

VESTAMID® L X7167

Evonik Industries AG - Polyamide 12

General Information

Product Description

Reinforced, filled and flame-retardant VESTAMID® polyamide 12 compounds

Characterization: high viscosity, with flame retardant, halogen and phosphorus-free, UL94-V2, with processing aid

Applications: profiles for aircraft interiors

In general, it can be said that long-chain, semi-crystalline polyamides absorb little water, are resistant to polar and non-polar solvents, exhibit low creep behavior and high impact resistance and can be used in a wide temperature range. Virtually no other polymer material in this price range exhibits these properties.

General

Additive	<ul style="list-style-type: none"> Flame Retardant 	<ul style="list-style-type: none"> Heat Stabilizer 	<ul style="list-style-type: none"> Processing Aid
Features	<ul style="list-style-type: none"> Abrasion Resistant Excellent Processability Fatigue Resistant Flame Retardant Food Contact Acceptable Fuel Resistant Grease Resistant 	<ul style="list-style-type: none"> Halogen Free Heat Stabilized High ESCR (Stress Crack Resist.) High Impact Resistance High Viscosity Low (to None) Phosphorus Content Low Friction 	<ul style="list-style-type: none"> Low Temperature Impact Resistance Low to No Water Absorption Noise Damping Oil Resistant Semi Crystalline Solvent Resistant Vibration Damping
Uses	<ul style="list-style-type: none"> Aircraft Interiors 	<ul style="list-style-type: none"> Profiles 	
Agency Ratings	<ul style="list-style-type: none"> EU 10/2011 	<ul style="list-style-type: none"> FDA 21 CFR 177.1500 	
Appearance	<ul style="list-style-type: none"> Colors Available 	<ul style="list-style-type: none"> Natural Color 	
Forms	<ul style="list-style-type: none"> Granules 		
Processing Method	<ul style="list-style-type: none"> Extrusion 		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.05	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.95	%	
Flow	0.60	%	
Water Absorption (Saturation, 73°F)	1.5	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.60	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	247000	psi	ISO 527-2
Tensile Stress (Yield)	6960	psi	ISO 527-2
Tensile Strain (Yield)	5.0	%	ISO 527-2
Tensile Strain (Break)	> 50	%	ISO 527-2
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F, Complete Break	2.9	ft·lb/in ²	
73°F, Complete Break	4.3	ft·lb/in ²	

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Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	No Break		
73°F	No Break		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	266	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	122	°F	ISO 75-2/A
Vicat Softening Temperature			
--	302	°F	ISO 306/B
--	347	°F	ISO 306/A
Melting Temperature ²	352	°F	ISO 11357-3
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+14	ohms-cm	IEC 60093
Electric Strength	710	V/mil	IEC 60243-1
Relative Permittivity (73°F, 1 MHz)	3.60		IEC 60250
Dissipation Factor (73°F, 1 MHz)	0.038		IEC 60250
Comparative Tracking Index			IEC 60112
--	600	V	
Solution A ³	> 600	V	
Flammability	Nominal Value	Unit	Test Method
Flammability Classification			IEC 60695-11-10, -20
0.06 in	V-2		
0.13 in	V-2		
Additional Information	Nominal Value	Unit	Test Method
Electrolytical Corrosion	A1		IEC 60426
ISO Shortname	PA12, EFH, 22-020		ISO 1874

Notes

¹ Typical properties: these are not to be construed as specifications.

² 2nd heating

³ 100 Drop Voltage