

Grilon BS/2

PA6

EMS-GRIVORY | a unit of EMS-CHEMIE AG

Product Texts

Product designation according to ISO 1874:

PA 6, MR, 12-030 N

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	3300 / 1100	MPa	ISO 527-1/-2
Yield stress	90 / 45	MPa	ISO 527-1/-2
Yield strain	3 / 15	%	ISO 527-1/-2
Nominal strain at break	5 / >50	%	ISO 527-1/-2
Stress at break	70 / 55	MPa	ISO 527-1/-2
Charpy impact strength (+23°C)	N / N	kJ/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	N / 30	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	4 / 20	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	4 / 3	kJ/m ²	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	140 / 60	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)	55 / -	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	170 / -	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	70 / -	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	100 / -	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)	180	°C	EMS

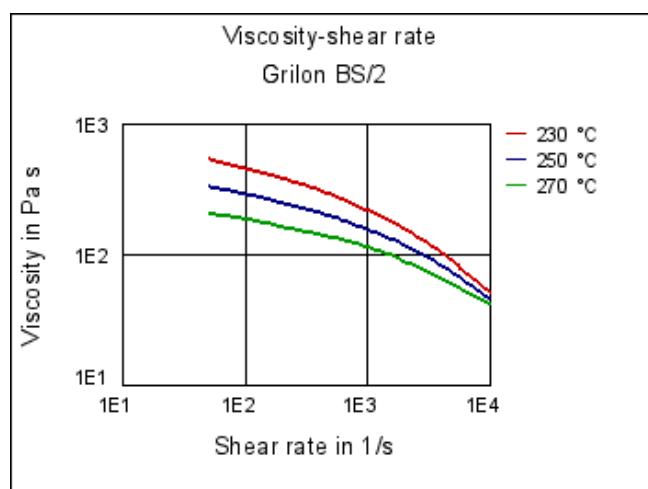
Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	1E12 / 1E11	Ohm*m	IEC 60093
Surface resistivity	- / 1E12	Ohm	IEC 60093
Electric strength	30 / 28	kV/mm	IEC 60243-1
Comparative tracking index	- / 600	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	9 / -	%	Sim. to ISO 62
Humidity absorption	3 / -	%	Sim. to ISO 62
Density	1140 / -	kg/m ³	ISO 1183

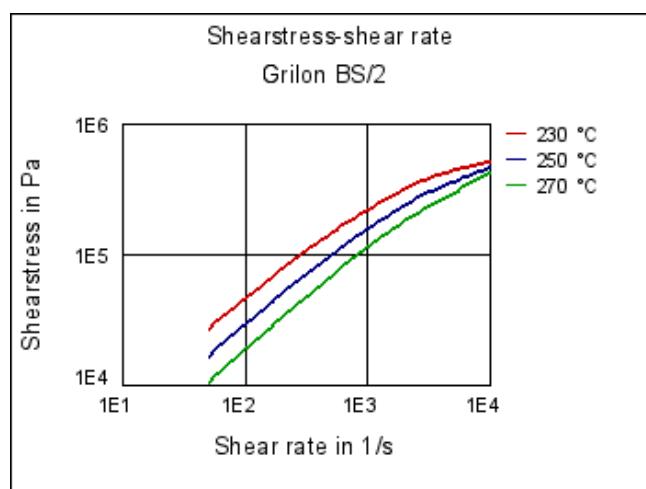
Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	1.1 / -	%	ISO 294-4, 2577
Molding shrinkage (normal)	1.1 / -	%	ISO 294-4, 2577

