

Product Information

VESTAMID® LX9043 NC

HEAT-STABILIZED POLYAMIDE 12 MOLDING COMPOUND WITH IMPROVED DEMOLDABILITY



VESTAMID® LX9043 NC is a semi-crystalline, low-viscosity molding compound based on PA12, from which various hollow articles can be produced by rotational molding. The polyamide 12 molding compound is especially suitable for industrial and technical applications with requirements for the manufacture of plastic products of different sizes. The semi-crystalline molding compound absorbs only small amounts of water. Components made from it therefore exhibit excellent dimensional stability under varying ambient humidity.

VESTAMID® LX9043 NC is supplied as cylindrical granules, ready for processing, in moisture-proof bags.

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

The use of colorants may affect property values.

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

Industry and Engineering

Resistance to

Heat (thermal stability)

Delivery form

Pellets, Granules

Electrical

Insulating

Optics

Laser transparent, Opaque

Additives

Release agent, Unfilled

Mechanical properties ISO

Tensile modulus

dry

161000

Unit

psi

Test Standard

ISO 527

Yield stress

5660

psi

ISO 527

Yield strain

13

%

ISO 527

Stress at 50% strain	4500	psi	ISO 527
Stress at break	8990	psi	ISO 527
Nominal strain at break, tB	>50	%	ISO 527
Typical for the mat. nom. strain at br., tB	344	%	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	2.38	ftlb/in ²	ISO 179/1eA
Type of failure	C	-	-
Charpy notched impact strength, -30°C	1.9	ftlb/in ²	ISO 179/1eA
Type of failure	C	-	-
Flexural modulus, 23°C	146000	psi	ISO 178
Flexural stress at conv. deflection, 23°C	4930	psi	ISO 178
Flexural strength, 23°C	6670	psi	ISO 178
Flexural strain at flexural strength, 23°C	8	%	ISO 178
Flexural stress at break, 23°C	N	psi	ISO 178

Thermal properties	dry	Unit	Test Standard
Melting temperature	352	°F	ISO 11357-1/-3
Glass transition temperature, DSC	104	°F	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	115	°F	ISO 75-1/-2
Temp. of deflection under load C, 8.00 MPa	205	°F	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	345	°F	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	271	°F	ISO 306
Melting Temperature	352	°F	ASTM D 3418

Physical properties	dry	Unit	Test Standard
Density	1.01	g/cm ³	ISO 1183
Water absorption	1.5	%	Sim. to ISO 62

Moisture content	0.07	wt.-%	ISO 15512
Shore D Hardness	70	-	ASTM D 2240

Rheological properties	dry	Unit	Test Standard
Melt volume-flow rate, MVR	63	cm ³ /10min	ISO 1133
Temperature	230	°C	-
Load	5	kg	-
Molding shrinkage, parallel	0.9	%	ISO 294-4, 2577
Molding shrinkage, normal	1.2	%	ISO 294-4, 2577
Mold temperature	176	°F	-
Melt temperature	428	°F	-
Melt viscosity, at 100 1/s	449	Pa s	-
Temperature	428	°F	-

Polymer analytics	dry	Unit	Test Standard
Rel. solution viscosity	1.75	-	ISO 307
Amino end group	5	mmol/kg	Evonik standard
Carboxyl end group	80	mmol/kg	Evonik standard

Characteristics

Applications

General purpose

Color

Natural color

Processing

Thermoforming, Rotational molding

Additives

Release agent

Special Characteristics

Halogen-free, Phosphorus-free, Semi-crystalline, Low viscosity

Delivery form

Cylindrical pellets

Processing Recommendation Injection Molding	dry	Unit	Test Standard
Pre-drying - Temperature	158 - 176	°F	-
Pre-drying - Time	5 - 12	h	-

Processing humidity	≤0.1	%	-
Melt temperature	410 - 428	°F	-
Mold temperature	140 - 176	°F	-
Feed temperature	104 - 140	°F	-
Circumferential speed	1.97 - 7.87	in/s	-
Back pressure	725 - 1450	psi	-