

Grilon BGM-65 X V0

PA6-(GF+MD)65

EMS-GRIVORY | a unit of EMS-CHEMIE AG

Product Texts

Product designation according to ISO 1874:

PA6, MFHR, 14-110, (MD+GF)65 X

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	11500 / 7100	MPa	ISO 527-1/-2
Stress at break	120 / 90	MPa	ISO 527-1/-2
Strain at break	1 / 3	%	ISO 527-1/-2
Charpy impact strength (+23°C)	25 / 25	kJ/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	15 / 15	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	3 / 3	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	3 / 3	kJ/m ²	ISO 179/1eA

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)	160 / -	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	75 / -	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	30 / -	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	60 / -	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm nom. thickn.	V-0 / -	class	IEC 60695-11-10
Thickness tested	1.5 / -	mm	IEC 60695-11-10
Burning Behav. at thickness h	V-0 / -	class	IEC 60695-11-10
Thickness tested	3.0 / -	mm	IEC 60695-11-10
Oxygen index	65 / -	%	ISO 4589-1/-2
Max. usage temperature (long term)	80 - 110	°C	ISO 2578
Max. usage temperature (short term)	160	°C	EMS

Electrical properties	dry / cond	Unit	Test Standard
Relative permittivity (100Hz)	3 / 3	-	IEC 60250
Dissipation factor (100Hz)	10 / 10	E-4	IEC 60250
Volume resistivity	1E12 / 1E11	Ohm*m	IEC 60093
Surface resistivity	- / 1E12	Ohm	IEC 60093
Electric strength	33 / 29	kV/mm	IEC 60243-1
Comparative tracking index	- / 500	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	5 / -	%	Sim. to ISO 62
Humidity absorption	1.5 / -	%	Sim. to ISO 62
Density	1690 / -	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

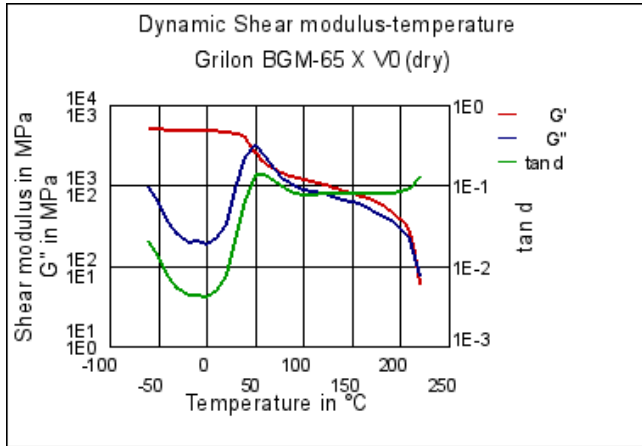
Diagrams

Grilon BGM-65 X V0

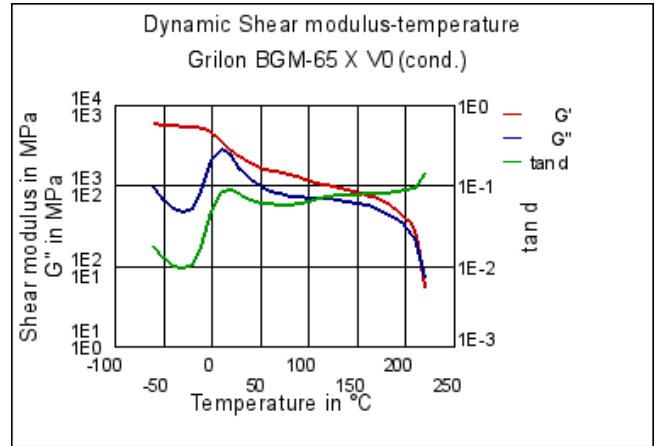
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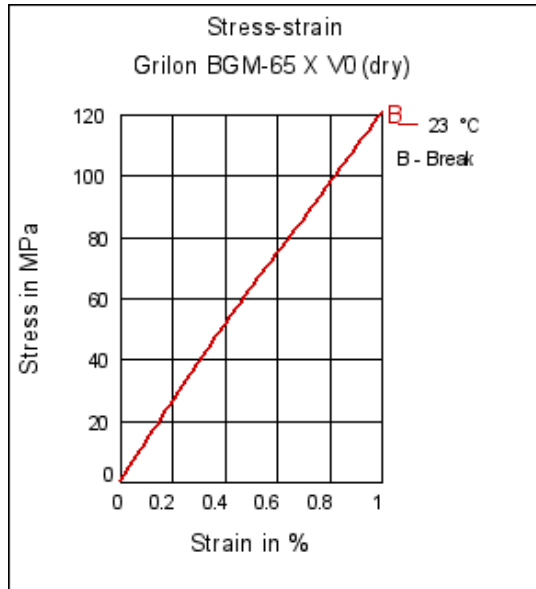
Dynamic Shear modulus-temperature



