

LG Chemical KEYFLEX TO-1045D Thermoplastic Olefin for Injection Molding, 45D Hardness

Category : Polymer , Thermoplastic , Elastomer, TPE , Olefinic TPE

Material Notes:

KEYFLEX resins, thermoplastic elastomers divided by polyester and polyolefin type, have been developed by LG's own polymerization and compounding technology. They display the flexibility of rubber and the strength of engineering plastics. In additions, they offer very good thermal stability, chemical resistance and weather resistance. KEYFLEX resins can be widely accepted as the replacement of thermoset rubbers. Characterization: High impact strength Low specific gravity Excellent resistance to chemicals and weathering Good electrical properties Various hardness grades (soft, semi-soft, and hard) Colorability Recyclability Applications: Automotive: Exterior: Bumper, air spoiler, mud guard, trim, side molding Interior: Head liner, instrument panel skin, glass sealing, door trim skin Others: Air intake hose, air duct, lamp packing, weather stripping, handle gasket, boots dust Others: Hose, packing, phone foots, gasket, insulation sheet (water protection sheet etc.), racket grip, booster cable, pump cable Information Provided by LG Chem

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-KEYFLEX-TO-1045D-Thermoplastic-Olefin-for-Injection-Molding-45D-Hardness.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.900 g/cc	0.900 g/cc	ASTM D297

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	43 - 47	43 - 47	ASTM D2240
Tensile Strength at Break	13.2 MPa	1910 psi	ASTM D412
Tensile Strength, Yield	9.80 MPa @Strain 100 %	1420 psi @Strain 100 %	ASTM D412
Elongation at Break	750 %	750 %	ASTM D412
Izod Impact, Notched	NB @Temperature -40.0 Â°C	NB @Temperature -40.0 Â°F	ASTM D256
Tear Strength	84.1 kN/m	480 pli	ASTM D790

Thermal Properties	Metric	English	Comments
Brittleness Temperature	-40.0 Â°C	-40.0 Â°F	ASTM D746

Processing Properties	Metric	English	Comments
Processing Temperature	160 - 200 Â°C	320 - 392 Â°F	Extrusion cylinder temperature
	180 - 210 Â°C	356 - 410 Â°F	Blow molding cylinder temperature

Processing Properties	Metric	English	Comments
Middle Barrel Temperature	200 - 220 Â°C	392 - 428 Â°F	
Front Barrel Temperature	210 - 230 Â°C	410 - 446 Â°F	
Nozzle Temperature	210 - 230 Â°C	410 - 446 Â°F	
Die Temperature	93.3 Â°C	200 Â°F	Extrusion
	93.3 - 104 Â°C	200 - 220 Â°F	Blow molding
Mold Temperature	5.00 - 40.0 Â°C	41.0 - 104 Â°F	Blow molding
	30.0 - 60.0 Â°C	86.0 - 140 Â°F	Injection molding
Drying Temperature	70.0 - 80.0 Â°C	158 - 176 Â°F	
Dry Time	2 hour	2 hour	Hot Blast
Injection Pressure	49.03 - 98.07 MPa	7111 - 14220 psi	
Screw Speed	20 - 100 rpm	20 - 100 rpm	

Descriptive Properties	Value	Comments
Ozone Resistance	No Crack	ASTM D518

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