



Lupoy® 1302HP-10
LG Chem Ltd. - Polycarbonate

Saturday, July 20, 2019

General Information

Product Description

LUPLOY PC 1302HP-10 resin is designed for extrusion products. It exhibits an excellent physical property balance of heat resistance, transparency and impact strength.

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Latin America	
	• Europe	• North America	
Additive	• UV Stabilizer		
Features	• Clean/High Purity	• Good Heat Resistance	• Medium Viscosity
	• Good Clarity	• Good Impact Resistance	• UV Stabilized
Uses	• Appliances	• Film	• Lighting Diffusers
Agency Ratings	• EC 1907/2006 (REACH)		
RoHS Compliance	• RoHS Compliant		
UL File Number	• E67171		
Appearance	• Clear/Transparent		
Processing Method	• Extrusion		

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)	10	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	2410	MPa	ASTM D638
Tensile Strength (Yield)	60.0	MPa	ASTM D638
Tensile Strength (Break)	71.0	MPa	ASTM D638
Tensile Elongation (Yield)	6.0	%	ASTM D638
Tensile Elongation (Break)	150	%	ASTM D638
Flexural Modulus	2410	MPa	ASTM D790
Flexural Strength	96.0	MPa	ASTM D790
Taber Abrasion Resistance - Change in Haze ²	45	%	ASTM D1004
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact ³ (23°C, 3.20 mm)	900	J/m	ASTM D256
Unnotched Izod Impact (23°C)	No Break		ASTM D256
Instrumented Dart Impact ⁴ (23°C, 3.20 mm, Total Energy)	87.0	J	ASTM D3763
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness			ASTM D785
M-Scale	73		
R-Scale	118		

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Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load 0.45 MPa, Annealed, 4.00 mm	144	°C	ASTM D648
Deflection Temperature Under Load 1.8 MPa, Unannealed, 4.00 mm	128	°C	ASTM D648
Deflection Temperature Under Load 1.8 MPa, Annealed, 4.00 mm	141	°C	ASTM D648
Vicat Softening Temperature	149	°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 ⁶			UL 94
0.50 mm	V-2		
1.6 mm	V-2		
2.5 mm	V-2		
3.0 mm	V-2		
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 1000g, 500 cycles, CS-10F Wheel

³ 0.25 mm Notch Depth

⁴ 3.38 m/sec

⁵ Rate A (50°C/h), Loading 2 (50 N)

⁶ ASTM D635