DSM Arnitel® PL461 Injection Molding Grade Copolyester Elastomer (North America)

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

Material Notes:

Product description: Arnitel® combines the advantages of engineering thermoplastics, being easy to process with excellent mechanical properties, at the same time with the flexibility of rubbers.Arnitel does not require vulcanization. This leads to substantial reductions in part cost. Arnitel can be used over a wide range of temperatures. Arnitel has exceptional fatigue, creep resistance and resistance to oils, greases and many other chemicals.Characteristics of Arnitel:Excellent strength over a wide range of temperaturesExcellent dynamic properties e.g. creep and fatigueHigh heat resistanceExceptional resistance to oils and greasesGood chemical resistanceHigh degree of versatility in processingEasy coloring using masterbatchesSurface quality from high gloss to texturedExcellent heat resistance (long term 165°C)Good electrical insulation propertiesLow moisture absorption, excellent dimensional stabilityEasy flow, fast cooling timesTypical Applications: Automotive: Arnitel® is extensively used in the automotive industry for applications requiring exceptional fatigue resistance and resistance to oil and greases. Examples are: Rack and Pinion Bellows, Constant Velocity Joint Boots (CVJ Boots), Air brake tubings.Arnitel in the Electronic and Consumer Goods Industry: Arnitel® finds enormous potential and is also widely used in consumer electronic companies. Arnitel® is a good choice for low noise gears where their exceptional processability without any defects such as flash, makes it the material solution of choice. Arnitel® is also used in highly demanding applications such as in mobile phone antennas.Arnitel® has exceptional flexibility and can perform or even outperform functions that normally require conventional rubbers. Available in a wide range of hardnesses, Arnitel can replace metals, thermoplastics, leather and rubber, often with a reduction in finished part costs.Information provided by DSM.

Order this product through the following link:
http://www.lookpolymers.com/polymer_DSM-Arnitel-PL461-Injection-Molding-Grade-Copolyester-Elastomer-North-America.php

Physical Properties	Metric	English	Comments
Density	1.21 g/cc	0.0437 lb/in³	ISO 1183
Melt Flow	36.3 g/10 min @Load 2.16 kg, Temperature 230 °C	36.3 g/10 min @Load 4.76 lb, Temperature 446 °F	Calculated from Volume Flow Rate of 30 cm³/10 min; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	46	46	3 s; ISO 868
Tensile Strength at Break	22.4 MPa	3250 psi	ISO 527-1/-2
Tensile Strength, Yield	5.30 MPa @Strain 5.00 %	769 psi @Strain 5.00 %	ISO 527-1/-2
	8.40 MPa @Strain 10.0 %	1220 psi @Strain 10.0 %	ISO 527-1/-2
	12.4 MPa	1800 psi	

Mechanical Properties	Metric	English	Comments
	@Strain 50.0 %	@Strain 50.0 %	ISO 527-1/-2
	13.7 MPa @Strain 100 %	1990 psi @Strain 100 %	ISO 527-1/-2
Elongation at Break	400 %	400 %	ISO 527-1/-2
Tensile Modulus	0.165 GPa	23.9 ksi	ISO 527-1/-2
Izod Impact, Notched (ISO)	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 180/1A
Charpy Impact, Notched	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179/1eA
	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
Melting Point	220 °C	428 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	65.0 °C	149 °F	ISO 75-1/-2

Descriptive Properties	Value	Comments
High impact or impact modified	Yes	
Injection molding	Yes	
Without Fillers	Yes	

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