

Product Information

VESTAMID® X7393 NC

HIGH VISCOSITY, PLASTICIZED, IMPACT MODIFIED, HEAT- AND LIGHT STABILIZED POLYAMIDE 12 COMPOUND



VESTAMID® X7393 is a high viscosity, plasticized, impact modified, heat- and light stabilized polyamide 12 compound for flexible tubing and hoses for the automobile industry according to DIN 73 378 and DIN 74 324, Type PA 12-PHLY.

Parts made of VESTAMID® X7393 are characterized by optimized cold temperature impact resistance for the extrusion of semi-rigid tubing with increased burst pressure resistance as well as exceptional low coefficient of friction and good chemical resistance. Properties of compounds based on Polyamide 12 vary little with changing humidity due to their low moisture absorption.

VESTAMID® X7393 is supplied as pellets, ready for use, in moisture-proof bags.

The use of colorants may affect property 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.

Key Features

Industrial Sector

Automotive and Mobility, Sustainable

Electrical

Insulating

Sustainability

Sustainable electricity

Conformity

Automotive

Resistance to

Heat (thermal stability), UV / light / weathering, Oil / fuels

Additives

Unfilled

LCA-values

LCA name of certificate

dry

[VESTAMID® L Compound medium](#)

Unit

-

Test Standard

ISO 14040, 14044

LCA certifier

[TÜV Rheinland](#)

-

ISO 14040, 14044

Blue water consumption	25.6	kg	ISO 14040, 14044
Global Warming Potential incl. bio. C incl. LUC	6.0	kg CO ₂ eq./kg	ISO 14040, 14044
Global Warming Potential excl. bio. C incl. LUC	6.0	kg CO ₂ eq./kg	ISO 14040, 14044
Land use (ReCiPe 2016)	0.1	Annual crop eq. y	ISO 14040, 14044
GWP savings as compared to 2023 reference	-2.4	kg CO ₂ eq./kg	ISO 14040, 14044

Mechanical properties ISO	dry / cond	Unit	Test Standard
Tensile modulus	520 / 470	MPa	ISO 527
Tensile strength	29 / 27	MPa	ISO 527
Yield stress	29 / 27	MPa	ISO 527
Yield strain	28 / 28	%	ISO 527
Stress at 50% strain	29 / 26	MPa	ISO 527
Stress at break	42 / 42	MPa	ISO 527
Nominal strain at break, tB	200 / 210	%	ISO 527
Charpy impact strength, +23°C	N / N	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	N / N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	108 / 130	kJ/m ²	ISO 179/1eA
Type of failure	P / P	-	-
Charpy notched impact strength, -30°C	7 / 8	kJ/m ²	ISO 179/1eA
Type of failure	C / C	-	-
Flexural modulus, 23°C	500 / 450	MPa	ISO 178
Flexural stress at conv. deflection, 23°C	17 / 16	MPa	ISO 178
Flexural strength, 23°C	25 / 25	MPa	ISO 178
Flexural strain at flexural strength, 23°C	9 / 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	177 / *	°C	ISO 11357-1/-3
Glass transition temperature, DSC	15 / *	°C	ISO 11357-1/-2
Temp. of deflection under load A, 1.80 MPa	45 / *	°C	ISO 75-1/-2
Temp. of deflection under load B, 0.45 MPa	110 / *	°C	ISO 75-1/-2
Vicat softening temperature A, 10 N, 50 K/h	170 / *	°C	ISO 306
Vicat softening temperature B, 50 N, 50 K/h	125 / *	°C	ISO 306
Melting Temperature	177	°C	ASTM D 3418

Physical properties	dry / cond	Unit	Test Standard
Density	1020 / -	kg/m ³	ISO 1183
Water absorption	1.2 / *	%	Sim. to ISO 62
Humidity absorption	0.7 / *	%	Sim. to ISO 62
Moisture content	0.03 / -	Gew.-%	ISO 15512
Bulk density, Granulate	596	kg/m ³	-
Weight per 1000 granules	14.9 / -	g	-
Shore D hardness	67 / -	-	ISO 7619-1
Density	1020	kg/m ³	ASTM D 792

