

Lupoy® 1303AH-15

Polycarbonate

LG Chem Ltd.

Message:

LUPOY PC 1303AH-15 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.

General Information			
UL YellowCard	E67171-100907360		
Additive	UV Stabilizer		
Features	Good Impact Resistance		
	Good Mold Release		
	High Clarity		
	High Heat Resistance		
	Medium Viscosity		
Uses	Automotive Applications		
	Outdoor Applications		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	15	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.50 to 0.70	%	ASTM D955
Water Absorption			ASTM D570
23°C, 24 hr	0.15	%	
Equilibrium, 23°C, 50% RH	0.32	%	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	72		
R-Scale	118		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2340	MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	60.0	MPa	
Break	71.0	MPa	
Tensile Elongation			ASTM D638
Yield	6.0	%	
Break	150	%	
Flexural Modulus	2410	MPa	ASTM D790

Flexural Strength	96.0	MPa	ASTM D790
Taber Abrasion Resistance - Change in Haze ¹	45	%	ASTM D1004
Average Extent of Burning	3	cm	ASTM D635
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact ² (23°C, 3.20 mm)	850	J/m	ASTM D256
Unnotched Izod Impact (23°C)	No Break		ASTM D256
Instrumented Dart Impact ³ (23°C, 3.20 mm, Total Energy)	87.0	J	ASTM D3763
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Annealed, 4.00 mm	143	°C	
1.8 MPa, Unannealed, 4.00 mm	127	°C	
1.8 MPa, Annealed, 4.00 mm	140	°C	
Vicat Softening Temperature	148	°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
Glow Wire Ignition Temperature ⁵ (2.00 mm)	850	°C	IEC 60695-2-13
Oxygen Index	26	%	ASTM D2863
Optical	Nominal Value	Unit	Test Method
Refractive Index	1.586		ASTM D542
Transmittance	89.0	%	ASTM D1003
Haze	0.70 to 1.5	%	ASTM D1003
NOTE			
1.	1000g, 500 cycles, CS-10F Wheel		
2.	0.25 mm Notch Depth		
3.	3.38 m/sec		
4.	Rate A (50°C/h), Loading 2 (50 N)		
5.	5 sec		

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