

**Grilon BG-30/2**

PA6-GF30

EMS-GRIVORY | a unit of EMS-CHEMIE AG

**Product Texts**

Product designation according to ISO 1874:

PA 6, MHR, 14-090 N, GF30

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	<b>9500 / 6000</b>	MPa	ISO 527-1/-2
Stress at break	<b>185 / 125</b>	MPa	ISO 527-1/-2
Strain at break	<b>5 / 10</b>	%	ISO 527-1/-2
Charpy impact strength (+23°C)	<b>75 / 90</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	<b>65 / 70</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	<b>11 / 20</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	<b>8 / 9</b>	kJ/m <sup>2</sup>	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	<b>210 / 100</b>	MPa	ISO 2039-1

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	<b>222 / -</b>	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	<b>205 / -</b>	°C	ISO 75-1/-2
Temp. of deflection under load (8.00 MPa)	<b>135 / -</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>110 / -</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>200</b>	°C	EMS

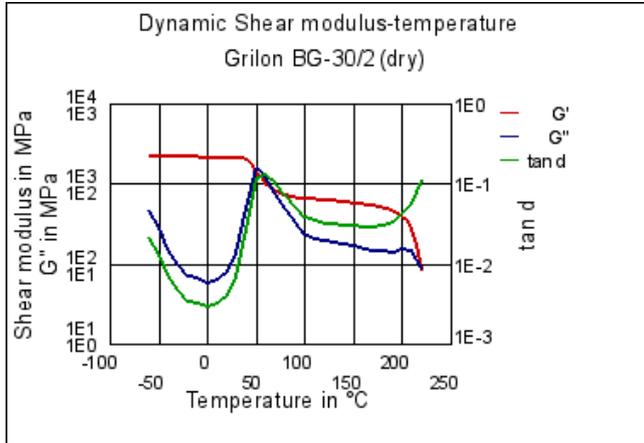
Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	<b>1E12 / 1E11</b>	Ohm*m	IEC 60093
Surface resistivity	<b>- / 1E12</b>	Ohm	IEC 60093
Electric strength	<b>40 / 37</b>	kV/mm	IEC 60243-1
Comparative tracking index	<b>- / 500</b>	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	<b>7 / -</b>	%	Sim. to ISO 62
Humidity absorption	<b>2 / -</b>	%	Sim. to ISO 62
Density	<b>1350 / -</b>	kg/m <sup>3</sup>	ISO 1183

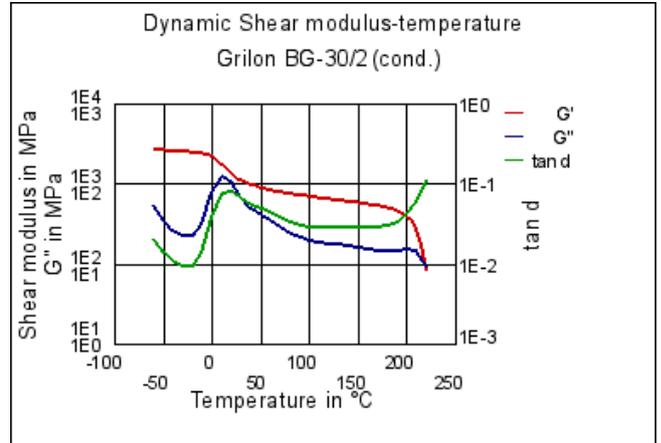
Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	<b>0.1 / -</b>	%	ISO 294-4, 2577
Molding shrinkage (normal)	<b>0.8 / -</b>	%	ISO 294-4, 2577

