Product Information

VESTAMID® DX9303 BK E70288

HIGH-VISCOSITY, PLASTICIZED, HEAT- AND LIGHT-STABILIZED, IMPACT-MODIFIED POLYAMIDE 612 COMPOUND FOR EXTRUSION

VESTAMID® DX9303 BK E70288 is a PA 612 extrusion compound developed for the production of tubing systems with higher requirements for heat resistance.

The melting point of VESTAMID® DX9303 BK E70288 is about 35°C higher than PA 11 and PA 12 compounds, allows higher peak temperatures in use. Thereby this compound fulfills the increased demands resulting from higher temperatures in the engine compartment.

If it is intended to use VESTAMID® DX9303 BK E70288 for fuel lines, certain preconditions must be observed. The Technical Marketing assists you in finding the suitable VESTAMID® compound.
At temperatures above 100°C tubing of VESTAMID® DX9303 BK E70288 allow a higher pressure load than tubing made of PA 12 compounds with comparable flexibility.

The process temperatures should be in the range of 240-270°C.

The material absorbs only little moisture. Therefore dimensions and properties of parts are nearly unaffected through ambient conditions.

Pigmentation may affect values.

Inside the original and undamaged packaging, the product has a shelf life of at least 2 years when stored in dry rooms at temperatures not exceeding 30°C.

For information about processing of VESTAMID®, please follow the general commendations about "Processing of VESTAMID® compounds".

FOR FURTHER INFORMATION PLEASE CONTACT US AT EVONIK-HP@EVONIK.COM
OR VISIT OUR PRODUCT AT WWW.VESTAMID.COM

Mechanical properties ISO	dry / cond	Unit	Test Standard
Tensile Modulus	**900 / 680**	MPa	ISO 527
Tensile Strength	**38 / -**	MPa	ISO 527
Yield stress	**38 / -**	MPa	ISO 527
Yield strain	**30 / -**	%	ISO 527
Stress at 50% strain	**37 / -**	MPa	ISO 527
Stress at break	**45 / 41**	MPa	ISO 527

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Nominal strain at break, εtB	**196 / 200**	%	ISO 527
Charpy impact strength, +23°C	**N / N**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**N / N**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	**87 / 135**	kJ/m²	ISO 179/1eA
Type of failure	**P / P**	-	-
Charpy notched impact strength, -30°C	**11 / 15**	kJ/m²	ISO 179/1eA
Type of failure	**C / C(P)**	-	-
Flexural modulus, 23°C	**850 / 605**	MPa	ISO 178
Flexural stress at conv. deflection, 23°C	**24 / 18**	MPa	ISO 178
Flexural strain at flexural strength, 23°C	**8.5 / 10**	%	ISO 178
Flexural stress at break, 23°C	**N / N**	MPa	ISO 178
Flexural strain at break, 23°C	**N / N**	%	ISO 178

Thermal properties	**dry / cond**	**Unit**	**Test Standard**
Melting temperature	**211 / ***	°C	ISO 11357-1/-3
Glass transition temperature	**20 / ***	°C	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	**60 / ***	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	**142 / ***	°C	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	**202 / ***	°C	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	**159 / ***	°C	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	**150 / ***	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, 23°C to 55 °C, normal	**120 / ***	E-6/K	ISO 11359-1/-2
Melting Temperature	**211**	°C	ASTM D 3418

Physical properties	**dry / cond**	**Unit**	**Test Standard**
Water absorption	**2.4 / ***	%	Sim. to ISO 62
Humidity absorption	**1 / ***	%	Sim. to ISO 62
Density	**1050 / -**	kg/m³	ISO 1183

Shore D hardness	**70[b] / 65[b]**	-	ISO 7619-1
Density	**1050**	kg/m³	ASTM D 792

b: 3 seconds

Burning Behav.	**dry / cond**	**Unit**	**Test Standard**
Burnin behav. at thickness h	**HB / ***	class	IEC 60695-11-10
Thickness tested	**3.2 / ***	mm	-
Burning behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10
Thickness tested	**1.6 / ***	mm	-

