

VESTAMID® L X7229

Polyamide 12

Evonik Industries AG

Message:

Reinforced, filled and flame retardant polyamide 12 compounds

Characterization: high viscosity, plasticized, with flame retardant, halogen- and phosphorus-free, UL94-V2, meets FAR 25.853b

Application Examples: profiles and tubing

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 ofrecision parts; others have been developed specifically for the extrusion process.

General Information	
Additive	Flame Retardant Plasticizer
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.) High Viscosity Low (to None) Phosphorus Content Low to No Water Absorption Oil Resistant Plasticized Solvent Resistant Sound Damping Vibration Damping
Uses	Profiles Tubing
Agency Ratings	EU 10/2011 FAA FAR 25.853
Processing Method	Extrusion

Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.06	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.80	%	
Flow	0.55	%	
Water Absorption			ISO 62
Saturation, 23°C	1.5	%	
Equilibrium, 23°C, 50% RH	0.60	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1000	MPa	ISO 527-2
Tensile Stress (Yield)	36.0	MPa	ISO 527-2
Tensile Strain			ISO 527-2
Yield	17	%	
Break	> 50	%	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Complete Break	5.0	kJ/m ²	
23°C, Complete Break	11	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	130	°C	ISO 75-2/B
1.8 MPa, Unannealed	40.0	°C	ISO 75-2/A
Vicat Softening Temperature			
--	170	°C	ISO 306/A
--	150	°C	ISO 306/B
Melting Temperature ¹	175	°C	ISO 11357-3
CLTE - Flow (23 to 55°C)	8.0E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+13	ohms · cm	IEC 60093
Electric Strength	27	kV/mm	IEC 60243-1
Relative Permittivity (23°C, 1 MHz)	5.00		IEC 60250
Dissipation Factor (23°C, 1 MHz)	0.17		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-2		
3.20 mm	V-2		

Additional Information	Nominal Value	Test Method
ISO Shortname	PA12-P, EFH, 22-010	ISO 1874
NOTE		
1.	2nd Heating	
2.	50 drops value	

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