

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

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	8500 / 5300	MPa	ISO 527-1/-2
Stress at break	150 / 105	MPa	ISO 527-1/-2
Strain at break	5 / 10	%	ISO 527-1/-2
Charpy impact strength (+23°C)	90 / 115	kJ/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	95 / 100	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	25 / 35	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	15 / 17	kJ/m ²	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	190 / 95	MPa	ISO 2039-1

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	222 / -	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	200 / -	°C	ISO 75-1/-2
Temp. of deflection under load (8.00 MPa)	90 / -	°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)	120 / -	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)	100 - 120	°C	ISO 2578
Max. usage temperature (short term)	180	°C	EMS

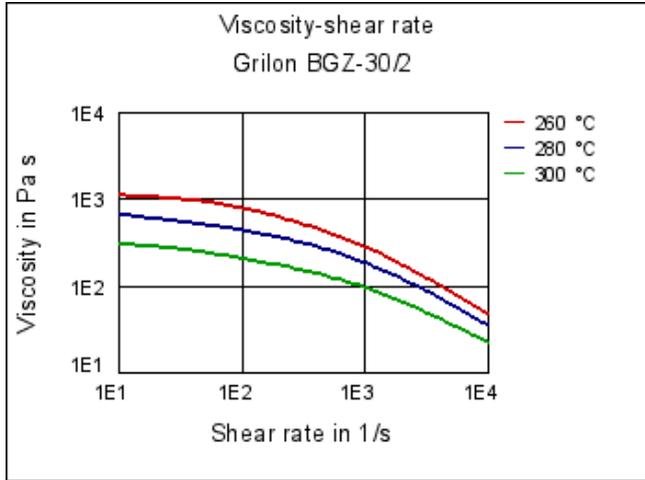
Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	1E12 / 1E11	Ohm*m	IEC 60093
Surface resistivity	- / 1E12	Ohm	IEC 60093
Electric strength	41 / 37	kV/mm	IEC 60243-1
Comparative tracking index	- / 550	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	7 / -	%	Sim. to ISO 62
Humidity absorption	2 / -	%	Sim. to ISO 62
Density	1330 / -	kg/m ³	ISO 1183

Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	0.2 / -	%	ISO 294-4, 2577
Molding shrinkage (normal)	0.6 / -	%	ISO 294-4, 2577

