

LG Chemical KEYFLEX BT 1055D Ester Type TPE

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyester, TP , Polyester Thermoplastic Elastomer

Material Notes:

Description: Injection Molding, TPC-ET, General Purpose, Medium Modulus
 Application: Antenna Cover, Injection Parts for Leisure & Sports
 CAS: 37282-12-5
 Information provided by LG Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-KEYFLEX-BT-1055D-Ester-Type-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.20 g/cc	1.20 g/cc	ASTM D792
Water Absorption	0.60 % @Temperature 23.0 Â°C, Time 86400 sec	0.60 % @Temperature 73.4 Â°F, Time 24.0 hour	ASTM D570
Molecular Weight	458.458 g/mol	458.458 g/mol	
Maximum Moisture Content	0.010	0.010	Injection Molding
	0.010	0.010	Extrusion Molding
Linear Mold Shrinkage, Flow	0.011 - 0.015 cm/cm @Thickness 3.20 mm	0.011 - 0.015 in/in @Thickness 0.126 in	ASTM D955
Melt Flow	25 g/10 min @Load 2.16 kg, Temperature 230 Â°C	25 g/10 min @Load 4.76 lb, Temperature 446 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	54	54	ASTM D2240
Tensile Strength at Break	34.3 MPa @Thickness 2.00 mm	4970 psi @Thickness 0.0787 in	50mm/min; ASTM D638
Tensile Strength, Yield	13.7 MPa @Thickness 2.00 mm	1990 psi @Thickness 0.0787 in	50mm/min; ASTM D638
Elongation at Break	500 % @Thickness 2.00 mm	500 % @Thickness 0.0787 in	50mm/min; ASTM D638
Flexural Modulus	0.196 GPa @Thickness 6.40 mm	28.4 ksi @Thickness 0.252 in	15mm/min; ASTM D790
	1.47 J/cm	2.76 ft-lb/in	

Mechanical Properties	Metric	English	Comments
	@Thickness 6.40 mm, Temperature -40.0 Â°C	@Thickness 0.252 in, Temperature -40.0 Â°F	
	NB	NB	
	@Thickness 6.40 mm, Temperature 23.0 Â°C	@Thickness 0.252 in, Temperature 73.4 Â°F	ASTM D256
Tear Strength	147 kN/m	840 pli	50mm/min, at Break; ASTM D624

Thermal Properties	Metric	English	Comments
Melting Point	205 Â°C	401 Â°F	Peak
Boiling Point	140 - 230 Â°C	284 - 446 Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	100 Â°C	212 Â°F	
	@Thickness 6.40 mm	@Thickness 0.252 in	Unannealed; ASTM D648
UL RTI, Electrical	50.0 Â°C	122 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	50.0 Â°C	122 Â°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
UL RTI, Mechanical with Impact	50.0 Â°C	122 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	50.0 Â°C	122 Â°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
UL RTI, Mechanical without Impact	50.0 Â°C	122 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	50.0 Â°C	122 Â°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
Flammability, UL94	HB	HB	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	HB	HB	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
Flash Point	300 - 340 Â°C	572 - 644 Â°F	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+13 ohm-cm	>= 1.00e+13 ohm-cm	ASTM D257
Dielectric Strength	26.0 kV/mm @Thickness 1.00 mm	660 kV/in @Thickness 0.0394 in	ASTM D149
Arc Resistance	120 - 180 sec	120 - 180 sec	ASTM D495
Comparative Tracking Index	600 V	600 V	Solution A; IEC 60112
Hot Wire Ignition, HWI	15 - 30 sec @Thickness >=1.50 mm	15 - 30 sec @Thickness >=0.0591 in	
	15 - 30 sec @Thickness >=3.00 mm	15 - 30 sec @Thickness >=0.118 in	
High Amp Arc Ignition, HAI	>= 120 arcs @Thickness 1.50 mm	>= 120 arcs @Thickness 0.0591 in	
	>= 120 arcs @Thickness 3.00 mm	>= 120 arcs @Thickness 0.118 in	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	200 - 240 Â°C	392 - 464 Â°F	Injection Molding
Middle Barrel Temperature	210 - 230 Â°C	410 - 446 Â°F	Injection Molding
Front Barrel Temperature	220 - 240 Â°C	428 - 464 Â°F	Injection Molding
Nozzle Temperature	220 - 240 Â°C	428 - 464 Â°F	Injection Molding
Zone 1	200 - 240 Â°C	392 - 464 Â°F	Extrusion Molding
Zone 2	200 - 220 Â°C	392 - 428 Â°F	Extrusion Molding
Zone 3	210 - 230 Â°C	410 - 446 Â°F	Extrusion Molding
Zone 4	215 - 235 Â°C	419 - 455 Â°F	Extrusion Molding
Adapter Temperature	220 - 240 Â°C	428 - 464 Â°F	Extrusion Molding
Die Temperature	210 - 250 Â°C	410 - 482 Â°F	Extrusion Molding
Melt Temperature	200 - 240 Â°C	392 - 464 Â°F	Injection Molding
	200 - 240 Â°C	392 - 464 Â°F	Extrusion Molding
Mold Temperature	20.0 - 40.0 Â°C	68.0 - 104 Â°F	Injection Molding

Processing Properties	Metric	English	Comments
Drying Temperature	80.0 - 90.0 Â°C	176 - 194 Â°F	Injection Molding
	80.0 - 90.0 Â°C	176 - 194 Â°F	Extrusion Molding
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	Injection Molding
	3.00 - 4.00 hour	3.00 - 4.00 hour	Extrusion Molding

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