

**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	<b>2800 / 800</b>	MPa	ISO 527-1/-2
Yield stress	<b>75 / 40</b>	MPa	ISO 527-1/-2
Yield strain	<b>4 / 20</b>	%	ISO 527-1/-2
Nominal strain at break	<b>&gt;50 / &gt;50</b>	%	ISO 527-1/-2
Stress at break	<b>50 / 50</b>	MPa	ISO 527-1/-2
Charpy impact strength (+23°C)	<b>N / N</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	<b>N / N</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	<b>11 / N</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	<b>10 / 9</b>	kJ/m <sup>2</sup>	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	<b>135 / 55</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>55 / -</b>	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	<b>140 / -</b>	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	<b>90 / -</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

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	<b>1E11 / 1E9</b>	Ohm*m	IEC 60093
Surface resistivity	<b>- / 1E10</b>	Ohm	IEC 60093
Electric strength	<b>28 / 24</b>	kV/mm	IEC 60243-1
Comparative tracking index	<b>- / 425</b>	-	IEC 60112

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

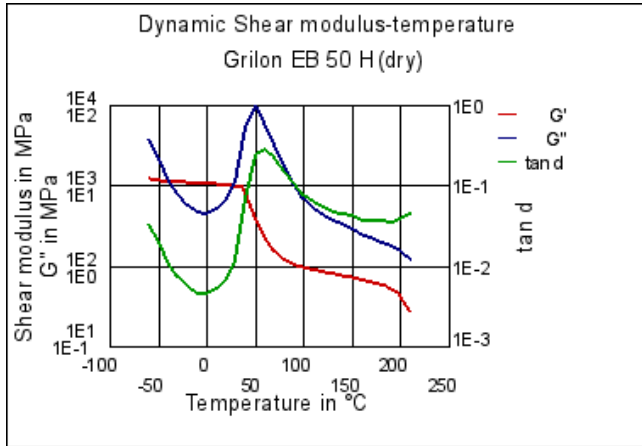
**Diagrams**

Grilon EB 50 H

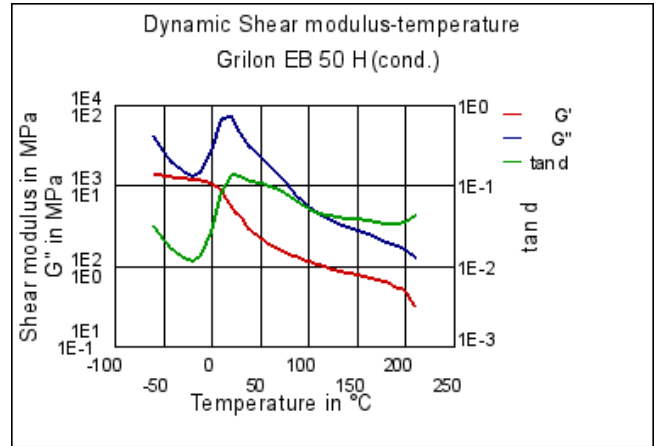
PA6

EMS-GRIVORY | a unit of EMS-CHEMIE AG

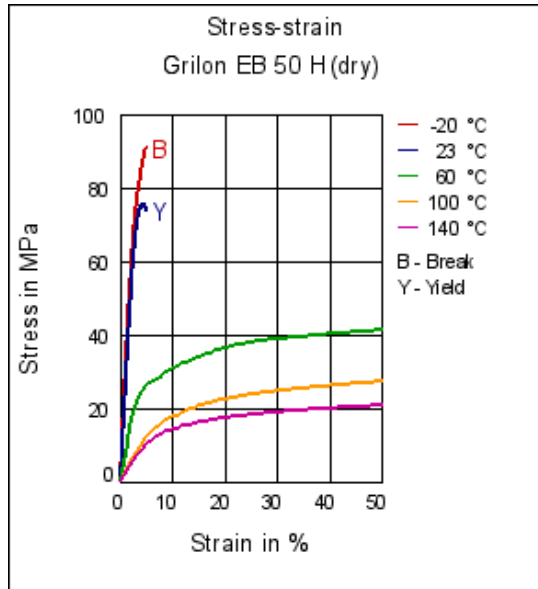
Dynamic Shear modulus-temperature



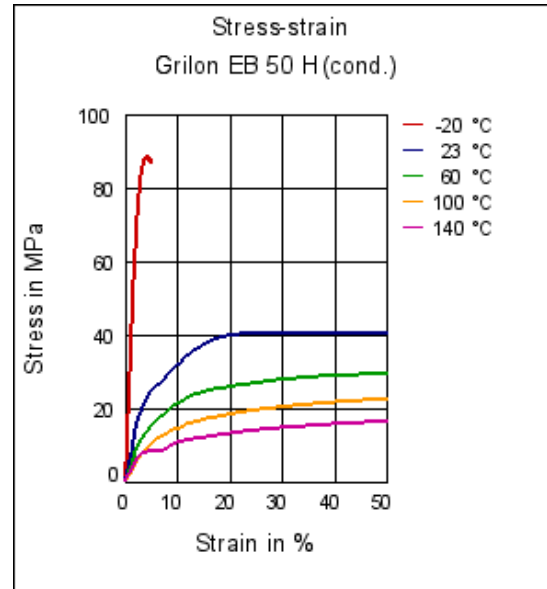
Dynamic Shear modulus-temperature



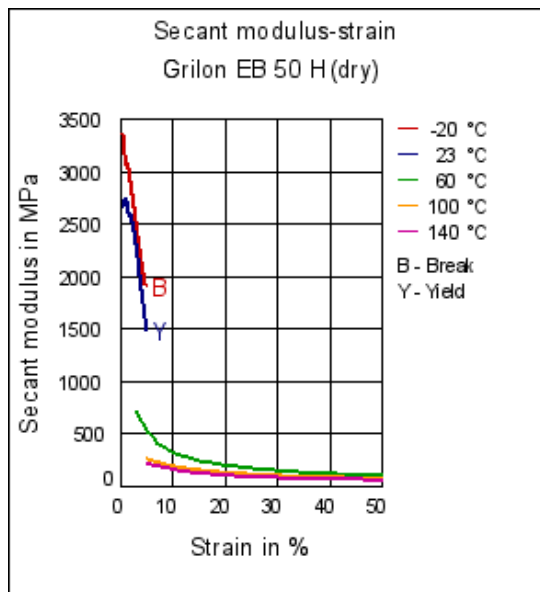
Stress-strain



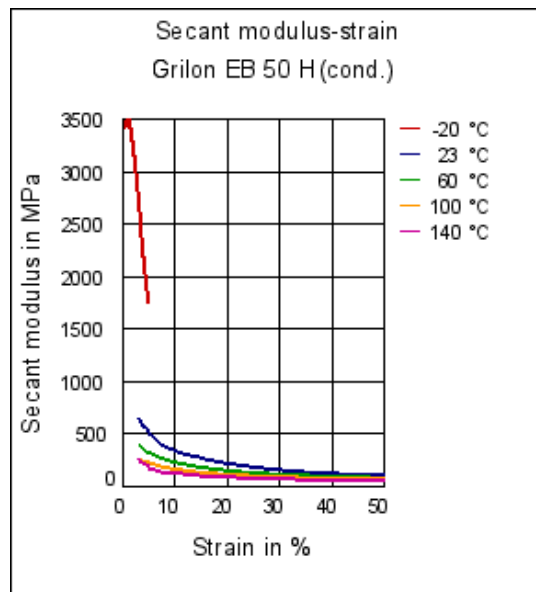
Stress-strain



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

**Grilon EB 50 H**

PA6

EMS-GRIVORY | a unit of EMS-CHEMIE AG

☹️ 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)

Grilon EB 50 H

PA6

EMS-GRIVORY | a unit of EMS-CHEMIE AG



Water (23°C)



Deionized water (90°C)



Phenol solution (5% by mass) (23°C)

---