

Product Information

VESTAMID® L1723 BK 9.7624

LOW-VISCOSITY, PLASTICIZED PA12 RESIN FOR INJECTION MOULDING



VESTAMID® L1723 BK 9.7624 has been developed especially for the production of strip clips and cable ties.

This partially crystalline polyamide 12 bases compounds have a very low water absorption. Therefore products produced from VESTAMID® L1723 BK 9.7624 maintain their dimensions in environments with varying humidity levels, while maintaining a high tenacity, a low coefficient of friction and good chemical resistance.

VESTAMID® L1723 BK 9.7624 is supplied as cylindrical granules, ready for processing in moisture-proof packaging.

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.

Key Features

Industrial Sector

Sustainable, Industry and Engineering

Delivery form

Pellets, Granules

Sustainability

Sustainable electricity

Additives

Lubricant, Release agent, Unfilled

Processing

Injection molding

LCA-values

LCA name of certificate

dry

[VESTAMID® L
Compound medium](#)

Unit

-

Test Standard

ISO 14040, 14044

LCA certifier

[TÜV Rheinland](#)

-

ISO 14040, 14044

Vicat softening temperature B, 50 N, 50 K/h	130 / *	°C	ISO 306
Coeff. of linear therm. expansion, 23°C to 55 °C, parallel	180 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, 23°C to 55 °C, normal	180 / *	E-6/K	ISO 11359-1/-2
Melting Temperature	173	°C	ASTM D 3418

Physical properties	dry / cond	Unit	Test Standard
Density	1030 / 1040	kg/m ³	ISO 1183
Humidity absorption	0.5 / *	%	Sim. to ISO 62
Density	1030	kg/m ³	ASTM D 792

Burning Behav.	dry / cond	Unit	Test Standard
UL Yellow Card available	yes / *	-	-
Burning behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.6 / *	mm	-
Burnin behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	3.0 / *	mm	-
Burning behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	0.8 / *	mm	-
Hot Wire Ignition (HWI)	4	PL-Klasse	IEC 60695-2-20
HWI - thickness tested	0.8	mm	-
Hot Wire Ignition (HWI)	4	PL-Klasse	IEC 60695-2-20
HWI - thickness tested	1.6	mm	-
Hot Wire Ignition (HWI)	3	PL-Klasse	IEC 60695-2-20
HWI - thickness tested	3.0	mm	-

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity, V	1E10 / 4E9	Ohm*m	IEC 62631-3-1
Surface resistivity, E	* / 2E13	Ohm	IEC 62631-3-2
Relative permittivity, 100Hz	10 / 14	-	IEC 62631-2-1

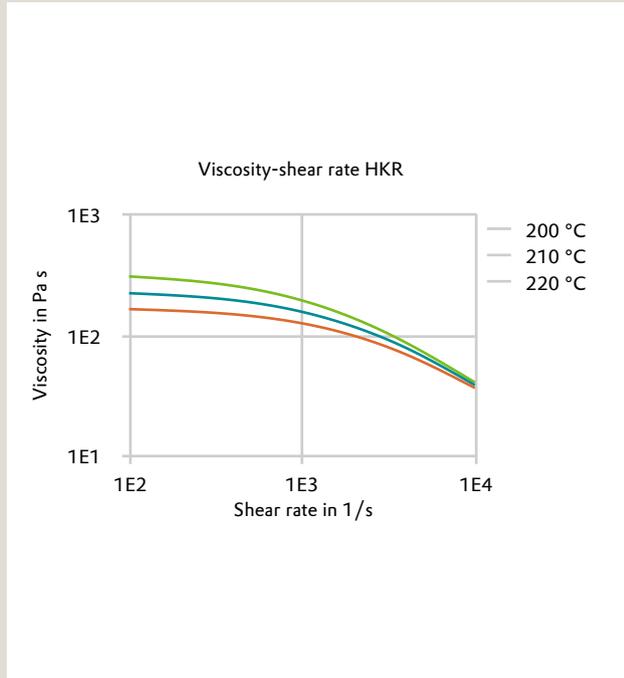
Relative permittivity, 1MHz	3.7 / 4.7	-	IEC 62631-2-1
Dissipation factor, 100Hz	1600 / 1400	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	1200 / 1700	E-4	IEC 62631-2-1
Dielectric strength, AC, S20/S20, t. 1 mm	33 / 31	kV/mm	IEC 60243-1
CTI, test solution A, 50 drops value	600 / 600	-	IEC 60112
Assessment of the insulation group	I	-	DIN EN 60664-1

Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	160 / *	cm ³ /10min	ISO 1133
Temperature	230 / *	°C	-
Load	5 / *	kg	-
Melt volume-flow rate, MVR	41 / *	cm ³ /10min	ISO 1133
Temperature	230 / *	°C	-
Load	2.16 / *	kg	-
Molding shrinkage, parallel	1.6 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.5 / *	%	ISO 294-4, 2577
Mold temperature	80 / *	°C	-
Melt temperature	200 / *	°C	-

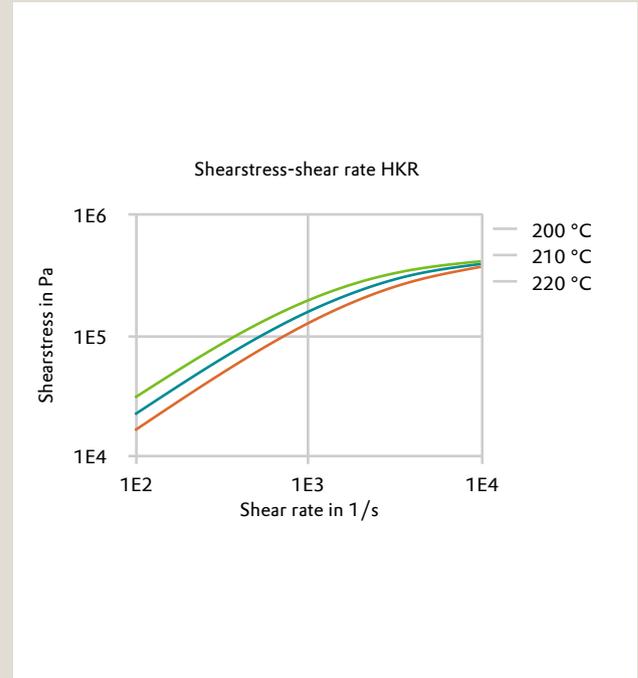
Test specimen production	dry	Unit	Test Standard
Injection Molding, melt temperature	200	°C	ISO 294
Injection Molding, mold temperature	60	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294
Injection Molding, pressure at hold	70	MPa	ISO 294