Electrical properties	**dry / cond**	**Unit**	**Test Standard**
Relative permittivity, 50Hz	**5 / -**	-	IEC 62631-2-1
Relative permittivity, 100Hz	**4.7 / -**	-	IEC 62631-2-1
Relative permittivity, 1MHz	**2.7 / -**	-	IEC 62631-2-1
Dissipation factor, 50Hz	**1700 / -**	E-4	IEC 62631-2-1
Dissipation factor, 100Hz	**1450 / -**	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	**400 / -**	E-4	IEC 62631-2-1
Volume resistivity, ρV	**2E10 / 5.3E8**	Ohm*m	IEC 62631-3-1
Surface resistivity, σC, circular electrodes	**2.6E12 / 5E12**	Ohm per square	IEC 62631-3-2
Electric strength, AC, S20/S20	**39 / 34**	kV/mm	IEC 60243-1
CTI, test solution A, 50 drops value	**600 / -**	-	IEC 60112
Assessment of the insulation group	**I /**	-	DIN EN 60664-1

Rheological properties	**dry / cond**	**Unit**	**Test Standard**
Melt volume-flow rate, MVR	**11 / ***	cm³/10min	ISO 1133
Temperature	**275 / ***	°C	-
Load	**5 / ***	kg	-
Molding shrinkage, parallel	**2.7 / ***	%	ISO 294-4, 2577
Molding shrinkage, normal	**0.9 / ***	%	ISO 294-4, 2577

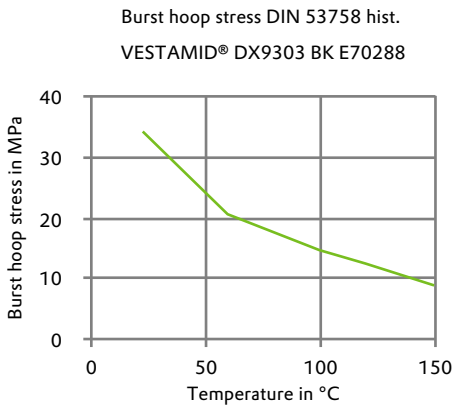
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Mold temperature	**80 / ***	°C	-
Melt temperature	**250 / ***	°C	-

Pipes Properties	dry / cond	Unit	Test Standard
Cold impact resistance, breaks of 10, -40°C, 912g	**0 / ***	-	SAE J2260, J2043
Tube dimension, OD x WT	**8 x 1 / ***	mm	SAE J2260, J2043
Cold impact resistance, breaks of 10, -40°C, 454g	**0 / ***	-	SAE J844
Tube dimension, OD x WT	**8 x 1 / ***	mm	SAE J844
Cold impact resistance, breaks of 10, -40°C, 454g	**0 / ***	-	SAE J844
Tube dimension, OD x WT	**8 x 1**	mm	SAE J844
Pretreatment	**2h boiling water**	-	SAE J844
Cold impact resistance, breaks of 10, -40°C, 454g	**0 / ***	-	SAE J844
Tube dimension, OD x WT	**8 x 1**	mm	SAE J844
Pretreatment	**24h 110°C**	-	SAE J844
Burst hoop stress, 23°C, H2O	**34 / ***	MPa	DIN 53758, historical

Diagrams

Burst hoop stress DIN 53758 hist.



Characteristics

Key Feature, Industrial Sector
Automotive

Key Feature, Processing
Extrusion

Key Feature, Resistance to
Heat (Thermal Stability), U.V. / Light / Weathering, Oil / Fuels

Key Feature, Electrical
Isolating

Key Feature, Certificate / Licence
Automotive

Key Feature, Additives
Unfilled

Applications
Tube and hose

Processing
Pipe/Tube Extrusion

Special Characteristics
High impact strength, Light-stabilized, Heat-stabilized, High viscosity

Color
Black

Additives
Impact restistant, Light stabilizer, Heat stabilizer

Delivery form
Pellets, Granules

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