**Diagrams**

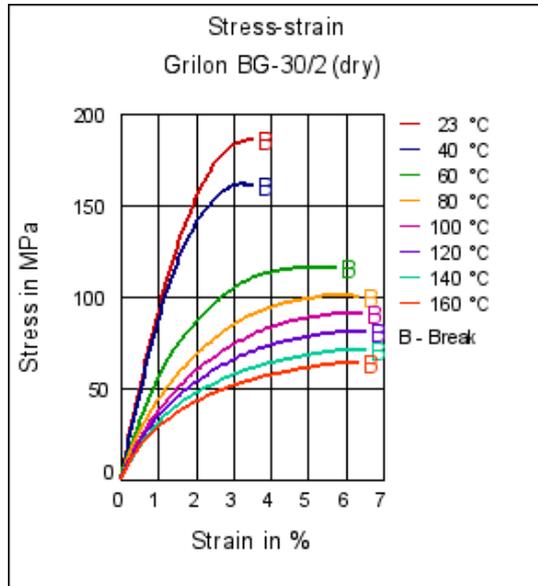

Dynamic Shear modulus-temperature



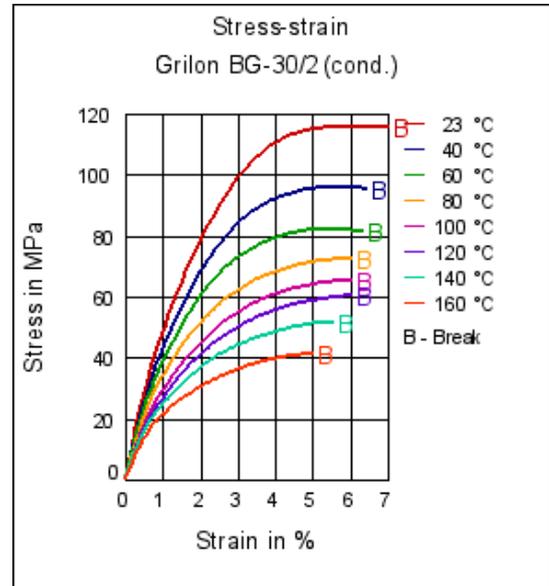
Dynamic Shear modulus-temperature



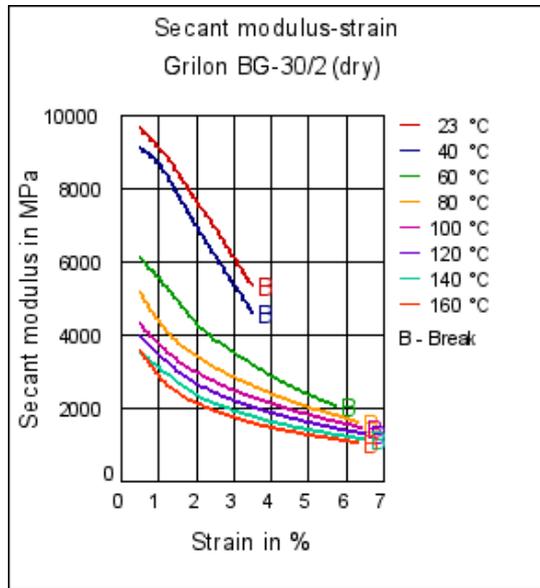
Stress-strain



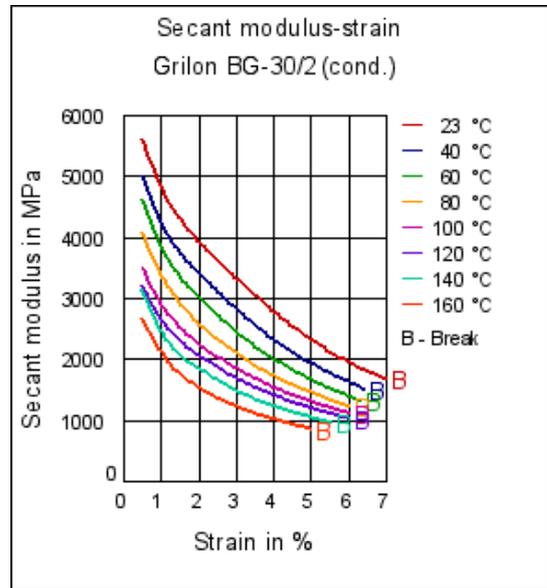
Stress-strain



Secant modulus-strain



Secant modulus-strain



Characteristics

Processing

Injection Molding

Delivery form

Granules

Regional Availability

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

Automotive

Interior

Electricals & Electronics

Electrical appliances, Electrical equipment

Potable Water Contact

WRAS

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)

