

DSM Arnite® TV4 240 S PBT-20% Glass Reinforced (European and Asian Grade)

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT) , Polybutylene Terephthalate (PBT), 20% Glass Fiber Filled

Material Notes:

Arnite resins are engineered to provide specific performance in applications where DSM technology can offer value. Arnite Molding resins: Standard Unfilled and Reinforced materials High modulus Flame retardant grades Easy molding FR grades for connectors Toughened unfilled materials for durability High modulus, tight specification for critical auto components Toughened reinforced resins Low outgassing grades for reflector surfaces Arnite extrusion resins: Specialized materials for specific uses PET for medical applications Loose buffer Optical fiber tubing PET for stock shapes Applications Automotive: Connectors, sensors and E&E parts, Exterior fittings, Gear housings and motors, Brake valve bodies Electrical & Electronic: Telecoms and IT connectors, Bobbins, Low voltage Power distribution, E-motor components, Lightings and Lamp fittings Consumer Durables: Small Appliances Other: Optical fiber tubing Information provided by DSM.

Order this product through the following link:

http://www.lookpolymers.com/polymer_DSM-Arnite-TV4-240-S-PBT-20-Glass-Reinforced-European-and-Asian-Grade.php

Physical Properties	Metric	English	Comments
Density	1.45 g/cc	0.0524 lb/in ³	ISO 1183
Water Absorption	0.30 %	0.30 %	Sim. to ISO 62
Moisture Absorption at Equilibrium	0.15 %	0.15 %	Humidity Absorption; Sim. to ISO 62
Melt Flow	33.35 g/10 min @Load 2.16 kg, Temperature 250 °C	33.35 g/10 min @Load 4.76 lb, Temperature 482 °F	Calculated from Volume Flow Rate of 23 cm ³ /10min.; ISO 1133

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	110 MPa	16000 psi	ISO 527-1/-2
Elongation at Break	2.5 %	2.5 %	ISO 527-1/-2
Tensile Modulus	8.50 GPa	1230 ksi	ISO 527-1/-2
Charpy Impact Unnotched	5.00 J/cm ² @Temperature -30.0 °C	23.8 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eU
	5.00 J/cm ² @Temperature 23.0 °C	23.8 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eU
Charpy Impact, Notched	0.900 J/cm ² @Temperature -30.0 °C	4.28 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
	0.900 J/cm ² @Temperature 23.0 °C	4.28 ft-lb/in ² @Temperature 73.4 °F	ISO 179/1eA

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	40.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	22.2 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-1/-2
	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	
CTE, linear, Transverse to Flow	80.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	44.4 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ISO 11359-1/-2
	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	
Melting Point	225 $^{\circ}\text{C}$	437 $^{\circ}\text{F}$	10 $^{\circ}\text{C}/\text{min}$; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	220 $^{\circ}\text{C}$	428 $^{\circ}\text{F}$	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	210 $^{\circ}\text{C}$	410 $^{\circ}\text{F}$	ISO 75-1/-2
UL RTI, Electrical	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	UL746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
UL RTI, Mechanical with Impact	130 $^{\circ}\text{C}$	266 $^{\circ}\text{F}$	UL746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	130 $^{\circ}\text{C}$	266 $^{\circ}\text{F}$	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
UL RTI, Mechanical without Impact	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	UL746B
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	140 $^{\circ}\text{C}$	284 $^{\circ}\text{F}$	UL746B
	@Thickness 0.750 mm	@Thickness 0.0295 in	
Flammability, UL94	V-2	V-2	IEC 60695-11-10
	@Thickness 0.750 mm	@Thickness 0.0295 in	
	V-0	V-0	IEC 60695-11-10
	@Thickness 1.60 mm	@Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+15$ ohm-cm	$\geq 1.00\text{e}+15$ ohm-cm	IEC 60093
Surface Resistance	$\geq 1.00\text{e}+15$ ohm	$\geq 1.00\text{e}+15$ ohm	IEC 60093
Dielectric Constant	3.7	3.7	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	

Electrical Properties	Metric	English	Comments
	@Frequency 100 Hz	@Frequency 100 Hz	IEC 60250
Dielectric Strength	27.0 kV/mm	686 kV/in	IEC 60243-1
Dissipation Factor	0.0020	0.0020	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.015	0.015	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	250 V	250 V	IEC 60112
	250 - 399 V	250 - 399 V	PLC 2; UL 746A

Descriptive Properties	Value	Comments
Flame Retardant	Yes	
Flame Retarding Agent	Yes	
Injection molding	Yes	
Release Agent	Yes	
With Fillers	Yes	

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