

General Information
Product Description

LUPLOY PC 1303AH-18 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 Stabilized
Uses	• Automotive Applications	• Lighting Applications	• Outdoor Applications
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)	18	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 ² (Yield, 23°C)	60.0	MPa	ASTM D638
Tensile Strength (Break)	69.0	MPa	ASTM D638
Tensile Elongation (Yield)	6.0	%	ASTM D638
Tensile Elongation (Break)	140	%	ASTM D638
Flexural Modulus	2410	MPa	ASTM D790
Flexural Strength	96.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact ³ (23°C, 3.18 mm)	800	J/m	ASTM D256
Unnotched Izod Impact (23°C)	No Break		ASTM D256
Instrumented Dart Impact ⁴ (23°C, 3.18 mm, Total Energy)	80.0	J	ASTM D3763

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Lupoy® 1303AH-18

LG Chem Ltd. - Polycarbonate

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	143	°C	
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed, 4.00 mm	127	°C	
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Annealed, 4.00 mm	140	°C	
Vicat Softening Temperature	148	°C	ASTM D1525 ⁵
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 50 mm/min

³ 0.25 mm Notch Depth

⁴ 3.39 m/sec

⁵ Rate A (50°C/h), Loading 2 (50 N)