ASTALON™ H4000

Polycarbonate

Marplex Australia Pty. Ltd.

Message:

ASTALON™ H4000 is the lowest viscosity (ultra high melt flow) grade in the ASTALON™ range and is well suited to extremely intricate or "difficult to fill" injection moulding applications, especially those requiring stress free mouldings for optical and electrical signal transmittance. Offering a balance of transparency, toughness, heat resistance, flame retardancy and processability, typical applications include domestic video and audio discs (compact discs) as well as digital discs for the computer data and program storage field.

General Information			
Features	Flame Retardant		
	Good Processability		
	Good Toughness		
	High Flow		
	Low Viscosity		
	Medium Clarity		
	Medium Heat Resistance		
Uses	Optical Data Storage		
Processing Method	Injection Molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.20	g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	62	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.00 mm)	0.60	%	ASTM D955
Water Absorption (24 hr)	0.15	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	123		ASTM D785
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength [1] (3.20 mm)	60.0	MPa	ASTM D638
Tensile Elongation [2] (Break, 3.20 mm)	100	%	ASTM D638
Flexural Modulus [3] (6.40 mm)	2300	MPa	ASTM D790
Flexural Strength [4] (6.40 mm)	86.0	MPa	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (3.20 mm)	100	J/m	ASTM D256
Gardner Impact (3.20 mm)	50.0	J	ASTM D3029
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	128	°C	
1.8 MPa, Unannealed, 6.40 mm	121	°C	
CLTE - Flow	6.5E-5	cm/cm/°C	ASTM D696
Electrical	**Nominal Value**	**Unit**	**Test Method**

Volume Resistivity	2.1E+16	ohms·cm	ASTM D257
Dielectric Constant	2.85		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.60 mm)	V-2		UL 94
Optical	Nominal Value	Unit	Test Method
Transmittance (Total, 3000 µm)	85.0	%	ASTM D1003
Injection	Nominal Value	Unit	
Drying Temperature	120 to 125	°C	
Drying Time	4.0 to 6.0	hr	
Rear Temperature	225 to 245	°C	
Middle Temperature	235 to 255	°C	
Front Temperature	245 to 265	°C	
Processing (Melt) Temp	240 to 270	°C	
Mold Temperature	60.0 to 110	°C	
Injection Pressure	60.0 to 140	MPa	
Injection Rate	Moderate		
Back Pressure	0.100 to 0.500	MPa	
Screw Speed	40 to 60	rpm	
Clamp Tonnage	4.0 to 8.0	kN/cm^2	
NOTE			
1.	20 mm/min		
2.	20 mm/min		
3.	2.8 mm/min		
4.	2.8 mm/min		

Recommended distributors for this material

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