

VESTAMID® D DX9304

Polyamide 612
Evonik Industries AG

Message:

Characterization: impact-resistant, heat- and light-stabilized
Applications: tubing systems subjected to higher temperatures, e.g., hydraulic clutch lines
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				
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		Hydraulic Applications		
		Tubing		
Agency Ratings		FDA 21 CFR 177.1500		
Appearance		Black		
Forms		Granules		
Processing Method		Extrusion		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.04	--	g/cm ³	ISO 1183
Molding Shrinkage ¹				ISO 294-4
Across Flow	1.4	--	%	
Flow	2.2	--	%	
Water Absorption				ISO 62
Saturation, 23°C	2.7	--	%	

Equilibrium, 23°C, 50% RH	1.0	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	1800	1200	MPa	ISO 527-2/1A
Tensile Stress (Yield)	50.0	41.0	MPa	ISO 527-2/1A
Tensile Strain				ISO 527-2/1A
Yield	5.0	20	%	
Break	> 50	> 50	%	
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C, Complete Break	30	18	kJ/m ²	
23°C, Partial Break	50	95	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	175	--	°C	ISO 75-2/B
0.45 MPa, Unannealed	170	--	°C	ISO 75-2/B
1.8 MPa, Unannealed ³	55.0	--	°C	ISO 75-2/A
1.8 MPa, Unannealed	50.0	--	°C	ISO 75-2/A
Vicat Softening Temperature	175	--	°C	ISO 306/B
Melting Temperature ⁴	213	--	°C	ISO 11357-3
CLTE - Flow (23 to 55°C)	1.5E-4	--	cm/cm/°C	ISO 11359-2
Electrical	Dry	Conditioned	Unit	Test Method
Volume Resistivity	1.0E+13	--	ohms·cm	IEC 60093
Electric Strength	24	--	kV/mm	IEC 60243-1
Relative Permittivity				IEC 60250
100 Hz	4.10	--		
1 MHz	3.20	--		
Dissipation Factor				IEC 60250
100 Hz	0.056	--		
1 MHz	0.031	--		
Comparative Tracking Index ⁵ (Solution A)	> 600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating				UL 94
1.60 mm	HB	--		
3.20 mm	HB	--		
Additional Information	Dry	Conditioned		Test Method

Electrolytical Corrosion	AN 1,2	--	IEC 60426
ISO Shortname	PA612-HI, EHL, 18-020	--	ISO 1874
NOTE			
1.	measured at specimen 60x60x2mm		
2.	after conditioning at 180 °C / 60 min		
3.	after conditioning at 180 °C / 60 min		
4.	2nd Heating		
5.	50 drops Value		

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