DSM Arnitel® EM402-L Injection Molding; Coating Grade Copolyester Elastomer (North America) (discontinued **)

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 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-EM402-L-Injection-Molding-Coating-Grade-Copolyester-Elastomer-North-America-nbspdiscontinued-.php

Physical Properties	Metric	English	Comments
Density	1.10 g/cc	0.0397 lb/in³	ISO 1183
Water Absorption	0.70 %	0.70 %	Sim. to ISO 62
Moisture Absorption at Equilibrium	0.30 %	0.30 %	Humidity Absorption; Sim. to ISO 62
Melt Flow	33 g/10 min @Load 2.16 kg, Temperature 230 °C	33 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	36	36	3 s; ISO 868
Tensile Strength at Break	25.0 MPa	3630 psi	ISO 527-1/-2
Tensile Strength, Yield	2.40 MPa @Strain 5.00 %	348 psi @Strain 5.00 %	ISO 527-1/-2

Mechanical Properties	Metric	English	Comments
	3.90 MPa @Strain 10.0 %	566 psi @Strain 10.0 %	ISO 527-1/-2
	6.90 MPa @Strain 50.0 %	1000 psi @Strain 50.0 %	ISO 527-1/-2
	7.50 MPa @Strain 100 %	1090 psi @Strain 100 %	ISO 527-1/-2
Elongation at Break	>= 300 %	>= 300 %	ISO 527-1/-2
Elongation at Yield	74 %	74 %	ISO 527-1/-2
Tensile Modulus	0.0500 GPa	7.25 ksi	ISO 527-1/-2
Izod Impact, Notched (ISO)	NB @Temperature 23.0 °C	NB @Temperature 73.4 °F	ISO 180/1A
Izod Impact, Unnotched (ISO)	NB @Temperature -40.0 °C	NB @Temperature -40.0 °F	ISO 180/1A
	NB @Temperature -20.0 °C	NB @Temperature -4.00 °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
Tensile Impact Strength	218 kJ/m²	104 ft-lb/in²	23°C; ISO 8256/1
Graves Tear Strength	60.0 kN/m	342 pli	without nick; ISO 34

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	220 µm/m-°C @Temperature 20.0 °C	122 µin/in-°F @Temperature 68.0 °F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	220 µm/m-°C @Temperature 20.0 °C	122 µin/in-°F @Temperature 68.0 °F	ISO 11359-1/-2
Melting Point	195 °C	383 °F	10°C/min; ISO 11357-1/-3
Vicat Softening Point	140 °C	284 °F	50°C/h 10N; ISO 306
Glass Transition Temp, Tg	-78.0 °C	-108 °F	10°C/min; ISO 11357-1/-2
	HB	HB	

Thermal Properties	Metric	English	Comments
Flammability, UL 94	@Thickness 1.60 mm	@Thickness 0.0630 in	IEC 60695-11-10

Electrical Properties	Metric	English	Comments
Volume Resistivity	5.00e+14 ohm-cm	5.00e+14 ohm-cm	IEC 60093
Surface Resistance	>= 1.00e+15 ohm	>= 1.00e+15 ohm	IEC 60093
Dielectric Constant	4.0 @Frequency 1e+6 Hz	4.0 @Frequency 1e+6 Hz	IEC 60250
	4.1 @Frequency 100 Hz	4.1 @Frequency 100 Hz	IEC 60250
Dielectric Strength	20.0 kV/mm	508 kV/in	IEC 60243-1
Dissipation Factor	0.0010 @Frequency 100 Hz	0.0010 @Frequency 100 Hz	IEC 60250
	0.017 @Frequency 1e+6 Hz	0.017 @Frequency 1e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Coating	Yes	
High impact or impact modified	Yes	
Injection molding	Yes	
U.V. stabilized or stable to weather	Yes	
Without Fillers	Yes	

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