

DSM Arnitel® EB500 Polyether Ester Elastomer (European and Asian 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-EB500-Polyether-Ester-Elastomer-European-and-Asian-Grade-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.18 g/cc	0.0426 lb/in ³	ISO 1183
Water Absorption	0.60 %	0.60 %	Sim. to ISO 62
Moisture Absorption at Equilibrium	0.20 %	0.20 %	Humidity Absorption; Sim. to ISO 62
Melt Flow	0.30 g/10 min	0.30 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
	4.72 g/10 min	4.72 g/10 min	Calculated from Volume Flow Rate of 4 cm ³ /10min.; ISO 1133
	@Load 10.0 kg, Temperature 230 °C	@Load 22.0 lb, Temperature 446 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	50	50	3s; ISO 868
Tensile Strength at Break	26.5 MPa	3840 psi	ISO 527-1/-2

Mechanical Properties	9.00 MPa Metric	1310 psi English	Comments
	@Strain 5.00 %	@Strain 5.00 %	
	10.8 MPa	1570 psi	ISO 527-1/-2
	@Strain 50.0 %	@Strain 50.0 %	
	12.6 MPa	1830 psi	ISO 527-1/-2
	@Strain 10.0 %	@Strain 10.0 %	
	19.5 MPa	2830 psi	ISO 527-1/-2
	@Strain 50.0 %	@Strain 50.0 %	
	23.5 MPa	3410 psi	ISO 527-1/-2
	@Strain 100 %	@Strain 100 %	
Elongation at Break	160 %	160 %	ISO 527-1/-2
Tensile Modulus	0.225 GPa	32.6 ksi	ISO 527-1/-2
Izod Impact, Notched (ISO)	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	215 °C	419 °F	10°C/min; ISO 11357-1/-3

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

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