

Grilon BR 40 W

PA6

EMS-GRIVORY | a unit of EMS-CHEMIE AG

Product Texts

Product designation according to ISO 1874:

PA6-P, E, 24-010

| Mechanical properties | dry / cond | Unit | Test Standard |
|--|------------------------|-------------------|---------------|
| Tensile Modulus | 1300 / 500 | MPa | ISO 527-1/-2 |
| Yield stress | 40 / 30 | MPa | ISO 527-1/-2 |
| Yield strain | 35 / 40 | % | ISO 527-1/-2 |
| Nominal strain at break | >50 / >50 | % | ISO 527-1/-2 |
| 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) | 15 / N | kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength (-30°C) | 3 / 3 | kJ/m ² | ISO 179/1eA |

| Mechanical properties (TPE) | dry / cond | Unit | Test Standard |
|-----------------------------|----------------|------|---------------|
| Ball indentation hardness | 55 / 30 | MPa | ISO 2039-1 |

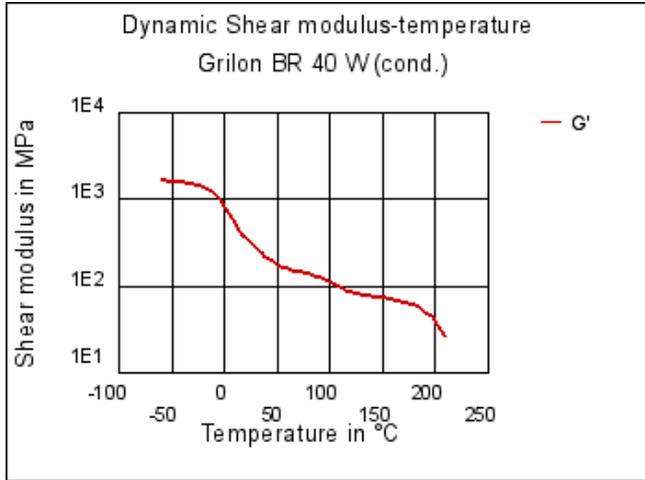
| Thermal properties | dry / cond | Unit | Test Standard |
|--|----------------|-------|-----------------|
| Melting temperature (10°C/min) | 220 / - | °C | ISO 11357-1/-3 |
| Temp. of deflection under load (1.80 MPa) | 45 / - | °C | ISO 75-1/-2 |
| Temp. of deflection under load (0.45 MPa) | 110 / - | °C | ISO 75-1/-2 |
| Coeff. of linear therm. expansion (parallel) | 110 / - | E-6/K | ISO 11359-1/-2 |
| Coeff. of linear therm. expansion (normal) | 160 / - | 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) | 70 - 90 | °C | ISO 2578 |
| Max. usage temperature (short term) | 160 | °C | EMS |

| Electrical properties | dry / cond | Unit | Test Standard |
|----------------------------|--------------------|-------|---------------|
| Volume resistivity | 1E11 / 1E10 | Ohm*m | IEC 60093 |
| Surface resistivity | - / 1E10 | Ohm | IEC 60093 |
| Electric strength | 26 / 22 | kV/mm | IEC 60243-1 |
| Comparative tracking index | - / 450 | - | IEC 60112 |

| Other properties | dry / cond | Unit | Test Standard |
|---------------------|-----------------|-------------------|----------------|
| Water absorption | 8 / - | % | Sim. to ISO 62 |
| Humidity absorption | 2.5 / - | % | Sim. to ISO 62 |
| Density | 1120 / - | kg/m ³ | ISO 1183 |

Diagrams


Dynamic Shear modulus-temperature



Characteristics

Processing

Injection Molding, Other Extrusion

Product Attributes

High viscosity

Delivery form

Granules

Automotive

Air intake systems, Hydraulic systems, Fuel systems

Additives

Plasticizer

Electricals & Electronics

Cables & Tubes

Regional Availability

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

Industry & Consumer goods

Hydraulics & Pneumatics, Mechanical Engineering, Power transmission, Tools & Accessories

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)

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)