Diagrams

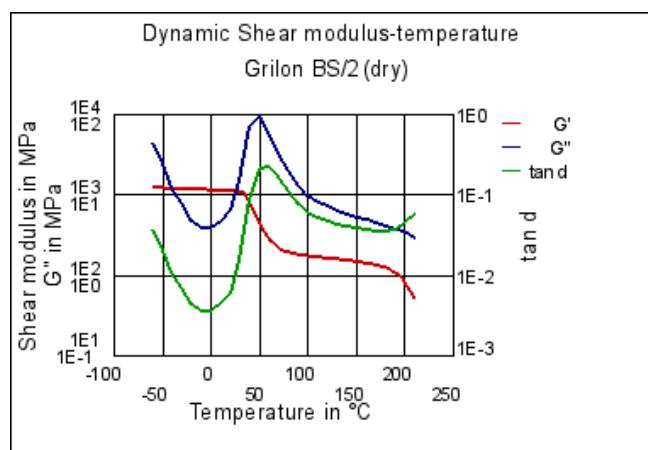
Viscosity-shear rate



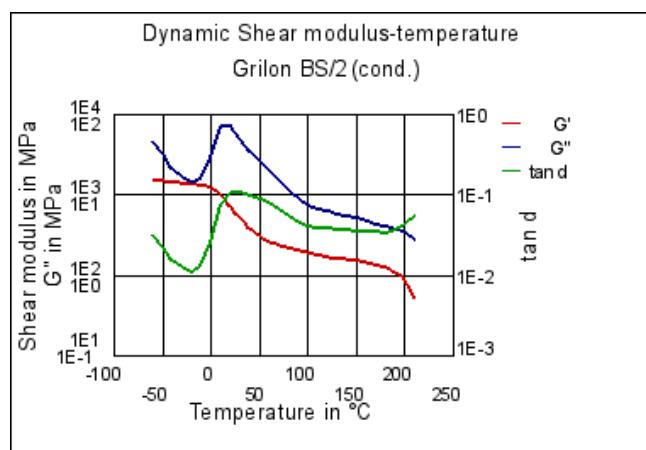
Shearstress-shear rate



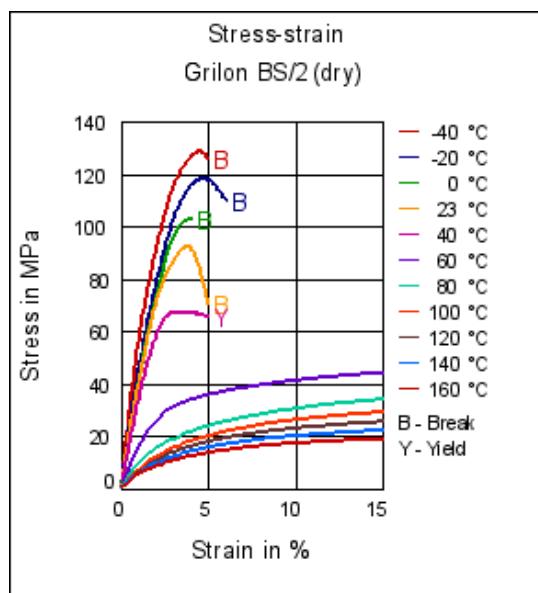
Dynamic Shear modulus-temperature



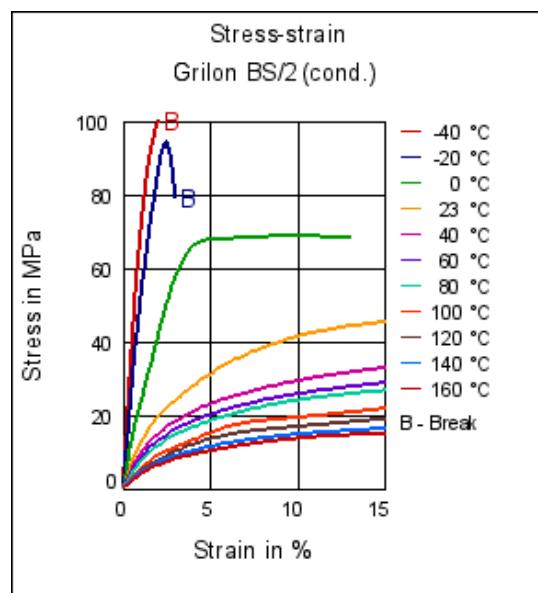
Dynamic Shear modulus-temperature



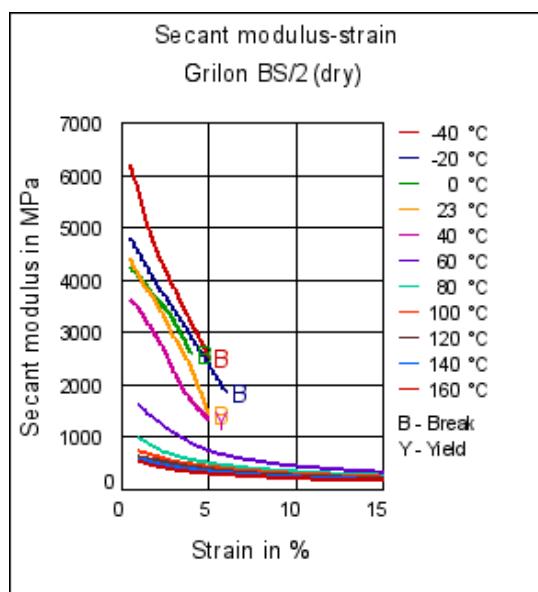
Stress-strain



