CAMPUS® Datasheet

VESTAMID® LX9102 blk (sw) - PA12
Evonik Industries AG

Product Texts

VESTAMID® LX9102 blk

Conductive nylon12 for use in multilayer tubing

Resin: ISO 1874-PA12-HIP,EHLZ,22-005

VESTAMID® LX9102 is a specially modified electrically conductive nylon 12 for use in conductive multilayer tubing. **VESTAMID® LX9102** can be used e.g. in multilayer tubing MLT 140.2 and MLT 2040.2.

Compared to common conductive resins **VESTAMID® LX9102** is characterised by a lower melt viscosity and thus excellent extrudability also in thin layers. Use of **VESTAMID® LX9102** leads to tubing with excellent quality of the inner surface.

Multilayer tubing with an innermost layer made of **VESTAMID® LX9102** complies with the American automotive manufactures' requirements to avoid electrostatic charging generated by fuel flow.

Rheological properties	dry / cond	Unit	Test Standard
Molding shrinkage, parallel	**1.4 / ***	%	ISO 294-4, 2577
Molding shrinkage, normal	**1.5 / ***	%	ISO 294-4, 2577

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	**640 / -**	MPa	ISO 527-1/-2
Yield stress	**32 / -**	MPa	ISO 527-1/-2
Yield strain	**37 / -**	%	ISO 527-1/-2
Nominal strain at break	**>50 / -**	%	ISO 527-1/-2
Charpy impact strength, +23°C	**N / -**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**N / -**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	**90[P] / -**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**5 / -**	kJ/m²	ISO 179/1eA

P: Partial Break

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 10°C/min	**171 / ***	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.80 MPa	**55 / ***	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**120 / ***	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	**136 / ***	°C	ISO 306
Burning Behav. at 1.5 mm nom. thickn.	**HB / ***	class	IEC 60695-11-10
Thickness tested (1.5)	**1.6 / ***	mm	IEC 60695-11-10
Burning Behav. at thickness h	**HB / ***	class	IEC 60695-11-10
Thickness tested (h)	**3.2 / ***	mm	IEC 60695-11-10

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	**100 / -**	Ohm*m	IEC 60093

Other properties	dry / cond	Unit	Test Standard
Water absorption	**1.5 / ***	%	Sim. to ISO 62
Humidity absorption	**0.5 / ***	%	Sim. to ISO 62

Density	**1120 / -**	kg/m³	ISO 1183

Characteristics

Processing
Profile Extrusion

Delivery form
Pellets

Additives
Plasticizer

Special Characteristics
Increased electrical conductivity, Anti-static

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Other text information

Profile extrusion

PREPROCESSING INFORMATION
Maximum Water Content: 0.1 %
When the indicated water content is exceeded, the resin must be dried. The drying time is dependent on the drying temperature. At a drying temperature of 80 °C we recommend, depending on the water content, a drying time of 8 - 16 hours. Fresh air dryers are acceptable, better would be a dry air or vacuum dryer. Please note our product literature, plasticized resins can lose plasticizer during drying.
PROCESSING INFORMATION
Melt Temperature : 230 - 260 °C

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)

All listed technical data are typical values intended for your guidance. They are given without obligation and do not constitute a materials specification. Should you have any further questions concerning material behavior or properties, please contact us at the following address :

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NAFTA:
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