VESTAMID® L X7166

Polyamide 12

Evonik Industries AG

Message:

Reinforced, filled and flame retardant polyamide 12 compounds
Characterization: low viscosity, with flame retardant, halogen- and phosphorus-free, UL94-V0/V2, with processing aid
Application Examples: wire insulation
The properties of PA 12 compounds can be modified to suit the requirements of many applications by incorporating various additives such as stabilizers, plasticizers, reinforcements, and fillers.
The VESTAMID® L compounds of Evonik comprise a range of various products that are customized to the requirements of processors and users. Many of the PA 12 compounds are suitable especially for the injection molding of recision parts; others have been developed specifically for the extrusion process.

General Information	
UL YellowCard	E100211-102170277
Additive	Flame Retardant Processing Aid
Features	Fatigue Resistant Flame Retardant Food Contact Acceptable Fuel Resistant Good Abrasion Resistance Good Impact Resistance Good Processability Grease Resistant Halogen Free High ESCR (Stress Crack Resist.) Low (to None) Phosphorus Content Low to No Water Absorption Low Viscosity Oil Resistant Solvent Resistant Sound Damping Vibration Damping
Uses	Insulation Wire & Cable Applications
Agency Ratings	EU 10/2011
Processing Method	Extrusion Injection Molding

Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.06	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.75	%	
Flow	0.65	%	
Water Absorption			ISO 62
Saturation, 23°C	1.3	%	
Equilibrium, 23°C, 50% RH	0.60	%	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	1800	MPa	ISO 527-2
Tensile Stress (Yield)	47.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield	5.0	%	
Break	> 50	%	
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Complete Break	5.0	kJ/m²	
23°C, Complete Break	3.0	kJ/m²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C, Complete Break	80	kJ/m²	
23°C, Complete Break	65	kJ/m²	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, Unannealed	140	°C	ISO 75-2/B
1.8 MPa, Unannealed	50.0	°C	ISO 75-2/A
Vicat Softening Temperature			
--	175	°C	ISO 306/A
--	150	°C	ISO 306/B
Melting Temperature [1]	178	°C	ISO 11357-3
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity	1.0E+14	ohms·cm	IEC 60093
Electric Strength	28	kV/mm	IEC 60243-1
Relative Permittivity (23°C, 1 MHz)	3.60		IEC 60250
Dissipation Factor (23°C, 1 MHz)	0.034		IEC 60250
Comparative Tracking Index			IEC 60112
--	600	V	
Solution A [2]	> 600	V	
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
1.60 mm	V-0		
3.20 mm	V-0		
Additional Information	**Nominal Value**		**Test Method**

ISO Shortname	PA12, KFH, 12-020	ISO 1874
NOTE		
1.	2nd Heating	
2.	50 drops value	

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