VESTAMID® D D16

Polyamide 612

Evonik Industries AG

Message:

Characterization: low-viscosity base product
Applications: monofilaments, bristles with high recovery for paint brushes and tooth brushes
Its advantages over PA 12 exhibit in the
heat deflection temperature (melting point nearly 40 °C higher)
tensile and flexural strength
outstanding recovery at high wet strength
The PA 612 compounds of the VESTAMID® D series consequently represent specialty products that complement the comprehensive selection of PA 12 compounds of the VESTAMID® L series.

General Information	
Features	Food Contact Acceptable
	Fuel Resistant
	Good Abrasion Resistance
	Grease Resistant
	High ESCR (Stress Crack Resist.)
	High Impact Resistance
	Low Viscosity
	Oil Resistant
	Solvent Resistant
Uses	Monofilaments
Agency Ratings	EU 10/2011
	FDA 21 CFR 177.1500
Appearance	Black
	Natural Color
Forms	Granules
Processing Method	Extrusion
	Injection Molding

Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.06	1.06	g/cm³	ISO 1183
Molding Shrinkage [1]				ISO 294-4
Across Flow	1.0	--	%	
Flow	1.4	--	%	
Water Absorption				ISO 62
Saturation, 23°C	2.6	--	%	

Equilibrium, 23°C, 50% RH	1.0	--	%	
Mechanical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Tensile Modulus	2200	1700	MPa	ISO 527-2/1A
Tensile Stress (Yield)	58.0	53.0	MPa	ISO 527-2/1A
Tensile Strain				ISO 527-2/1A
Yield	5.0	16	%	
Break	> 50	> 50	%	
Impact	**Dry**	**Conditioned**	**Unit**	**Test Method**
Charpy Notched Impact Strength				ISO 179/1eA
-30°C, Complete Break	6.0	6.0	kJ/m^2	
23°C, Complete Break	5.0	6.0	kJ/m^2	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	No Break	No Break		
23°C	No Break	No Break		
Thermal	**Dry**	**Conditioned**	**Unit**	**Test Method**
Heat Deflection Temperature				
0.45 MPa, Unannealed [2]	170	170	°C	ISO 75-2/B
0.45 MPa, Unannealed	150	150	°C	ISO 75-2/B
1.8 MPa, Unannealed [3]	75.0	--	°C	ISO 75-2/A
1.8 MPa, Unannealed	65.0	55.0	°C	ISO 75-2/A
Vicat Softening Temperature	180	180	°C	ISO 306/B
Melting Temperature [4]	215	215	°C	ISO 11357-3
CLTE - Flow (23 to 55°C)	1.3E-4	--	cm/cm/°C	ISO 11359-2
Electrical	**Dry**	**Conditioned**	**Unit**	**Test Method**
Volume Resistivity	1.0E+15	1.0E+14	ohms·cm	IEC 60093
Electric Strength	28	27	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	3.80	4.50		
1 MHz	3.20	4.10		
Dissipation Factor				IEC 60250
100 Hz	0.024	0.059		
1 MHz	0.029	0.051		
Comparative Tracking Index [5] (Solution A)	> 600	> 600	V	IEC 60112
Flammability	**Dry**	**Conditioned**	**Unit**	**Test Method**
Flame Rating				UL 94
1.60 mm	HB	HB		
3.20 mm	HB	HB		
Additional Information	**Dry**	**Conditioned**		**Test Method**

Electrolytical Corrosion	A1	A1	IEC 60426
ISO Shortname	PA612, LN, 12-020	--	ISO 1874

NOTE	
1.	specimen 127x12.7x3.2 mm processing acc. to ISO 1874-2
2.	after conditioning at 180 °C / 60 min
3.	after conditioning at 180 °C / 60 min
4.	2nd Heating
5.	50 drops Value

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

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