AMECA

Applications

- Outdoor applications
- Automotive headlamps

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Latin America	
	• Europe	• North America	
Additive	• UV Stabilizer		
Features	• Good Clarity	• Good Impact Resistance	• Low Viscosity
	• Good Heat Resistance	• Good Mold Release	• UV Resistant
Uses	• Automotive Applications	• Lighting Applications	• Outdoor Applications
UL File Number	• E67171		
Appearance	• Clear/Transparent		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.20	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	22	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.50 to 0.70	%	ASTM D955
Water Absorption (24 hr, 23°C)	0.15	%	ASTM D570
Water Absorption (Equilibrium, 23°C, 50% RH)	0.32	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2340	MPa	ASTM D638
Tensile Strength (Yield)	60.0	MPa	ASTM D638
Tensile Strength (Break)	66.0	MPa	ASTM D638
Tensile Elongation (Yield)	6.0	%	ASTM D638
Tensile Elongation (Break)	120	%	ASTM D638
Flexural Modulus	2410	MPa	ASTM D790
Flexural Strength	96.0	MPa	ASTM D790
Taber Abrasion Resistance - Delta Haze (3.20 mm)	45	%	ASTM D1004
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact ² (23°C, 3.18 mm)	750	J/m	ASTM D256
Unnotched Izod Impact (23°C)	No Break		ASTM D256

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Lupoy® 1303AH-22

LG Chem Ltd. - Polycarbonate

Impact	Nominal Value	Unit	Test Method
Instrumented Dart Impact ³ (23°C, 3.18 mm, Total Energy)	72.0	J	ASTM D3763
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	72		
R-Scale	118		
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Annealed, 4.00 mm	142	°C	
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed, 4.00 mm	126	°C	
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Annealed, 4.00 mm	139	°C	
Vicat Softening Temperature	147	°C	ASTM D1525 ⁴
Ball Indentation Temperature	> 125	°C	IEC 60598-1
CLTE - Flow (-40 to 82°C)	6.8E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity (23°C)	2.0E+17	ohms-cm	ASTM D257
Dielectric Strength	17	kV/mm	ASTM D149
Dielectric Constant (60 Hz)	3.00		ASTM D150
Dissipation Factor (60 Hz)	1.0E-3		ASTM D150
Comparative Tracking Index (2.00 mm)	250	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.5 mm	HB		
3.0 mm	HB		
Glow Wire Ignition Temperature (2.0 mm, 5.0 sec)	850	°C	IEC 60695-2-13
Oxygen Index	26	%	ASTM D2863
Average Extent of Burning	3	cm	ASTM D635
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ASTM D542
Transmittance	89.0	%	ASTM D1003
Haze	0.700 to 1.50	%	ASTM D1003

Notes

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

² 0.25 mm Notch Depth

³ 3.39 m/sec

⁴ Rate A (50°C/h), Loading 2 (50 N)