Diagrams

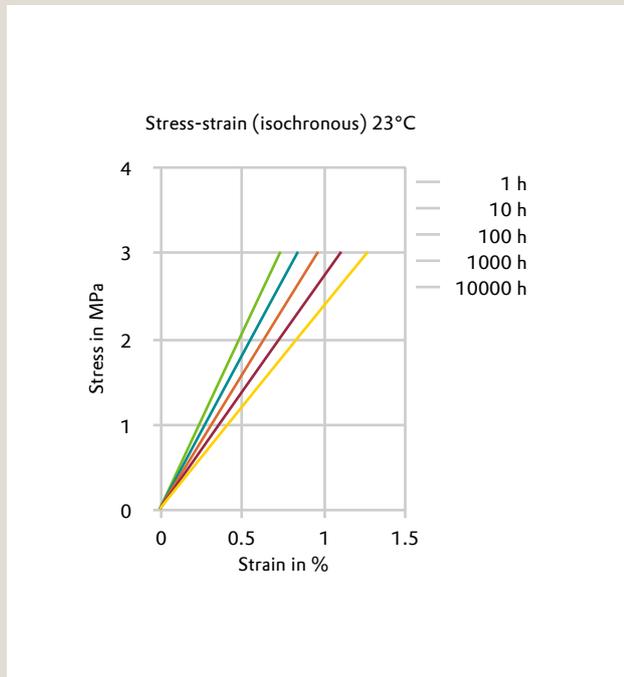
Viscosity-shear rate HKR



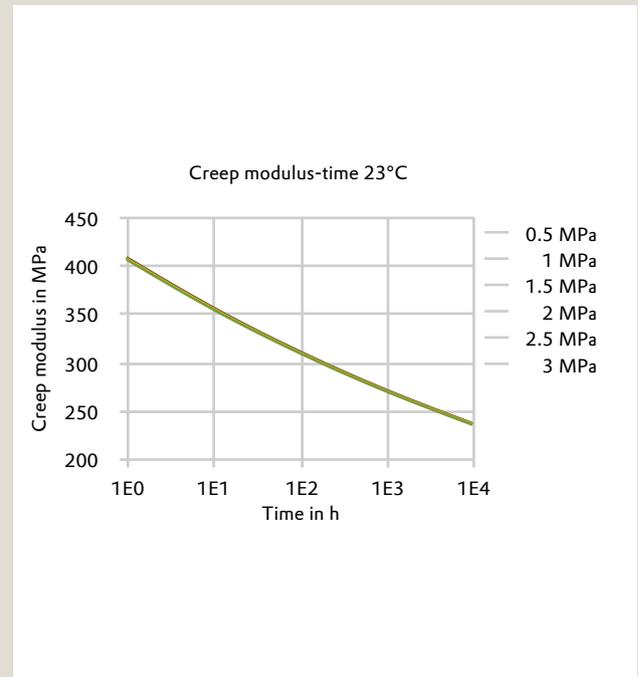
Shearstress-shear rate HKR



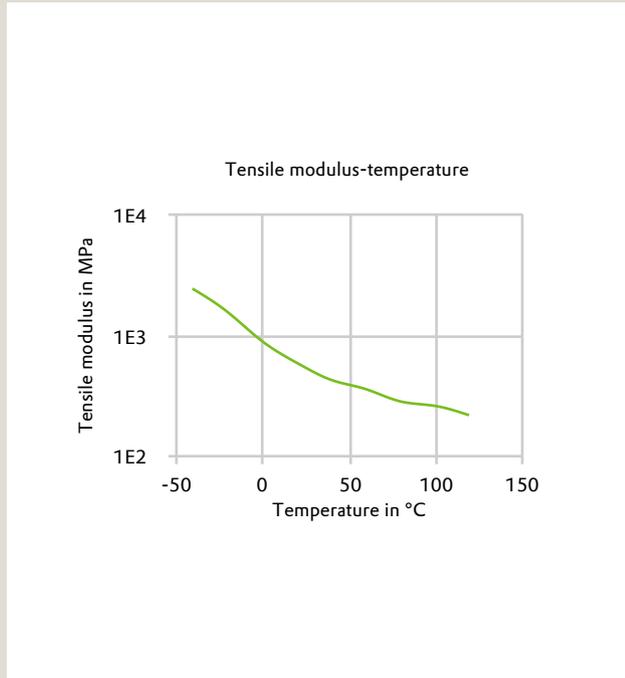
Stress-strain (isochronous) 23°C



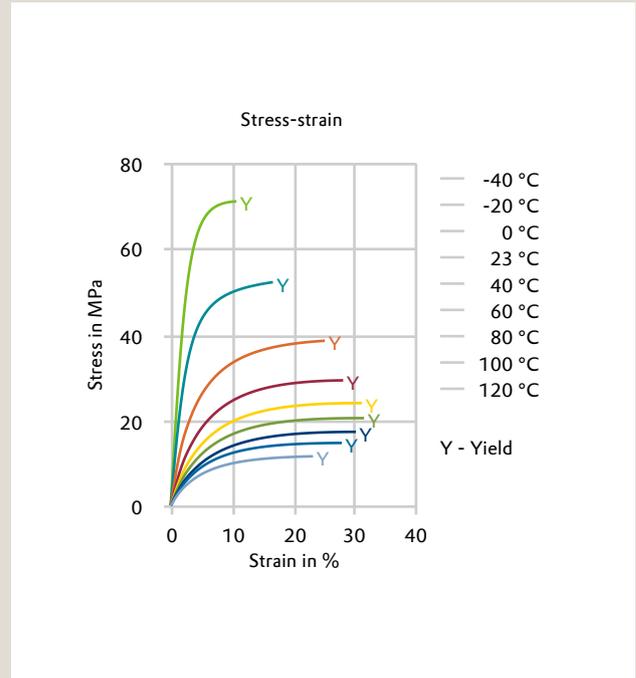
Creep modulus-time 23°C



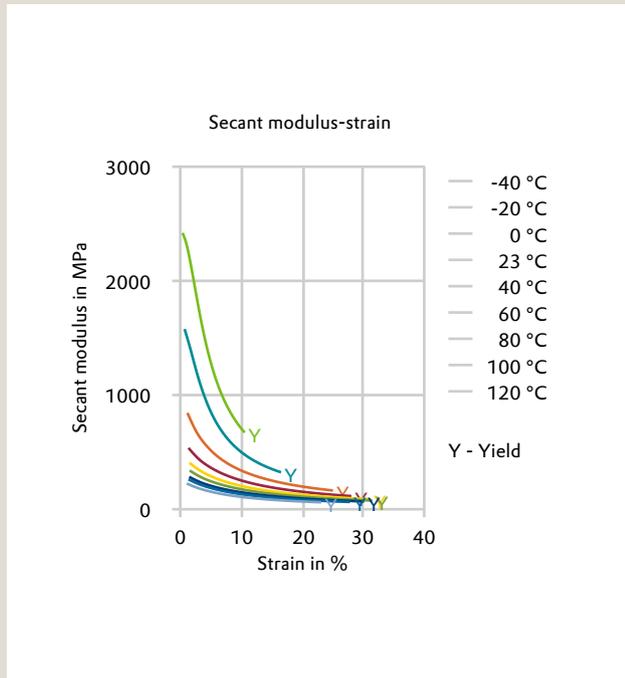
Tensile modulus-temperature



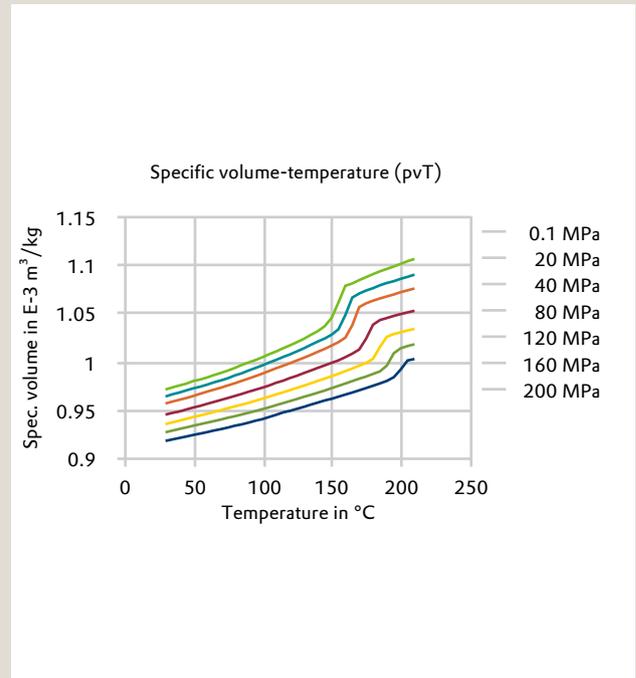
Stress-strain



Secant modulus-strain



Specific volume-temperature (pvT)



Characteristics

Special Characteristics

Light-stabilized, U.V. stabilized, High heat resistant

Additives

Release agent, Plasticizer, Heat stabilizer, Processing aids

Color

Black

Chemical Media Resistance

Acids

- ✓ Acetic Acid (5% by mass) (23°C)
- ✓ Citric Acid solution (10% by mass) (23°C)

Bases

- ✓ Sodium Hydroxide solution (35% by mass) (23°C)
- ✓ Sodium Hydroxide solution (1% by mass) (23°C)
- ✓ Ammonium Hydroxide solution (10% by mass) (23°C)

Alcohols

- ✓ Isopropyl alcohol (23°C)
- ✓ Methanol (23°C)
- ✓ Ethanol (23°C)

Hydrocarbons

- ✓ n-Hexane (23°C)
- ✓ Toluene (23°C)
- ✓ iso-Octane (23°C)

Ketones

