

## DSM Arnitel® PL420-H Polyether Ester Elastomer (European and Asian Grade)

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 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-PL420-H-Polyether-Ester-Elastomer-European-and-Asian-Grade.php](http://www.lookpolymers.com/polymer_DSM-Arnitel-PL420-H-Polyether-Ester-Elastomer-European-and-Asian-Grade.php)

Physical Properties	Metric	English	Comments
Density	1.18 g/cc	0.0426 lb/in³	ISO 1183
Melt Flow	23.6 g/10 min @Load 2.16 kg, Temperature 230 °C	23.6 g/10 min @Load 4.76 lb, Temperature 446 °F	Calculated from Volume Flow Rate of 20 cm³/10min.; ISO 1133

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	40	40	3s; ISO 868
Tensile Strength at Break	17.5 MPa	2540 psi	ISO 527-1/-2
Tensile Strength, Yield	3.10 MPa @Strain 5.00 %	450 psi @Strain 5.00 %	ISO 527-1/-2
	5.30 MPa @Strain 10.0 %	769 psi @Strain 10.0 %	ISO 527-1/-2
	9.10 MPa @Strain 50.0 %	1320 psi @Strain 50.0 %	ISO 527-1/-2

Mechanical Properties	Metric	English	Comments
	@Strain 100 %	@Strain 100 %	ISO 527-1/-2
Elongation at Break	400 %	400 %	ISO 527-1/-2
Tensile Modulus	0.100 GPa	14.5 ksi	ISO 527-1/-2
Izod Impact, Notched (ISO)	NB	NB	ISO 180/1A
	@Temperature -40.0 °C	@Temperature -40.0 °F	
	NB	NB	ISO 180/1A
	@Temperature -20.0 °C	@Temperature -4.00 °F	
	NB	NB	ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	NB	NB	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	NB	NB	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
Melting Point	220 °C	428 °F	10°C/min; ISO 11357-1/-3
Flammability, UL94	HB	HB	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	HB	HB	IEC 60695-11-10
	@Thickness 3.00 mm	@Thickness 0.118 in	

Descriptive Properties	Value	Comments
Heat stabilized or stable to heat	Yes	
High impact or impact modified	Yes	
Injection molding	Yes	
Without Fillers	Yes	

## Contact Songhan Plastic Technology Co.,Ltd.

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