

**Grilon BGK-30 X**

PA6-(GF+GB)30

EMS-GRIVORY | a unit of EMS-CHEMIE AG

**Product Texts**

Product designation according to ISO 1874:

PA 6, MHR, 14-070N, (GF+GB) 30

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	<b>7000 / 3800</b>	MPa	ISO 527-1/-2
Stress at break	<b>140 / 80</b>	MPa	ISO 527-1/-2
Strain at break	<b>3 / 7</b>	%	ISO 527-1/-2
Charpy impact strength (+23°C)	<b>65 / 75</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength (-30°C)	<b>50 / 50</b>	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength (+23°C)	<b>8 / 15</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	<b>6 / 6</b>	kJ/m <sup>2</sup>	ISO 179/1eA

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>185 / -</b>	°C	ISO 75-1/-2
Temp. of deflection under load (8.00 MPa)	<b>140 / -</b>	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	<b>35 / -</b>	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	<b>70 / -</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>90 - 110</b>	°C	ISO 2578
Max. usage temperature (short term)	<b>160</b>	°C	EMS

Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	<b>1E12 / 1E10</b>	Ohm*m	IEC 60093
Surface resistivity	<b>- / 1E12</b>	Ohm	IEC 60093
Electric strength	<b>29 / 23</b>	kV/mm	IEC 60243-1
Comparative tracking index	<b>- / 400</b>	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	<b>7 / -</b>	%	Sim. to ISO 62
Humidity absorption	<b>2 / -</b>	%	Sim. to ISO 62
Density	<b>1340 / -</b>	kg/m <sup>3</sup>	ISO 1183

Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	<b>0.1 / -</b>	%	ISO 294-4, 2577
Molding shrinkage (normal)	<b>0.5 / -</b>	%	ISO 294-4, 2577

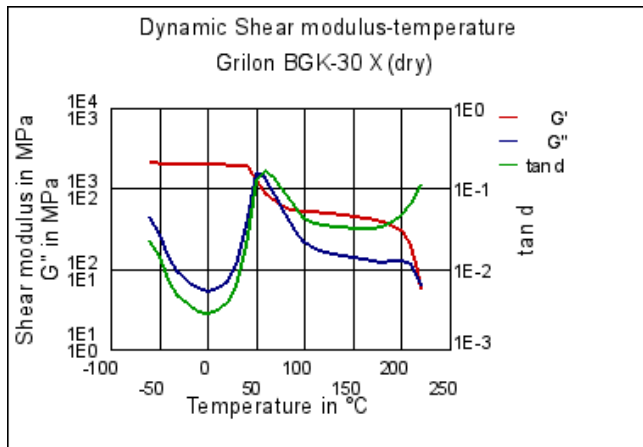
**Diagrams**

**Grilon BGK-30 X**

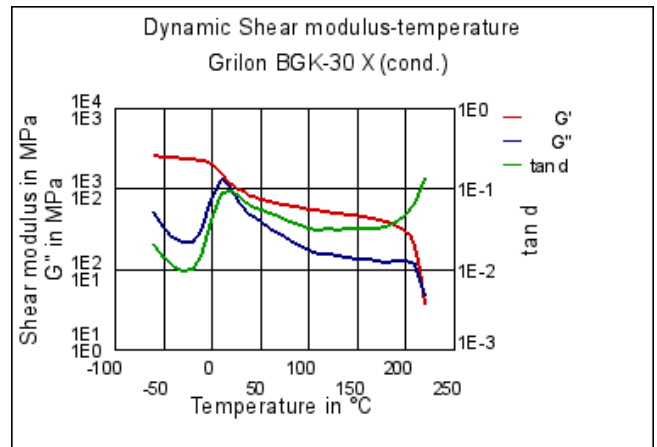
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**Dynamic Shear modulus-temperature**



**Dynamic Shear modulus-temperature**



**Characteristics**

**Processing**

Injection Molding

**Delivery form**

Granules

**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)
- ☺ 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)

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### 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)