Diagrams

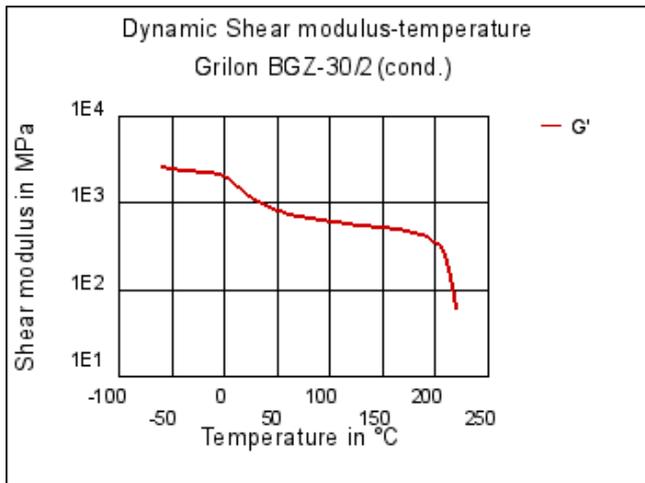

Viscosity-shear rate



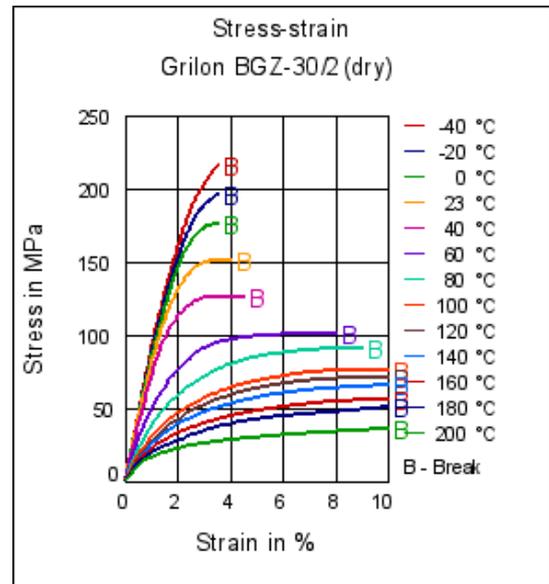
Shearstress-shear rate



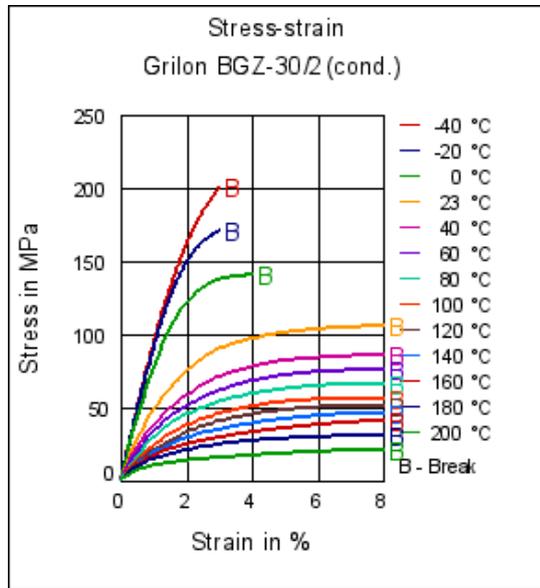
Dynamic Shear modulus-temperature



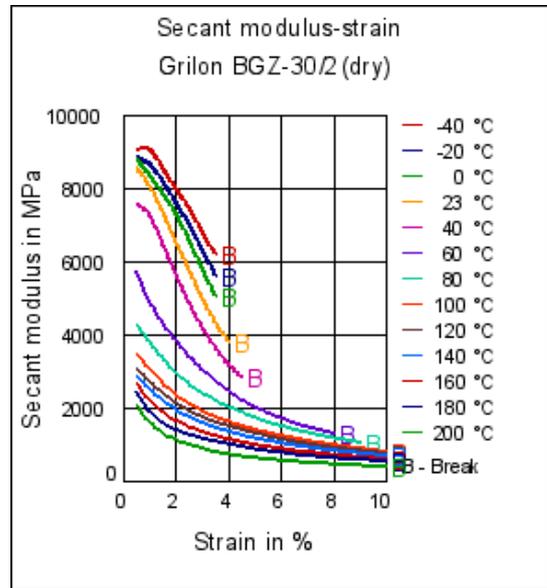
Stress-strain



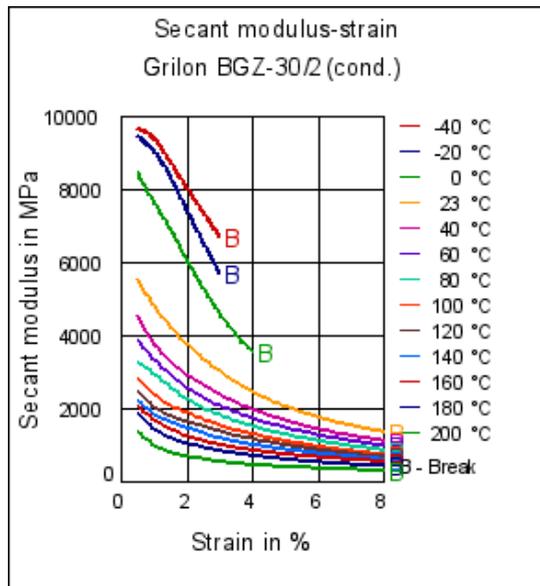
Stress-strain



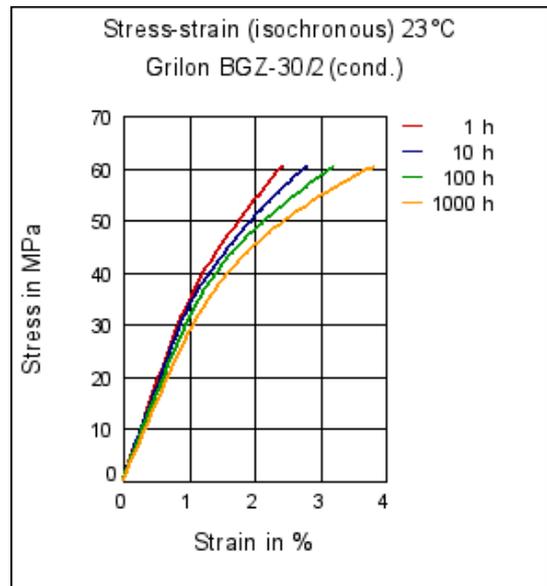
Secant modulus-strain



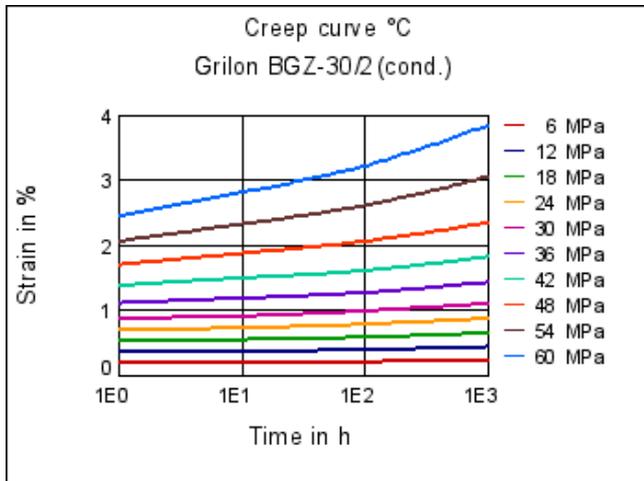
Secant modulus-strain



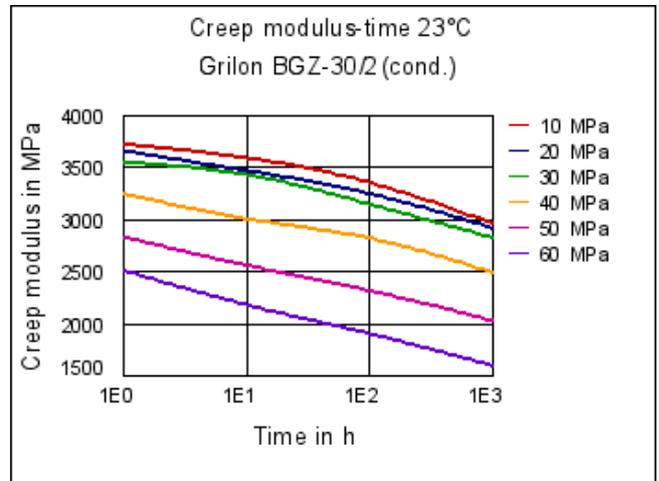
