

Grilon EB 50 H

PA6

EMS-GRIVORY | a unit of EMS-CHEMIE AG

Product Texts

Product designation according to ISO 1874:

PA 6-HI, BH, 34-030

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	2800 / 800	MPa	ISO 527-1/-2
Yield stress	75 / 40	MPa	ISO 527-1/-2
Yield strain	4 / 20	%	ISO 527-1/-2
Nominal strain at break	>50 / >50	%	ISO 527-1/-2
Stress at break	50 / 50	MPa	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)	11 / N	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	10 / 9	kJ/m ²	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	135 / 55	MPa	ISO 2039-1

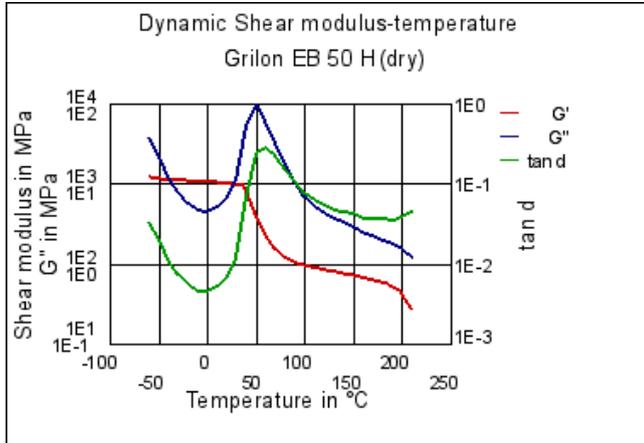
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	222 / -	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	55 / -	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	140 / -	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	90 / -	E-6/K	ISO 11359-1/-2
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	1E11 / 1E9	Ohm*m	IEC 60093
Surface resistivity	- / 1E10	Ohm	IEC 60093
Electric strength	28 / 24	kV/mm	IEC 60243-1
Comparative tracking index	- / 425	-	IEC 60112

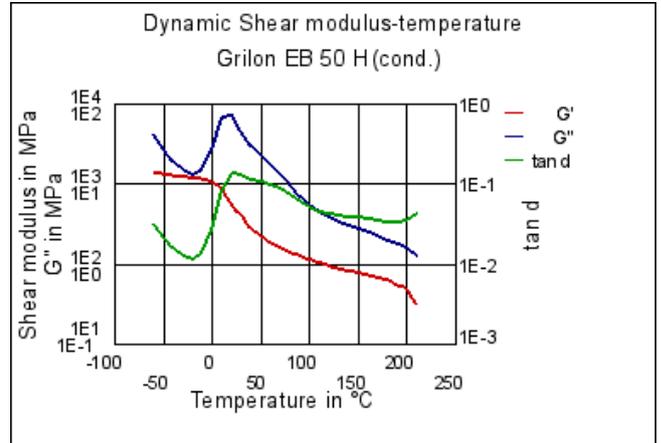
Other properties	dry / cond	Unit	Test Standard
Water absorption	9 / -	%	Sim. to ISO 62
Humidity absorption	3 / -	%	Sim. to ISO 62
Density	1110 / -	kg/m ³	ISO 1183

