

Product Information

VESTAMID® DX9330

MEDIUM VISCOSITY POLYAMIDE 612 RESIN

VESTAMID® DX9330 NC is a PA 612 base polymer without any stabilizers and other additives.

VESTAMID® DX9330 NC is suitable for both extrusion as well as injection molding. Usually VESTAMID® DX9330 NC is only used in special cases when additives are not preferable, or processing aids are not necessary, e.g. filament extrusion.

Based on the perfect balance of amino and carboxyl end groups this material is easy to process and to dye. The typical characteristics of PA 612 are moderate water absorption, good dimensional stability and almost unchanged properties at varying ambient humidity.

VESTAMID® DX9330 NC is supplied as cylindrical granules, ready for processing, in moisture-proof bags. The processing temperature should be within a range of 250°C to 290°C.

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.

The results shown have been generated from a low number of production lots. Therefore, they are preliminary and not yet the result of a statistical evaluation. Therefore they must not be used to establish specifications.

Key Features

Industrial Sector

Sustainable, Sports and Lifestyle

Delivery form

Pellets, Granules

Sustainability

Sustainable electricity

Conformity

Food contact

Processing

Injection molding

Additives

Unfilled

LCA-values	dry	Unit	Test Standard
LCA name of certificate	VESTAMID® D	-	ISO 14040, 14044
LCA certifier	TÜV Rheinland	-	ISO 14040, 14044
Blue water consumption	9.9	kg	ISO 14040, 14044
Global Warming Potential incl. bio. C incl. LUC	7.2	kg CO ₂ eq./kg	ISO 14040, 14044
Global Warming Potential excl. bio. C incl. LUC	7.2	kg CO ₂ eq./kg	ISO 14040, 14044
Land use (ReCiPe 2016)	0	Annual crop eq. y	ISO 14040, 14044
GWP savings as compared to 2023 reference	-0.8	kg CO ₂ eq./kg	ISO 14040, 14044

Mechanical properties ISO	dry / cond	Unit	Test Standard
Tensile modulus	319000 / -	psi	ISO 527
Tensile strength	8410 / -	psi	ISO 527
Yield stress	8410 / -	psi	ISO 527
Yield strain	4 / -	%	ISO 527
Stress at 50% strain	6090 / -	psi	ISO 527
Stress at break	6380 / -	psi	ISO 527
Nominal strain at break, tB	>50 / -	%	ISO 527
Charpy impact strength, +23°C	N / -	ftlb/in ²	ISO 179/1eU
Charpy impact strength, -30°C	N / -	ftlb/in ²	ISO 179/1eU
Charpy notched impact strength, +23°C	2.14 / -	ftlb/in ²	ISO 179/1eA
Type of failure	C / -	-	-
Charpy notched impact strength, -30°C	2.14 / -	ftlb/in ²	ISO 179/1eA
Type of failure	C / -	-	-
Flexural modulus, 23°C	299000 / -	psi	ISO 178
Flexural stress at conv. deflection, 23°C	10000 / -	psi	ISO 178
Flexural strength, 23°C	12000 / -	psi	ISO 178
Flexural strain at flexural strength, 23°C	6 / -	%	ISO 178
Flexural stress at break, 23°C	N / -	psi	ISO 178

Flexural strain at break, 23°C	N / -	%	ISO 178
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Thermal properties	dry / cond	Unit	Test Standard
Melting temperature	419 / *	°F	ISO 11357-1/-3
Glass transition temperature, DSC	111 / *	°F	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	136 / *	°F	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	300 / *	°F	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	412 / *	°F	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	356 / *	°F	ISO 306
Melting Temperature	419	°F	ASTM D 3418

Physical properties	dry / cond	Unit	Test Standard
Density	1.06 / -	g/cm ³	ISO 1183
Water absorption	2.8 / *	%	Sim. to ISO 62
Humidity absorption	1.4 / *	%	Sim. to ISO 62
Moisture content	0.15 / -	wt.-%	ISO 15512
Density	1.06	g/cm ³	ASTM D 792

Optical properties	dry	Unit	Test Standard
Color b	-0.01	-	CIE

Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	69 / *	cm ³ /10min	ISO 1133
Temperature	240 / *	°C	-
Load	10 / *	kg	-
Molding shrinkage, parallel	1.4 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.4 / *	%	ISO 294-4, 2577
Mold temperature	176 / *	°F	-
Melt temperature	482 / *	°F	-

VESTAMID®

Polymer analytics

	dry / cond	Unit	Test Standard
Viscosity number	4290 / *	in ³ /lb	ISO 307, 1157, 1628
Amino end group	31	mmol/kg	Evonik standard
Carboxyl end group	94	mmol/kg	Evonik standard

Test specimen production

	dry	Unit	Test Standard
Injection Molding, melt temperature	482	°F	ISO 294
Injection Molding, mold temperature	176	°F	ISO 294
Injection Molding, injection velocity	7.87	in/s	ISO 294

Characteristics

Special Characteristics

Medium viscosity

Color

Natural color