Hylex® P1017L

Ravago Manufacturing Americas, LLC - Polycarbonate

Wednesday, 25 August 2010

General Information

Product Description			
For moderately hard to fill parts.			
General			
Material Status	• Commercial: Active		
Availability	• North America		
Features	• General Purpose	• Good Mold Release	• High Flow
Uses	• General Purpose		
Agency Ratings	• FDA 21 CFR 177.1580		
RoHS Compliance	• RoHS Compliant		
Automotive Specifications	• FORD ESF-M4D100-A1 Color: Black	• FORD ESF-M4D100-A1 Color: Clear	
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM and ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.20		ASTM D792
Melt Mass-Flow Rate (300°C/1.2 kg)	17	g/10 min	ASTM D1238
Molding Shrinkage - Flow	0.0050 to 0.0070	in/in	ASTM D955
Water Absorption (24 hr)	0.15	%	ASTM D570
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength (73°F)	10100	psi	ASTM D638
Tensile Elongation (Break, 73°F)	120	%	ASTM D638
Flexural Modulus (73°F)	340000	psi	ASTM D790
Flexural Strength (73°F)	13500	psi	ASTM D790
Impact	**Nominal Value**	**Unit**	**Test Method**
Notched Izod Impact (73°F, 0.125 in)	14.0	ft·lb/in	ASTM D256
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	80		ASTM D785
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (66 psi, Unannealed)	285	°F	ASTM D648
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	265	°F	
Vicat Softening Temperature	310	°F	ASTM D1525
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	4.0E+16	ohm·cm	ASTM D257
Dielectric Strength (0.125 in, in Air)	410	V/mil	ASTM D149
Arc Resistance	120	sec	ASTM D495
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating - UL (0.0200 in)	V-2		UL 94
Optical	**Nominal Value**	**Unit**	**Test Method**
Refractive Index	1.585		ASTM D542

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Optical	Nominal Value	Unit	Test Method
Transmittance (125 mil)	89.0 to 91.0	%	ASTM D1003
Haze (125 mil)	0.50 to 0.80	%	ASTM D1003

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	250	°F
Drying Time	3.0 to 4.0	hr
Drying Time, Maximum	12	hr
Suggested Max Moisture	0.020	%
Suggested Shot Size	40 to 60	%
Rear Temperature	470 to 510	°F
Middle Temperature	490 to 520	°F
Front Temperature	520 to 540	°F
Nozzle Temperature	510 to 530	°F
Processing (Melt) Temp	520 to 550	°F
Mold Temperature	160 to 200	°F
Injection Pressure	900 to 1800	psi
Holding Pressure	600 to 1100	psi
Back Pressure	70.0 to 150	psi
Screw Speed	40 to 70	rpm

Injection Notes

Pressures given are in the hydraulic circuit.

Drying time should not exceed 12 hours to avoid excessive heat history.
Drying time is 5 to 6 hours with regrind.
Dew point of circulating air to be less than -20°F at hopper inlet.
Air throughout minimum of 1 CFM/lb resin/hr.

Notes

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