

**Grilon TSS**

PA666

EMS-GRIVORY | a unit of EMS-CHEMIE AG

**Product Information**

Product designation according to ISO 1874:

PA66+PA6, MHR, 14-030N

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	<b>2700 / 750</b>	MPa	ISO 527-1/-2
Yield stress	<b>70 / 40</b>	MPa	ISO 527-1/-2
Yield strain	<b>4 / 15</b>	%	ISO 527-1/-2
Nominal strain at break	<b>25 / &gt;50</b>	%	ISO 527-1/-2
Stress at break	<b>45 / -</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>8 / 35</b>	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength (-30°C)	<b>6 / 7</b>	kJ/m <sup>2</sup>	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	<b>135 / 45</b>	MPa	ISO 2039-1

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	<b>260 / -</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>220 / -</b>	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	<b>80 / -</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>80 - 110</b>	°C	EMS
Max. usage temperature (short term)	<b>180</b>	°C	EMS

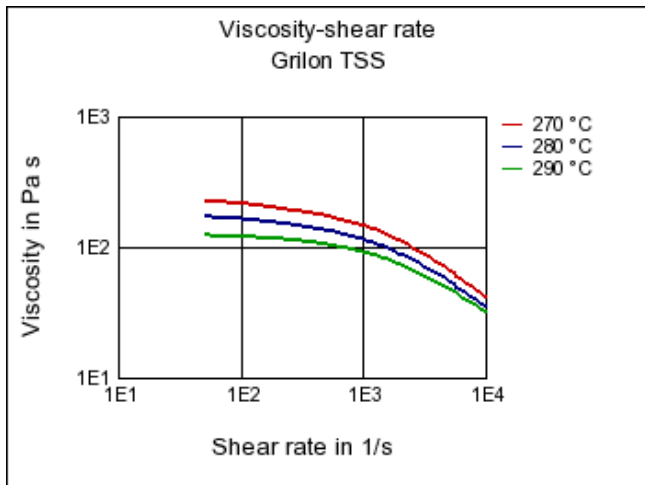
Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	<b>1E11 / 1E9</b>	Ohm*m	IEC 60093
Surface resistivity	<b>- / 1E10</b>	Ohm	IEC 60093
Electric strength	<b>26 / 25</b>	kV/mm	IEC 60243-1
Comparative tracking index	<b>- / 600</b>	-	IEC 60112

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>1140 / -</b>	kg/m <sup>3</sup>	ISO 1183

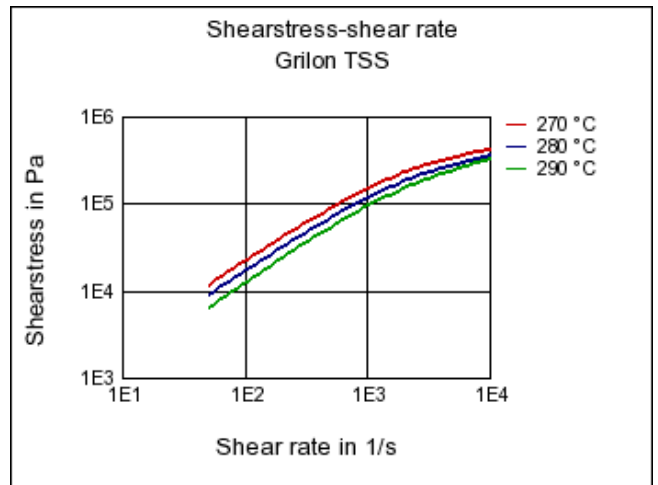
Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	<b>1.1 / -</b>	%	ISO 294-4, 2577
Molding shrinkage (normal)	<b>1.3 / -</b>	%	ISO 294-4, 2577

