

VESTAMID® D X7099

Polyamide 612
Evonik Industries AG

Message:

Characterization: 20% glass fiber reinforced, heat-stabilized
Applications: housings, sealing and damping elements for the automotive industry, noise and vibration-damping sliding bearings and rollers
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				
Filler / Reinforcement		Glass Fiber,20% Filler by Weight		
Additive		Carbon Black		
		Heat Stabilizer		
Features		Food Contact Acceptable		
		Fuel Resistant		
		Good Abrasion Resistance		
		Grease Resistant		
		Heat Stabilized		
		High ESCR (Stress Crack Resist.)		
		High Impact Resistance		
		Light Stabilized		
		Oil Resistant		
		Solvent Resistant		
Uses		Automotive Applications		
		Bearings		
		Housings		
		Rollers		
Agency Ratings		FDA 21 CFR 177.1500		
Appearance		Black		
Forms		Granules		
Processing Method		Injection Molding		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.20	1.20	g/cm ³	ISO 1183
Molding Shrinkage ¹				ISO 294-4
Across Flow	1.1	--	%	

Flow	0.60	--	%	
Water Absorption				ISO 62
Saturation, 23°C	2.0	--	%	
Equilibrium, 23°C, 50% RH	0.80	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	5600	--	MPa	ISO 527-2/1A
Tensile Stress (Break)	118	--	MPa	ISO 527-2/1A
Tensile Strain (Break)	5.0	--	%	ISO 527-2/1A
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C, Complete Break	7.0	--	kJ/m ²	
23°C, Complete Break	10	--	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C, Complete Break	60	--	kJ/m ²	
23°C, Complete Break	80	--	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	210	210	°C	ISO 75-2/B
1.8 MPa, Unannealed	190	190	°C	ISO 75-2/A
Vicat Softening Temperature	205	205	°C	ISO 306/B
Melting Temperature ²	215	215	°C	ISO 11357-3
CLTE				ISO 11359-2
Flow : 23 to 55°C	7.0E-5	--	cm/cm/°C	
Transverse : 23 to 55°C	5.0E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+14	--	ohms·cm	IEC 60093
Electric Strength	38	--	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	4.40	--		
1 MHz	3.90	--		
Dissipation Factor				IEC 60250
100 Hz	0.065	--		
1 MHz	0.043	--		
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.60 mm	HB	HB		
3.20 mm	HB	--		
Additional Information	Dry	Conditioned		Test Method
ISO Shortname	PA612, MH, 14-050, GF20	--		ISO 1874

NOTE

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| 1. | specimen 127x12.7x3.2 mm
processing acc. to ISO
1874-2 |
| 2. | 2nd Heating |

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