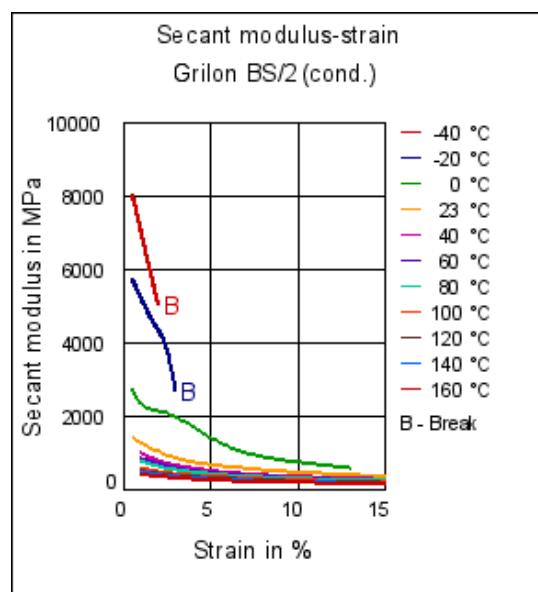
Stress-strain



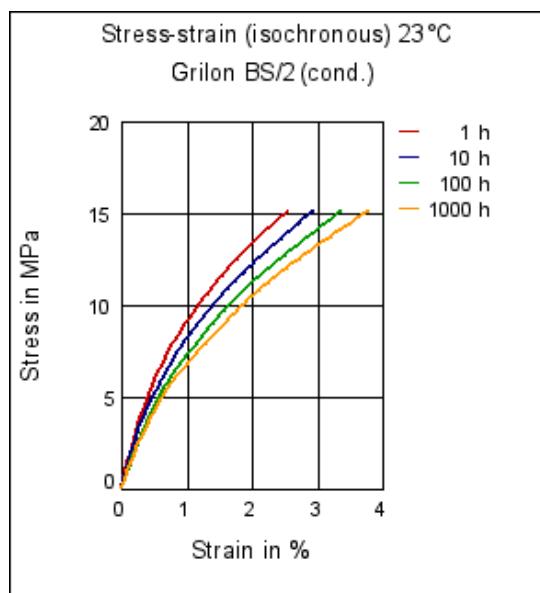
Secant modulus-strain



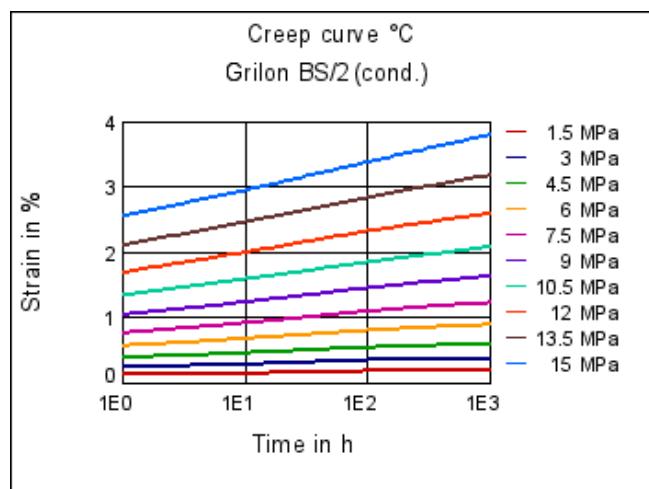
Secant modulus-strain



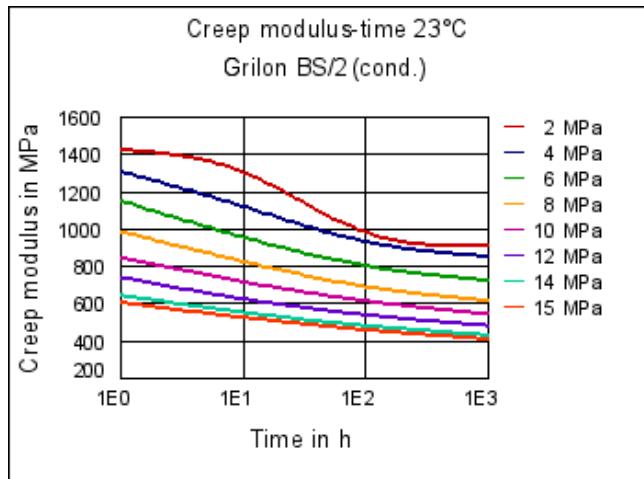
Stress-strain (isochronous) 23°C



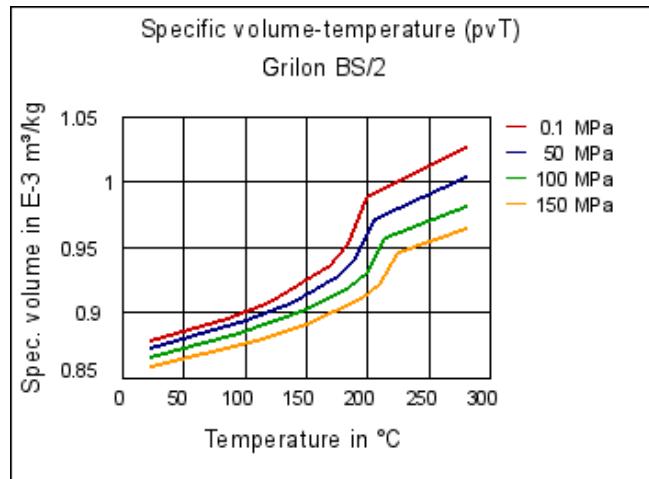
Creep curve °C



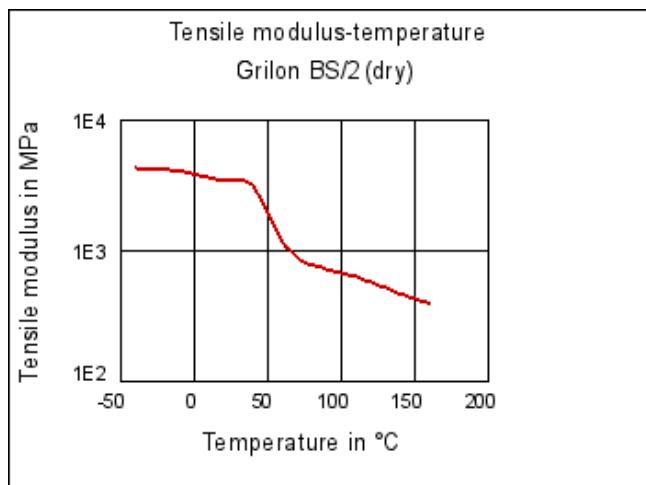
Creep modulus-time 23°C



Specific volume-temperature (pvT)



Tensile modulus-temperature



Characteristics

Processing

Injection Molding

Delivery form

Granules

Regional Availability

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

Product Attributes

Nucleated

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)