- ✓ Acetone (23°C)

Ethers

- ✓ Diethyl ether (23°C)

Mineral oils

- ✓ SAE 10W40 multigrade motor oil (23°C)
- ✓ Insulating Oil (23°C)

Standard Fuels

- ✓ ISO 1817 Liquid 1 (60°C)
- ✓ ISO 1817 Liquid 2 (60°C)
- ✓ ISO 1817 Liquid 3 (60°C)
- ✓ ISO 1817 Liquid 4 (60°C)
- ✓ Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)
- ✓ Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)
- ✓ Diesel fuel (pref. ISO 1817 Liquid F) (23°C)
- ✓ Diesel fuel (pref. ISO 1817 Liquid F) (90°C)
- ✓ Diesel EN 590 (100°C)

Salt solutions

- ✓ Sodium Chloride solution (10% by mass) (23°C)
- ✓ Sodium Carbonate solution (20% by mass) (23°C)
- ✓ Sodium Carbonate solution (2% by mass) (23°C)
- ✓ Zinc Chloride solution (50% by mass) (23°C)

Other

- ✓ Ethyl Acetate (23°C)
- ✓ Hydrogen peroxide (23°C)
- ✓ DOT No. 4 Brake fluid (120°C)
- ✓ Water (23°C)

Rheological calculation properties

	dry	Unit	Test Standard
Density of melt	860	kg/m ³	-
Spec. heat capacity of melt	3000	J/(kg K)	-
Ejection temperature	170	°C	-
Min. mold temperature	30	°C	-
Max. mold temperature	100	°C	-
Min. melt temperature	190	°C	-
Max. melt temperature	230	°C	-