

## LG Chemical KEYFLEX BT 1140D 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: Cable & Wire Jackets, Hose & Tubing, Sheet  
 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-1140D-Ester-Type-TPE.php](http://www.lookpolymers.com/polymer_LG-Chemical-KEYFLEX-BT-1140D-Ester-Type-TPE.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.12 g/cc	1.12 g/cc	ASTM D792
Water Absorption	0.70 % @Temperature 23.0 Â°C, Time 86400 sec	0.70 % @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	0.0060 - 0.010 cm/cm @Thickness 3.20 mm	0.0060 - 0.010 in/in @Thickness 0.126 in	ASTM D955
Melt Flow	12 g/10 min @Load 2.16 kg, Temperature 200 Â°C	12 g/10 min @Load 4.76 lb, Temperature 392 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	90	90	ASTM D2240
Hardness, Shore D	36	36	ASTM D2240
Tensile Strength at Break	25.5 MPa @Thickness 2.00 mm	3700 psi @Thickness 0.0787 in	50mm/min; ASTM D638
Elongation at Break	750 % @Thickness 2.00 mm	750 % @Thickness 0.0787 in	50mm/min; ASTM D638
Flexural Modulus	0.0588 GPa @Thickness 6.40 mm	8.53 ksi @Thickness 0.252 in	15mm/min; ASTM D790
Izod Impact, Notched	NB @Thickness 6.40 mm,	NB @Thickness 0.252 in,	ASTM D256

Mechanical Properties	Temperature 23.0 Â°C Metric	Temperature 73.4 Â°F English	Comments
	NB	NB	
	@Thickness 6.40 mm, Temperature -40.0 Â°C	@Thickness 0.252 in, Temperature -40.0 Â°F	ASTM D256
Tear Strength	118 kN/m	672 pli	50mm/min, at Break; ASTM D624

Thermal Properties	Metric	English	Comments
Melting Point	170 Â°C	338 Â°F	Peak
Boiling Point	140 - 230 Â°C	284 - 446 Â°F	
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	660 kV/in	ASTM D149

Electrical Properties	@Thickness 1.00 mm Metric	@Thickness 0.0394 in English	Comments
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	30 - 60 sec	30 - 60 sec	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	60 - 120 sec	60 - 120 sec	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	>= 120 arcs	>= 120 arcs	
	@Thickness 3.00 mm	@Thickness 0.118 in	
High Voltage Arc-Tracking Rate, HVTR	10.0 - 25.4 mm/min	0.394 - 1.00 in/min	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	180 - 200 Â°C	356 - 392 Â°F	Injection Molding
Middle Barrel Temperature	190 - 210 Â°C	374 - 410 Â°F	Injection Molding
Front Barrel Temperature	200 - 220 Â°C	392 - 428 Â°F	Injection Molding
Nozzle Temperature	200 - 220 Â°C	392 - 428 Â°F	Injection Molding
Zone 1	180 - 220 Â°C	356 - 428 Â°F	Extrusion Molding
Zone 2	180 - 200 Â°C	356 - 392 Â°F	Extrusion Molding
Zone 3	200 - 220 Â°C	392 - 428 Â°F	Extrusion Molding
Zone 4	200 - 220 Â°C	392 - 428 Â°F	Extrusion Molding
Adapter Temperature	200 - 220 Â°C	392 - 428 Â°F	Extrusion Molding
Die Temperature	190 - 230 Â°C	374 - 446 Â°F	Extrusion Molding
Melt Temperature	180 - 220 Â°C	356 - 428 Â°F	Injection Molding
	180 - 220 Â°C	356 - 428 Â°F	Extrusion Molding
Mold Temperature	10.0 - 35.0 Â°C	50.0 - 95.0 Â°F	Injection Molding
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

Processing Properties	Metric	English	Comments
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

## Contact Songhan Plastic Technology Co.,Ltd.

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