

DSM Arnitel® PL471 Polyether Ester Elastomer (European Grade) (discontinued **)

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

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 temperatures Excellent dynamic properties e.g. creep and fatigue High heat resistance Exceptional resistance to oils and greases Good chemical resistance High degree of versatility in processing Easy coloring using masterbatches Surface quality from high gloss to textured Excellent heat resistance (long term 165°C) Good electrical insulation properties Low moisture absorption, excellent dimensional stability Easy flow, fast cooling times **Typical 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 the consumer electronics by some of the world's best companies. Arnitel® is the best 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-PL471-Polyether-Ester-Elastomer-European-Grade-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.20 g/cc	0.0434 lb/in ³	ISO 1183
Melt Flow	32.4 g/10 min @Load 2.16 kg, Temperature 230 °C	32.4 g/10 min @Load 4.76 lb, Temperature 446 °F	Calculated from Volume Flow Rate of 27 cm ³ /10min.; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	45	45	3s; ISO 868
Tensile Strength at Break	21.5 MPa	3120 psi	ISO 527-1/-2
Tensile Strength, Yield	8.70 MPa @Strain 5.00 %	1260 psi @Strain 5.00 %	ISO 527-1/-2
	11.3 MPa @Strain 10.0 %	1640 psi @Strain 10.0 %	ISO 527-1/-2
	14.0 MPa	2030 psi	

Mechanical Properties	Metric	English	ISO 527-1/-2 Comments
	14.6 MPa @Strain 100 %	2120 psi @Strain 100 %	ISO 527-1/-2
Elongation at Break	375 %	375 %	ISO 527-1/-2
Tensile Modulus	0.240 GPa	34.8 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	224 °C	435 °F	10°C/min; ISO 11357-1/-3

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

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