

Grilamid LV-23 ESD

PA12-GF23

EMS-GRIVORY | a unit of EMS-CHEMIE AG

Product Texts

Product designation according to ISO 1874:

PA12, MHRZ, 18-050 GF23+C

| Mechanical properties | dry / cond | Unit | Test Standard |
|--|--------------------|-------------------|---------------|
| Tensile Modulus | 5800 / 5000 | MPa | ISO 527-1/-2 |
| Stress at break | 110 / 95 | MPa | ISO 527-1/-2 |
| Strain at break | 3 / 5 | % | ISO 527-1/-2 |
| Charpy impact strength (+23°C) | - / 70 | kJ/m ² | ISO 179/1eU |
| Charpy impact strength (-30°C) | - / 40 | kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength (+23°C) | - / 8 | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength (-30°C) | - / 6 | kJ/m ² | ISO 179/1eA |

| Mechanical properties (TPE) | dry / cond | Unit | Test Standard |
|-----------------------------|---------------|------|---------------|
| Shore D hardness (15s) | - / 75 | - | ISO 868 |

| Thermal properties | dry / cond | Unit | Test Standard |
|--|-----------------|-------|-----------------|
| Melting temperature (10°C/min) | 178 / - | °C | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa) | 150 / - | °C | ISO 75-1/-2 |
| Temp. of deflection under load (8.00 MPa) | 80 / - | °C | ISO 75-1/-2 |
| Coeff. of linear therm. expansion (parallel) | 20 / - | E-6/K | ISO 11359-1/-2 |
| Coeff. of linear therm. expansion (normal) | 150 / - | E-6/K | ISO 11359-1/-2 |
| Burning Behav. at thickness h | HB / - | class | IEC 60695-11-10 |
| Thickness tested | 0.8 / - | mm | IEC 60695-11-10 |
| Max. usage temperature (long term) | 90 - 120 | °C | ISO 2578 |
| Max. usage temperature (short term) | 150 | °C | EMS |

| Electrical properties | dry / cond | Unit | Test Standard |
|-----------------------|------------------|-------|---------------|
| Volume resistivity | - / 100 | Ohm*m | IEC 60093 |
| Surface resistivity | - / 10000 | Ohm | IEC 60093 |

| Other properties | dry / cond | Unit | Test Standard |
|---------------------|-----------------|-------------------|----------------|
| Water absorption | 1 / - | % | Sim. to ISO 62 |
| Humidity absorption | 0.5 / - | % | Sim. to ISO 62 |
| Density | 1190 / - | kg/m ³ | ISO 1183 |

| Rheo/Phys properties | dry / cond | Unit | Test Standard |
|------------------------------|----------------|------|-----------------|
| Molding shrinkage (parallel) | 0.1 / - | % | ISO 294-4, 2577 |
| Molding shrinkage (normal) | 0.7 / - | % | ISO 294-4, 2577 |

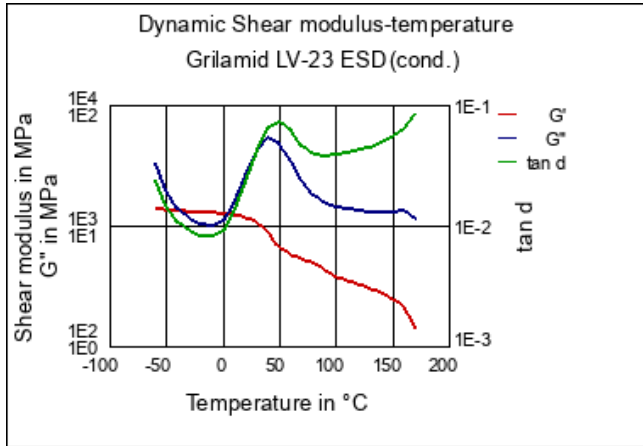
Diagrams

Grilamid LV-23 ESD

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Dynamic Shear modulus-temperature



Characteristics

Processing

Injection Molding

Delivery form

Granules

Special Characteristics

Anti-static, High impact or impact modified, Improved UV resistance (outdoor use), Improved heat resistance

Regional Availability

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

Product Attributes

Hydrolysis resistant

Automotive

Fuel systems

Chemical Media Resistance

Acids

- ☺ Acetic Acid (5% by mass) (23°C)
- ☺ Citric Acid solution (10% by mass) (23°C)
- ☺ Lactic Acid (10% by mass) (23°C)
- ☹ Hydrochloric Acid (36% by mass) (23°C)
- ☹ Nitric Acid (40% by mass) (23°C)
- ☺ Sulfuric Acid (38% by mass) (23°C)
- ☺ Sulfuric Acid (5% by mass) (23°C)
- ☹ Chromic Acid solution (40% 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)

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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)
- ☹️ SAE 10W40 multigrade motor oil (130°C)
- ☹️ SAE 80/90 hypoid-gear oil (130°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 fuel (pref. ISO 1817 Liquid F) (>90°C)

Salt solutions

- ☹️ Sodium Chloride solution (10% by mass) (23°C)
- ☹️ Sodium Hypochlorite 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 (130°C)
 - ☹️ Ethylene Glycol (50% by mass) in water (108°C)
 - ☹️ 1% nonylphenoxy-polyethyleneoxy ethanol in water (23°C)
 - ☹️ 50% Oleic acid + 50% Olive Oil (23°C)
 - ☹️ Water (23°C)
 - ☹️ Deionized water (90°C)
 - 🚫 Phenol solution (5% by mass) (23°C)
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