

LG Chemical Lupoy NF1005F 03R Polycarbonate Resin

Category : Polymer , Thermoplastic , Polycarbonate (PC)

Material Notes:

Description: LUPOY NF 1005F03R, eco-friendly UL94 V0/1.5 mm, is designed for extrusion products. It combines an excellent physical property balance of heat resistance, transparency and impact strength and exhibits excellent processing characteristics. Main Characteristics: Good mold release, High viscosity, Non chlorine, bromine, nor phosphate additives and Complying with global environmental standards Applications: Extrusion application and Information Technology Equipment CAS: 103598-77-2 Information provided by LG Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-Lupoy-NF1005F-03R-Polycarbonate-Resin.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Water Absorption	0.32 %	0.32 %	equilibrium, 50% RH; ASTM D570
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	0.15 %	0.15 %	ASTM D570
	@Temperature 23.0 Â°C, Time 86400 sec	@Temperature 73.4 Â°F, Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.00050 - 0.00070 cm/cm	0.00050 - 0.00070 in/in	ASTM D955
Melt Flow	3.0 g/10 min	3.0 g/10 min	ASTM D1238
	@Load 1.20 kg, Temperature 300 Â°C	@Load 2.65 lb, Temperature 572 Â°F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell M	73	73	ASTM D785
Tensile Strength, Ultimate	66.0 MPa	9570 psi	ASTM D638
Tensile Strength, Yield	62.0 MPa	8990 psi	50mm/min; ASTM D638
Elongation at Break	120 %	120 %	ASTM D638
Elongation at Yield	6.0 %	6.0 %	ASTM D638
Tensile Modulus	2.20 GPa	319 ksi	ASTM D638
Flexural Yield Strength	90.0 MPa	13100 psi	ASTM D790
Flexural Modulus	2.20 GPa	319 ksi	ASTM D790

Mechanical Properties	9.074 J/cm Metric	17.00 ft-lb/in English	Comments
Izod Impact, Notched	@Thickness 3.20 mm, Temperature 23.0 Â°C	@Thickness 0.126 in, Temperature 73.4 Â°F	0.25 mm notch, ASTM D256
Izod Impact, Unnotched	NB @Temperature 23.0 Â°C	NB @Temperature 73.4 Â°F	ASTM D256
Dart Drop, Total Energy	89.0 J @Thickness 3.20 mm	65.6 ft-lb @Thickness 0.126 in	203m/min; ASTM D3763
Abrasion	45 @Load 1.00 kg	45 @Load 2.20 lb	[%], CS-10 F wheel, 500 cycles; ASTM D1044

Thermal Properties	Metric	English	Comments
CTE, linear	68.0 Âµm/m-Â°C @Temperature -40.0 - 82.0 Â°C	37.8 Âµin/in-Â°F @Temperature -40.0 - 180 Â°F	ASTM D696
Hot Ball Pressure Test	>= 125 Â°C	>= 257 Â°F	IEC 598-1
Deflection Temperature at 0.46 MPa (66 psi)	138 Â°C @Thickness 4.00 mm	280 Â°F @Thickness 0.157 in	Unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	126 Â°C @Thickness 4.00 mm	259 Â°F @Thickness 0.157 in	Unannealed; ASTM D648
Vicat Softening Point	147 Â°C @Load 5.10 kg	297 Â°F @Load 11.2 lb	50Â°C/hr; ASTM D1525
Softening Point	150 - 200 Â°C	302 - 392 Â°F	melting point per MSDS
UL RTI, Electrical	130 Â°C @Thickness >=0.750 mm	266 Â°F @Thickness >=0.0295 in	
	130 Â°C @Thickness >=1.50 mm	266 Â°F @Thickness >=0.0591 in	
	130 Â°C @Thickness >=2.00 mm	266 Â°F @Thickness >=0.0787 in	
	130 Â°C @Thickness >=3.00 mm	266 Â°F @Thickness >=0.118 in	
	110 Â°C	230 Â°F	

Thermal Properties with Impact	Metric @ Thickness >=0.750 mm	English @ Thickness >=0.0295 in	Comments
	110 Â°C	230 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	110 Â°C	230 Â°F	
	@Thickness >=2.00 mm	@Thickness >=0.0787 in	
	110 Â°C	230 Â°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
UL RTI, Mechanical without Impact	130 Â°C	266 Â°F	
	@Thickness >=0.750 mm	@Thickness >=0.0295 in	
	130 Â°C	266 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	130 Â°C	266 Â°F	
	@Thickness >=2.00 mm	@Thickness >=0.0787 in	
	130 Â°C	266 Â°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
Flammability, UL94	V-0	V-0	ASTM D635
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	V-0	V-0	ASTM D635
	@Thickness 2.00 mm	@Thickness 0.0787 in	
	V-0	V-0	ASTM D635
	@Thickness 3.00 mm	@Thickness 0.118 in	
Flash Point	>= 450 Â°C	>= 842 Â°F	
Oxygen Index	35 %	35 %	ASTM D2863
Glow Wire Test	960 Â°C	1760 Â°F	IEC 695-2-1
	@Thickness 2.00 mm, Time 5.00 sec	@Thickness 0.0787 in, Time 0.00139 hour	

Optical Properties	Metric	English	Comments
Refractive Index	1.586	1.586	ASTM D542

Optical Properties	Metric	English	Comments
Transmission, Visible	89 %	89 %	ASTM D1003

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+17 ohm-cm	2.00e+17 ohm-cm	ASTM D257
Dielectric Constant	3.0 @Frequency 60.0 Hz	3.0 @Frequency 60.0 Hz	ASTM D150
Dielectric Strength	17.0 kV/mm	432 kV/in	ASTM D149
Dissipation Factor	0.0010 @Frequency 60.0 Hz	0.0010 @Frequency 60.0 Hz	ASTM D150
Arc Resistance	0.00 - 60 sec	0.00 - 60 sec	ASTM D495
Comparative Tracking Index	225 V @Thickness 2.00 mm	225 V @Thickness 0.0787 in	IEC 112
Hot Wire Ignition, HWI	15 - 30 sec @Thickness >=2.00 mm	15 - 30 sec @Thickness >=0.0787 in	
	15 - 30 sec @Thickness >=1.50 mm	15 - 30 sec @Thickness >=0.0591 in	
	30 - 60 sec @Thickness >=3.00 mm	30 - 60 sec @Thickness >=0.118 in	
High Amp Arc Ignition, HAI	>= 120 arcs @Thickness 3.00 mm	>= 120 arcs @Thickness 0.118 in	
	>= 120 arcs @Thickness 2.00 mm	>= 120 arcs @Thickness 0.0787 in	
	>= 120 arcs @Thickness 1.50 mm	>= 120 arcs @Thickness 0.0591 in	
High Voltage Arc-Tracking Rate, HVTR	80.0 - 150 mm/min	3.15 - 5.91 in/min	

Descriptive Properties	Value	Comments
Autoignition Temperature	>450Â°C	

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