

**Grilon BGZ-30/2**

PA6-GF30

EMS-GRIVORY | a unit of EMS-CHEMIE AG

**Product Texts**

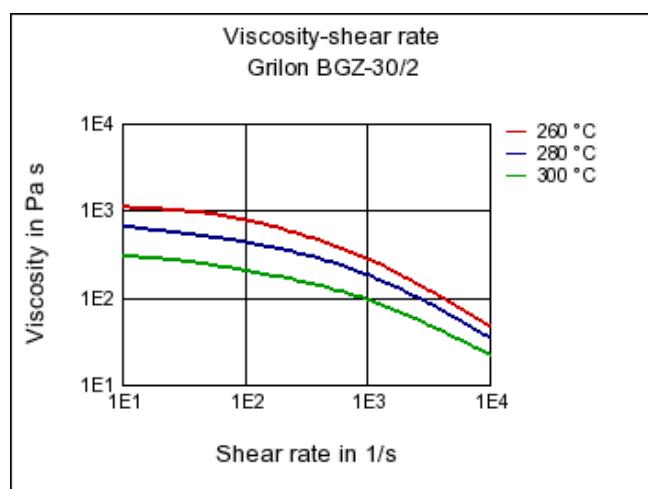
Product-nomenclature acc. ISO 1874:

PA6-HI, MHR, 18-080 , GF30

<b>Mechanical properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
Tensile Modulus	<b>8500 / 5300</b>	MPa	ISO 527-1/2
Stress at break	<b>150 / 105</b>	MPa	ISO 527-1/2
Strain at break	<b>5 / 10</b>	%	ISO 527-1/2
Charpy impact strength (+23°C)	<b>90 / 115</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	<b>95 / 100</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	<b>25 / 35</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	<b>15 / 17</b>	kJ/m <sup>2</sup>	ISO 179/1eA
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<b>Mechanical properties (TPE)</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
Ball indentation hardness	<b>190 / 95</b>	MPa	ISO 2039-1
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<b>Thermal properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
Melting temperature (10°C/min)	<b>222 / -</b>	°C	ISO 11357-1/3
Temp. of deflection under load (1.80 MPa)	<b>200 / -</b>	°C	ISO 75-1/2
Temp. of deflection under load (8.00 MPa)	<b>90 / -</b>	°C	ISO 75-1/2
Coeff. of linear therm. expansion (parallel)	<b>20 / -</b>	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	<b>120 / -</b>	E-6/K	ISO 11359-1/-2
Burning Behav. at thickness h	<b>HB / -</b>	class	IEC 60695-11-10
Thickness tested	<b>0.8 / -</b>	mm	IEC 60695-11-10
Max. usage temperature (long term)	<b>100 - 120</b>	°C	ISO 2578
Max. usage temperature (short term)	<b>180</b>	°C	EMS
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<b>Electrical properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
Volume resistivity	<b>1E12 / 1E11</b>	Ohm*m	IEC 60093
Surface resistivity	<b>- / 1E12</b>	Ohm	IEC 60093
Electric strength	<b>41 / 37</b>	kV/mm	IEC 60243-1
Comparative tracking index	<b>- / 550</b>	-	IEC 60112
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<b>Other properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
Water absorption	<b>7 / -</b>	%	Sim. to ISO 62
Humidity absorption	<b>2 / -</b>	%	Sim. to ISO 62
Density	<b>1330 / -</b>	kg/m <sup>3</sup>	ISO 1183
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<b>Rheo/Phys properties</b>	<b>dry / cond</b>	<b>Unit</b>	<b>Test Standard</b>
Molding shrinkage (parallel)	<b>0.2 / -</b>	%	ISO 294-4, 2577
Molding shrinkage (normal)	<b>0.6 / -</b>	%	ISO 294-4, 2577