Diagrams

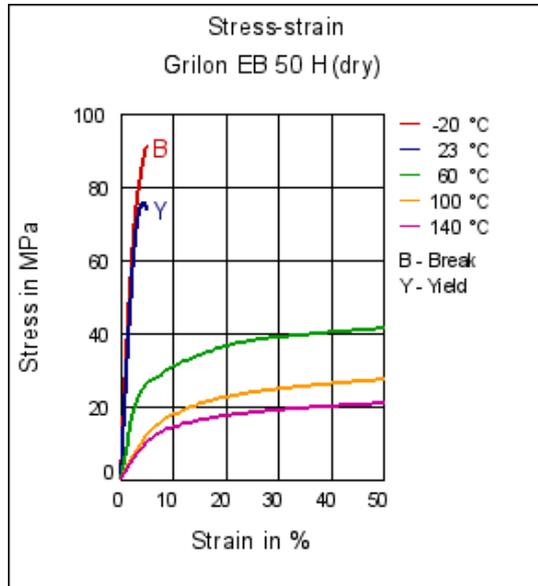

Dynamic Shear modulus-temperature



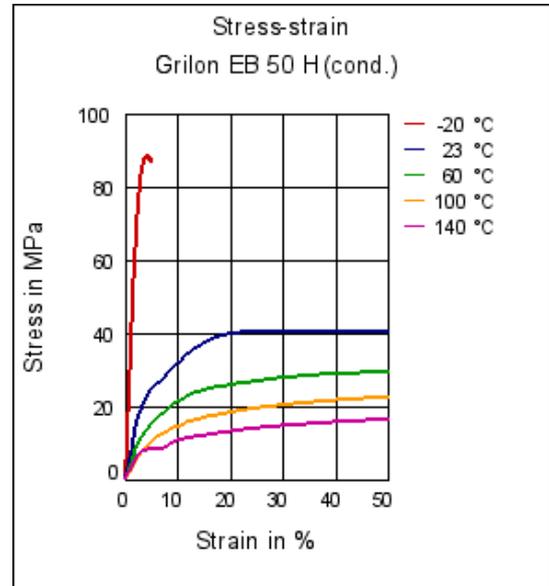
Dynamic Shear modulus-temperature



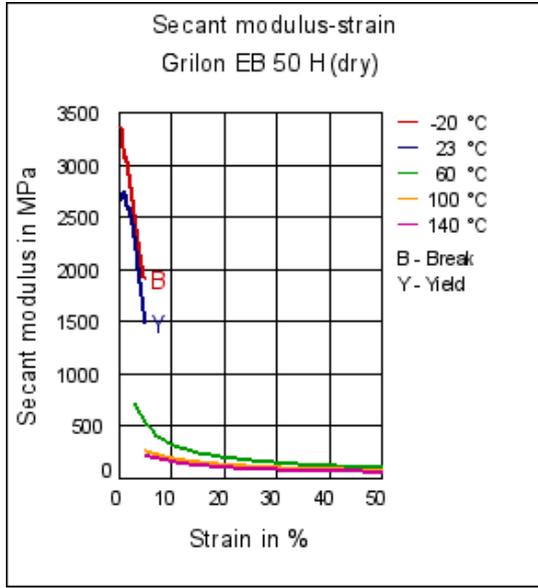
Stress-strain



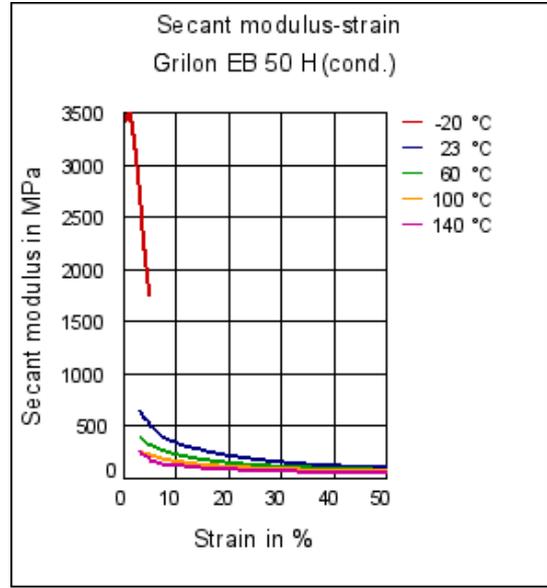
Stress-strain



Secant modulus-strain



Secant modulus-strain



Characteristics

Processing

Extrusion - blow molding, Other Extrusion

Delivery form

Granules

Special Characteristics

Improved heat resistance

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)

Automotive

Air intake systems, Cooling and climate control

Electricals & Electronics

Cables & Tubes

Industry & Consumer goods

Hydraulics & Pneumatics



☺ 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)

