

**Grilon FG 40 NL nat 6025**

PA6

EMS-GRIVORY | a unit of EMS-CHEMIE AG

**Product Texts**

Product designation according to ISO 1874:

PA 6+PA 6I/6T, FR, 27-030N

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	<b>3000 / 1100</b>	MPa	ISO 527-1/-2

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	<b>222 / -</b>	°C	ISO 11357-1/-3

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>1150 / -</b>	kg/m <sup>3</sup>	ISO 1183

Film Properties	dry / cond	Unit	Test Standard
Stress at yield (parallel)	<b>40 / -</b>	MPa	ISO 527-3
Stress at yield (normal)	<b>40 / -</b>	MPa	ISO 527-3
Strain at yield (parallel)	<b>10 / -</b>	%	ISO 527-3
Strain at yield (normal)	<b>7 / -</b>	%	ISO 527-3
Maximum strain (parallel)	<b>600 / -</b>	%	ISO 527-3
Maximum strain (normal)	<b>900 / -</b>	%	ISO 527-3
Elmendorf Tear resistance (parallel)	<b>15 / -</b>	N	ISO 6383-2
Elmendorf Tear resistance (normal)	<b>15 / -</b>	N	ISO 6383-2
Trouser Tear resistance (parallel)	<b>50 / -</b>	N/mm	ISO 6383-1
Trouser Tear resistance (normal)	<b>50 / -</b>	N/mm	ISO 6383-1
Dynamic coefficient of friction	<b>0.3 / -</b>	-	ISO 8295
Gloss, 60°	<b>100 / -</b>	-	ISO 2813
WVTR (23°C/85%r.h.)	<b>10 / -</b>	g/(m <sup>2</sup> *d)	ISO 15106-1/-2
Oxygen transmission rate (23°C/0%r.h.)	<b>25 / -</b>	cm <sup>3</sup> /(m <sup>2</sup> *d*bar)	ISO 15105-1/-2
Oxygen transmission rate (23°C/85%r.h.)	<b>30 / -</b>	cm <sup>3</sup> /(m <sup>2</sup> *d*bar)	ISO 15105-1/-2
Carbon Dioxide transm. rate (23°C/0%r.h.)	<b>80 / -</b>	cm <sup>3</sup> /(m <sup>2</sup> *d*bar)	ISO 15105-1/-2
Carbon Dioxide transm. rate (23°C/85%r.h.)	<b>150 / -</b>	cm <sup>3</sup> /(m <sup>2</sup> *d*bar)	ISO 15105-1/-2
Stress at break (parallel)	<b>100</b>	MPa	ISO 527-3
Stress at break (normal)	<b>90</b>	MPa	ISO 527-3

Rheo/Phys properties	dry / cond	Unit	Test Standard
Melt volume-flow rate (MVR)	<b>20 / -</b>	cm <sup>3</sup> /10min	ISO 1133
Temperature	<b>275 / -</b>	°C	ISO 1133
Load	<b>5 / -</b>	kg	ISO 1133

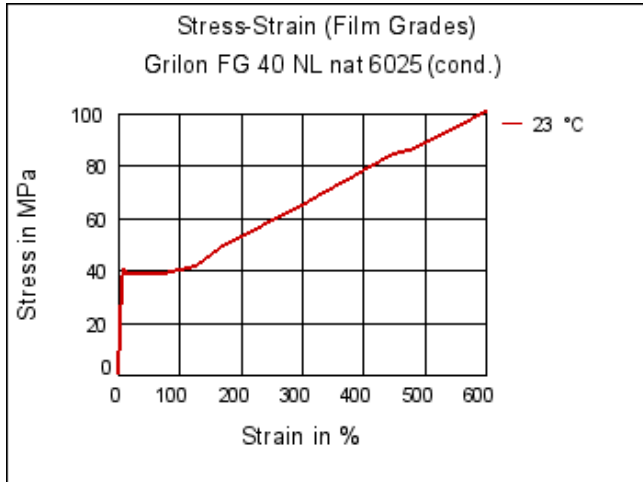
**Diagrams**

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**Stress-Strain (Film Grades)**



**Characteristics**

**Processing**

Extrusion - cast film, Blown Film Extrusion, Other Extrusion

**Product Attributes**

Barrier Properties, High viscosity, Nucleated

**Delivery form**

Granules

**Packaging**

Non oriented film, Oriented film, Paper coating, Tubes, Medical packaging

**Regional Availability**

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

**Food Contact**

EU Requirements, FDA

**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)

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**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)