**Diagrams**

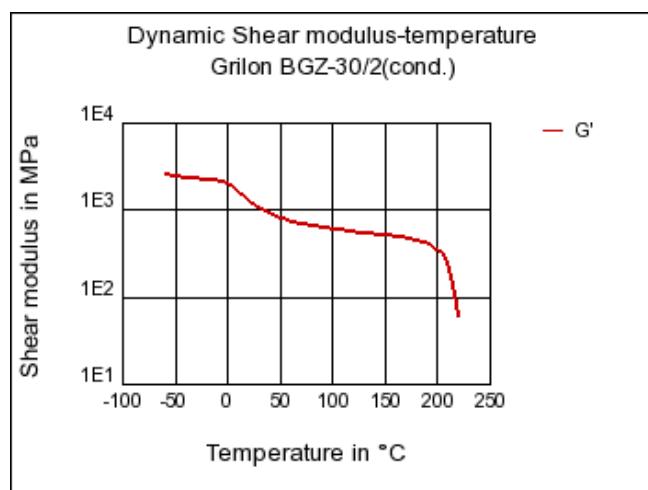
Viscosity-shear rate



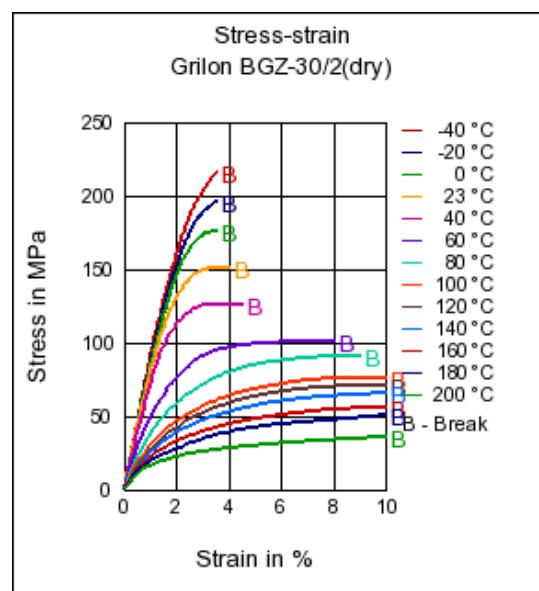
Shearstress-shear rate



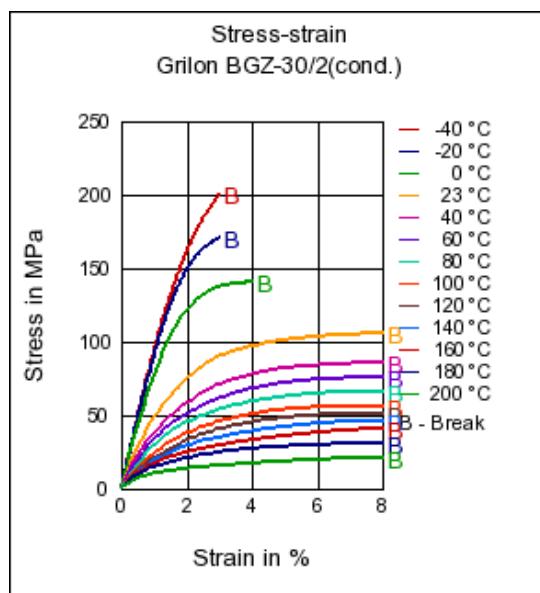
Dynamic Shear modulus-temperature



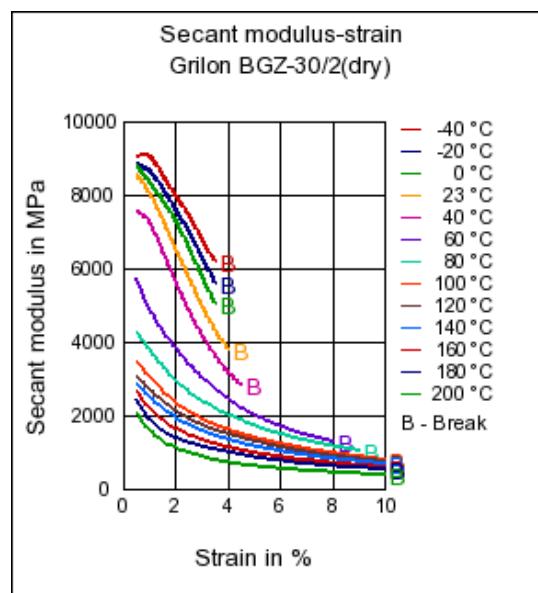
Stress-strain



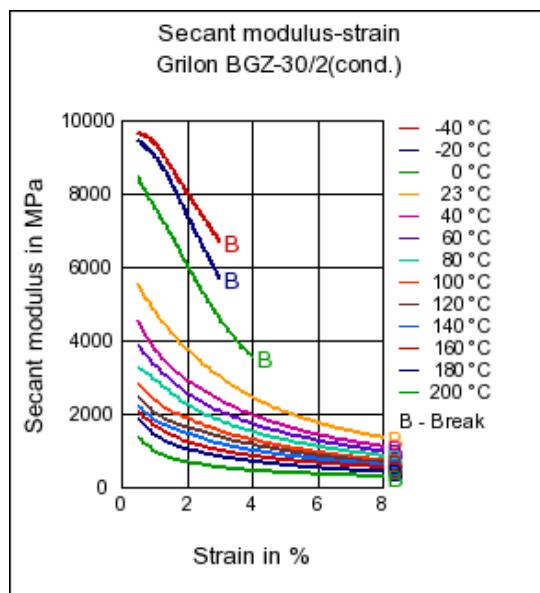
Stress-strain



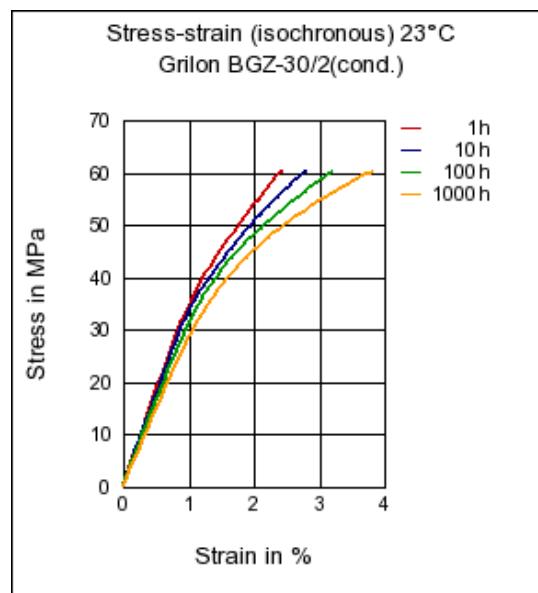
Secant modulus-strain



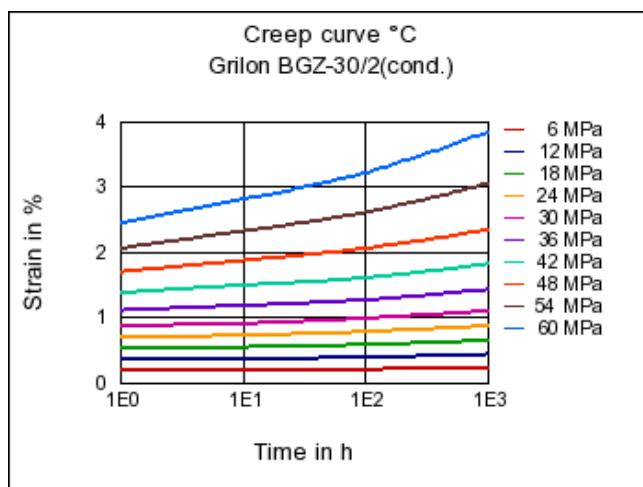
Secant modulus-strain



