

Evonik Corporation Vestamid® D18 Nylon 612 (Dry as Molded)

Category : Polymer , Thermoplastic , Nylon , Nylon 612 , Nylon 612, Unreinforced

Material Notes:

Description: medium-viscosity base product Applications: monofilaments, bristles with high recovery for paint brushes and tooth brushes Information provided by degussa.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Evonik-Corporation-Vestamid-D18-Nylon-612-Dry-as-Molded.php

Physical Properties	Metric	English	Comments
Density	1.06 g/cc	0.0383 lb/in ³	ISO 1183
Moisture Absorption at Equilibrium	1.0 %	1.0 %	23°C/50% R.H.; ISO 62
Water Absorption at Saturation	2.7 %	2.7 %	ISO 62
Linear Mold Shrinkage	0.013 cm/cm	0.013 in/in	127x12.7x3.2 mm (processing cond. acc. To ISO 1874-2)
Linear Mold Shrinkage, Transverse	0.011 cm/cm	0.011 in/in	127x12.7x3.2 mm (processing cond. acc. To ISO 1874-2)

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	58.0 MPa	8410 psi	ISO 527-2/1A
Elongation at Break	>= 50 %	>= 50 %	ISO 527-2/1A
Elongation at Yield	4.0 %	4.0 %	ISO 527-2/1A
Tensile Modulus	2.10 GPa	305 ksi	ISO 527-2/1A
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.600 J/cm ²	2.86 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Charpy Impact, Notched	0.700 J/cm ²	3.33 ft-lb/in ²	ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear	130 µm/m-°C	72.2 µin/in-°F	ISO 11359
	@Temperature 23.0 -	@Temperature 73.4 -	

Thermal Properties	55.0 °C Metric	131 °F English	Comments
Melting Point	215 °C	419 °F	Peak Temperature; ISO 3146, ISO 11357
Deflection Temperature at 0.46 MPa (66 psi)	140 °C	284 °F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	60.0 °C	140 °F	ISO 75
	75.0 °C	167 °F	When conditioned at 180°C for 1 hour; ISO 75
Vicat Softening Point	180 °C	356 °F	50N; ISO 306
Flammability, UL94	HB	HB	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	HB	HB	
	@Thickness 3.20 mm	@Thickness 0.126 in	

Electrical Properties	Metric	English	Comments
Dielectric Constant	3.4	3.4	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
	3.8	3.8	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	28.0 kV/mm	711 kV/in	K20/P50; IEC 60243-1
Dissipation Factor	0.026	0.026	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	
	0.031	0.031	IEC 60250
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	>= 600 V	>= 600 V	Test Solution A, 100 drops; IEC 60112

Descriptive Properties	Value	Comments
Electrolytic Corrosion	A1 Step	IEC 60426

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