Optical properties	dry	Unit	Test Standard
Color b	4.29	-	CIE

Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	8.5 / *	cm ³ /10min	ISO 1133
Temperature	230 / *	°C	-
Load	5 / *	kg	-
Molding shrinkage, parallel	0.8 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.4 / *	%	ISO 294-4, 2577

VESTAMID®

Polymer analytics

Viscosity number

dry / cond

190 / *

Unit

cm³/g

Test Standard

ISO 307, 1157, 1628

Test specimen production

Injection Molding, melt temperature

dry

220

Unit

°C

Test Standard

ISO 294

Injection Molding, mold temperature

60

°C

ISO 294

Injection Molding, injection velocity

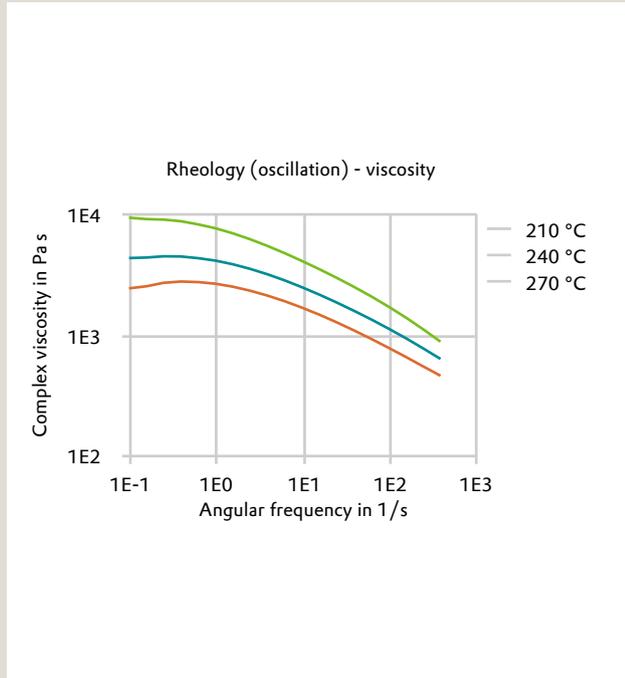
200

mm/s

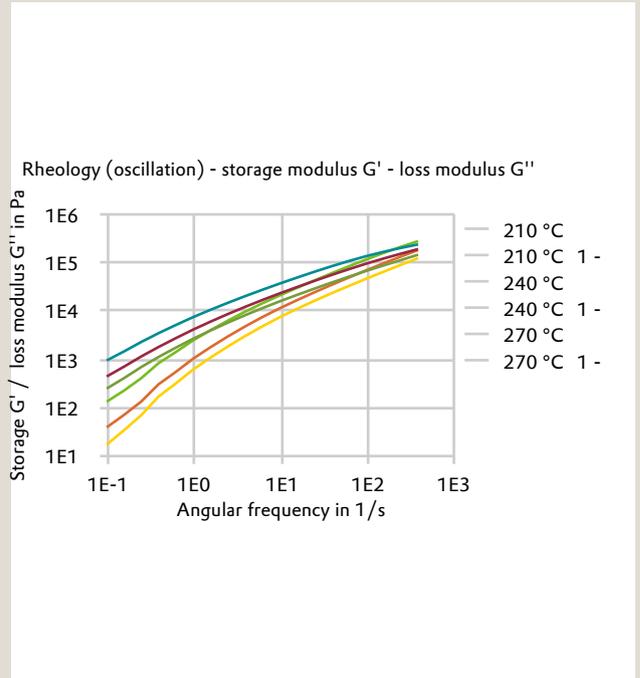
ISO 294

Diagrams

Rheology (oscillation) - viscosity



Rheology (oscillation) - storage modulus G' - loss modulus G''



Characteristics

Additives

Plasticizer, Impact resistant