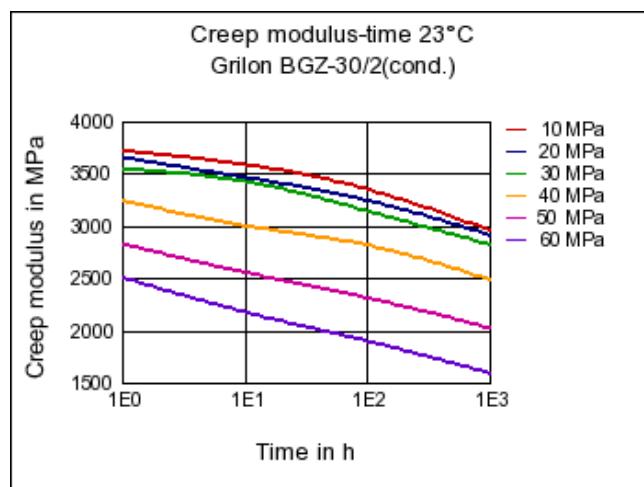
Stress-strain (isochronous) 23°C



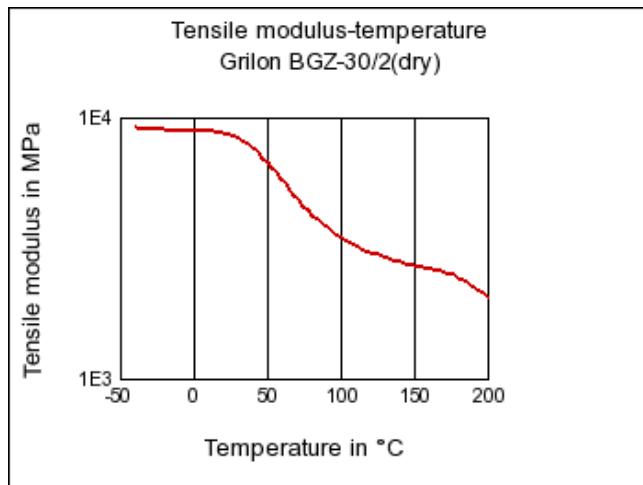
Creep curve °C



Creep modulus-time 23°C



Tensile modulus-temperature



Characteristics

Processing

Injection Molding

Delivery form

Granules

Special Characteristics

High impact or impact modified

Regional Availability

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

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)