

CAMPUS® Datasheet

VESTAMID® LX9008 blk (sw) - PA12-I
Evonik Industries AG



Product Texts

VESTAMID® LX9008 blk

High-viscosity, plasticizer-free extrusion compound with an extraordinary longterm heat resistance

Resin: ISO 1874-PA12,HI,EHL,22-010

VESTAMID® LX9008 is a plasticizer-free polyamid 12 compound, with an especially high long-term resistance under thermal load.

VESTAMID® LX9008 is suitable to produce flexible tubes that are permanently exposed to higher temperatures, e.g., in the engine compartment of motor vehicles. Especially when used as diesel fuel lines they show significant advantages compared with standard grades, obvious in storage tests with diesel fuel.

The material absorbs only little moisture, thus leading to nearly unaffected dimensions and properties of the finished parts at changing ambient conditions.

| Rheological properties | dry / cond | Unit | Test Standard |
|------------------------------------------|-----------------------|-------------------|-----------------|
| Molding shrinkage, parallel | 0.2 / * | % | ISO 294-4, 2577 |
| Molding shrinkage, normal | 1.9 / * | % | ISO 294-4, 2577 |
| Mechanical properties | dry / cond | Unit | Test Standard |
| Tensile Modulus | 1450 / - | MPa | ISO 527-1/-2 |
| Yield stress | 42 / - | MPa | ISO 527-1/-2 |
| Yield strain | 5 / - | % | ISO 527-1/-2 |
| Nominal strain at break | >50 / - | % | ISO 527-1/-2 |
| Charpy impact strength, +23 °C | N / - | kJ/m ² | ISO 179/1eU |
| Charpy impact strength, -30 °C | N / - | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength, +23 °C | 45 ^[P] / - | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength, -30 °C | 22 / - | kJ/m ² | ISO 179/1eA |
| P: Partial Break | | | |
| Thermal properties | dry / cond | Unit | Test Standard |
| Melting temperature, 10 °C/min | 176 / * | °C | ISO 11357-1/-3 |
| Temp. of deflection under load, 1.80 MPa | 45 / * | °C | ISO 75-1/-2 |
| Temp. of deflection under load, 0.45 MPa | 125 / * | °C | ISO 75-1/-2 |
| Vicat softening temperature, 50 °C/h 50N | 145 / * | °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 |
| Relative permittivity, 100Hz | 3.7 / - | - | IEC 60250 |
| Relative permittivity, 1MHz | 2.9 / - | - | IEC 60250 |
| Dissipation factor, 100Hz | 520 / - | E-4 | IEC 60250 |

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|--------------------------|-------------------|-------------------|----------------------|
| Dissipation factor, 1MHz | 320 / - | E-4 | IEC 60250 |
| Volume resistivity | 1E12 / - | Ohm*m | IEC 60093 |
| Electric strength | 37 / - | kV/mm | IEC 60243-1 |
| Other properties | dry / cond | Unit | Test Standard |
| Water absorption | 1.4 / * | % | Sim. to ISO 62 |
| Humidity absorption | 0.7 / * | % | Sim. to ISO 62 |
| Density | 1010 / - | kg/m ³ | ISO 1183 |

Characteristics

Processing

Profile Extrusion, Other Extrusion

Delivery form

Pellets

Special Characteristics

Light stabilized or stable to light, U.V. stabilized or stable to weather, Heat stabilized or stable to heat

Regional Availability

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

Other text information

Other 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 : 220 - 250 °C

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 : 220 - 250 °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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