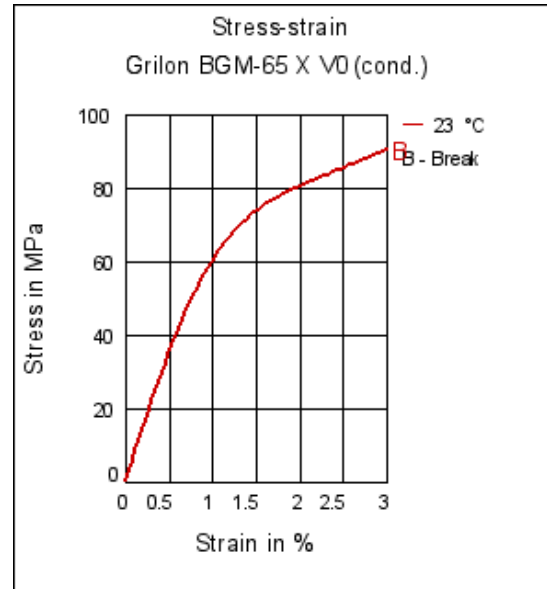
Dynamic Shear modulus-temperature



Stress-strain



Stress-strain

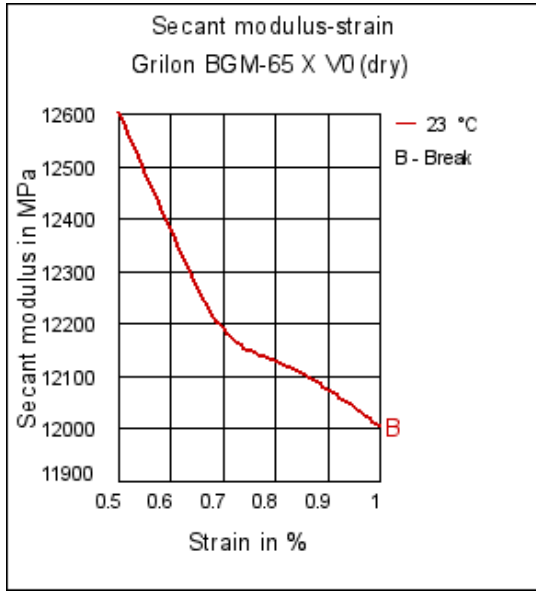


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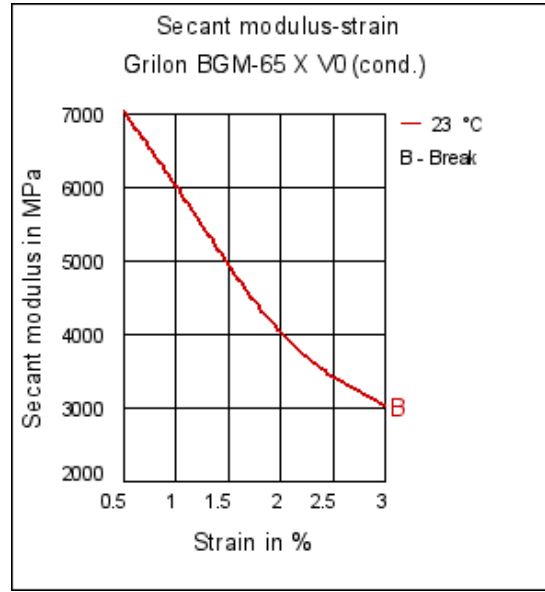
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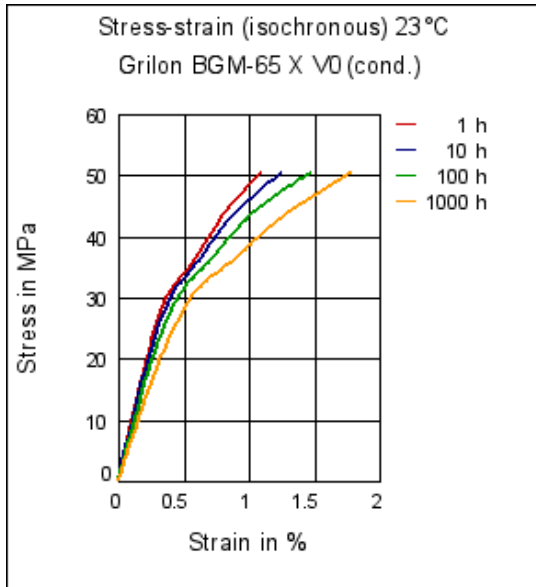
Secant modulus-strain



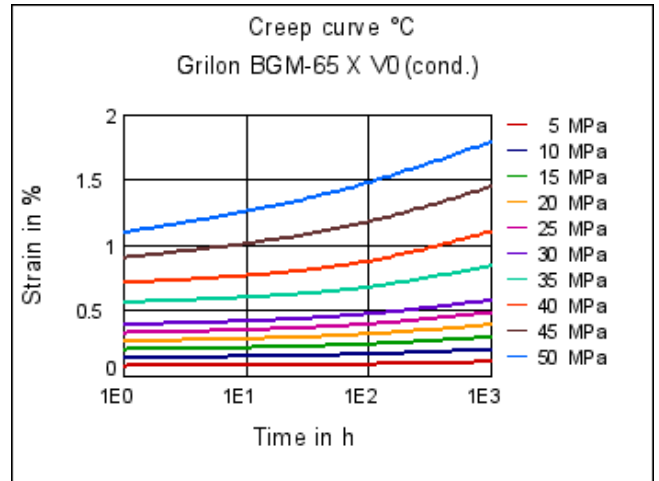
Secant modulus-strain



Stress-strain (isochronous) 23°C



Creep curve °C

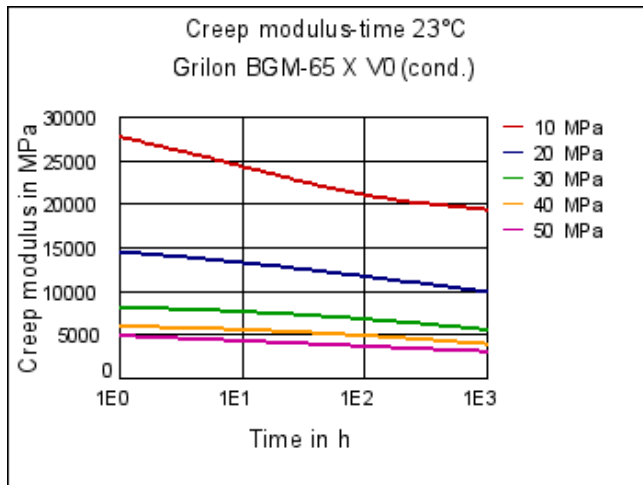


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Creep modulus-time 23°C



Characteristics

Processing

Injection Molding

Delivery form

Granules

Special Characteristics

Flame retardant

Regional Availability

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

Automotive

Automotive electr. and electronics, lighting

Electricals & Electronics

Electrical appliances, Electrical equipment, Connectors, Energy distribution, Lighting

Burning Behaviour

UL V0

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




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-  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)