Stress-strain (isochronous) 23°C



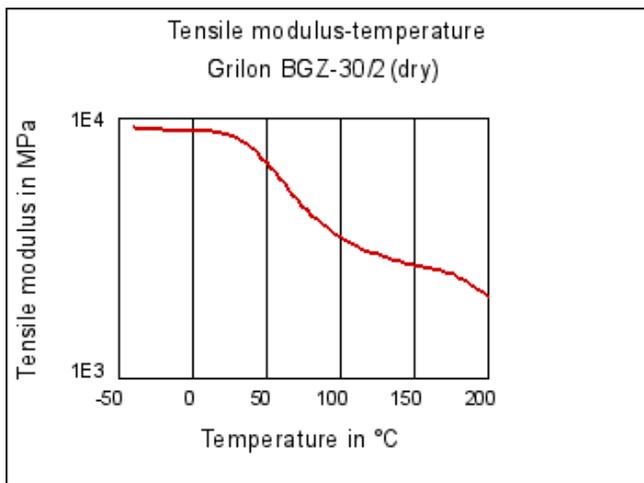
Creep curve °C



Creep modulus-time 23°C



Tensile modulus-temperature



Characteristics

Processing

Injection Molding

Delivery form

Granules

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)

Special Characteristics

High impact or impact modified

Regional Availability

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



- ☹ 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)