**Diagrams**

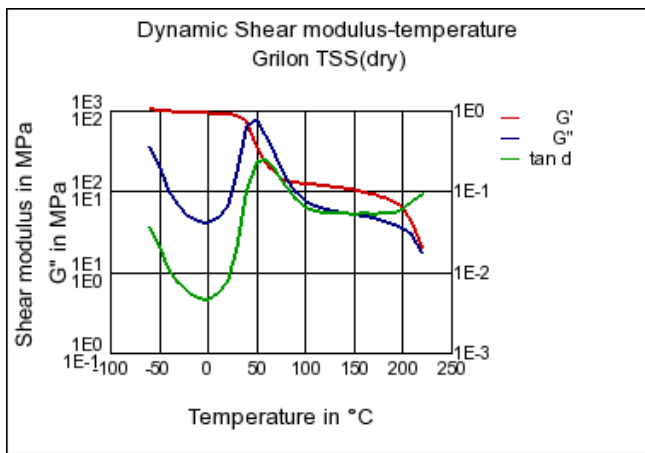
Viscosity-shear rate



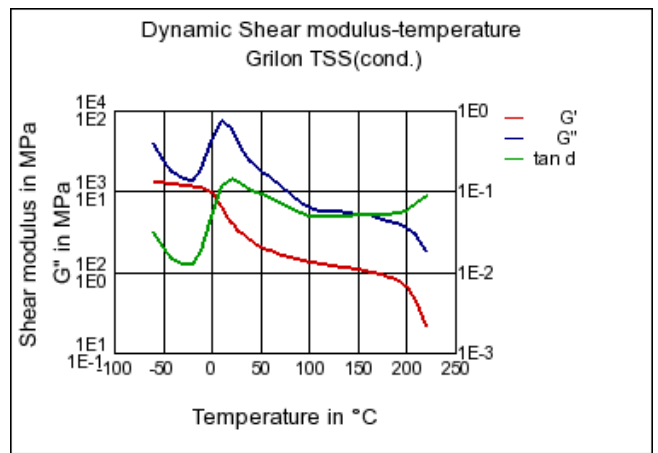
Shearstress-shear rate



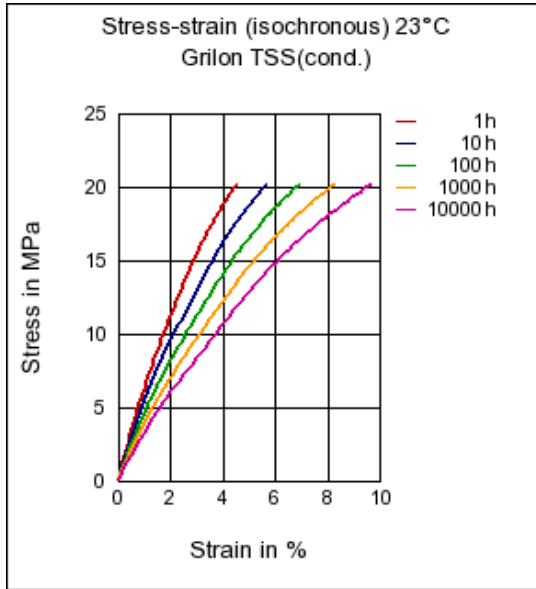
Dynamic Shear modulus-temperature



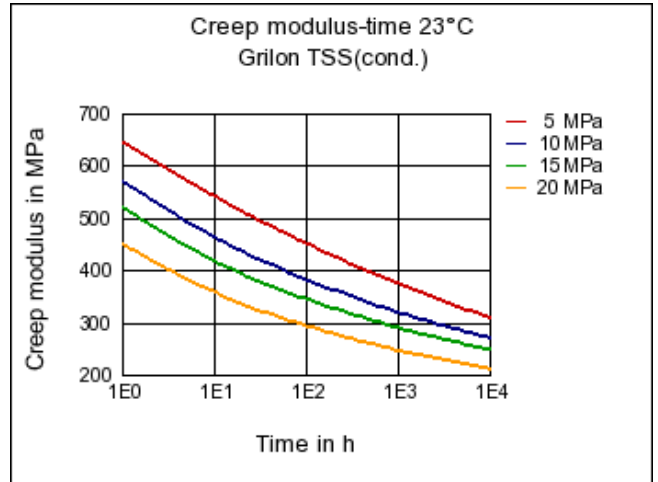
Dynamic Shear modulus-temperature



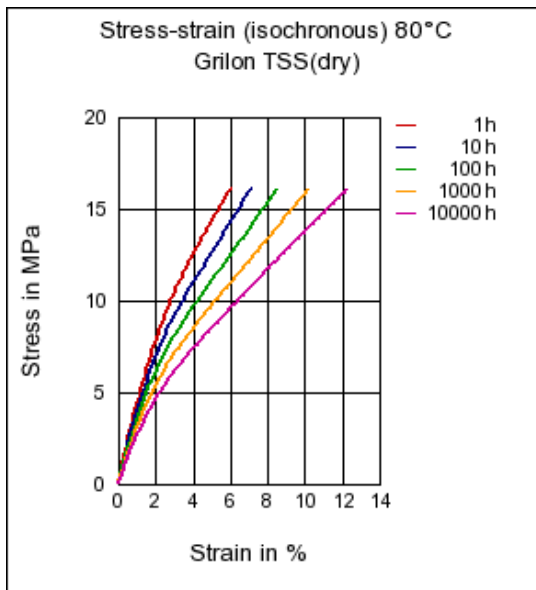
Stress-strain (isochronous) 23°C



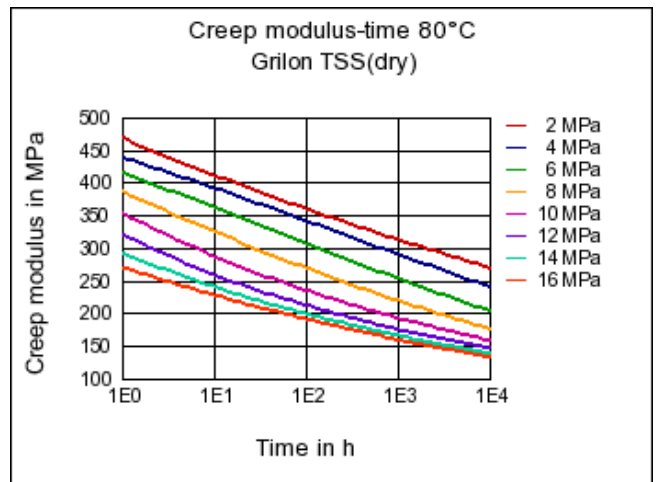
Creep modulus-time 23°C



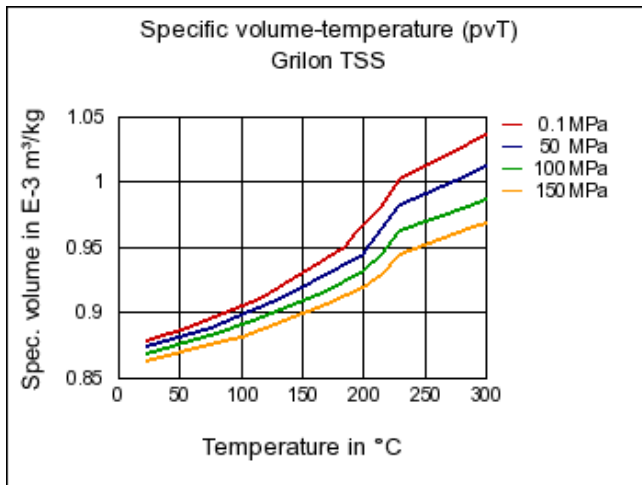
Stress-strain (isochronous) 80°C



Creep modulus-time 80°C



Specific volume-temperature (pvT)



Characteristic

Processing

Injection Molding

Automotive

Automotive electr. and electronics, lighting, Interior

Regional Availability

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

Electricals & Electronics

Electrical appliances, Connectors

Product Attributes

Nucleated

Industry & Consumer goods

Mechanical Engineering, Power transmission, Sports & Leisure, Tools & Accessories

Chemical Media Resistance

Acids

- Acetic Acid (5% by mass) (23°C)
- Chromic Acid solution (40% by mass) (23°C)
- Citric Acid solution (10% by mass) (23°C)
- Hydrochloric Acid (36% by mass) (23°C)
- Lactic Acid (10% 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)

Bases

- Ammonium Hydroxide solution (10% by mass) (23°C)
- Sodium Hydroxide solution (1% by mass) (23°C)
- Sodium Hydroxide solution (35% by mass) (23°C)

Alcohols

- Ethanol (23°C)
- Isopropyl alcohol (23°C)
- Methanol (23°C)

## Hydrocarbons

- ☺ Toluene (23 °C)
- ☺ iso-Octane (23 °C)
- ☺ n-Hexane (23 °C)

## Ketones

- ☺ Acetone (23 °C)

## Ethers

- ☺ Diethyl ether (23 °C)

## Mineral oils

- ☺ Insulating Oil (23 °C)
- ☺ SAE 10W40 multigrade motor oil (130 °C)
- ☺ SAE 10W40 multigrade motor oil (23 °C)
- ☺ SAE 80/90 hypoid-gear oil (130 °C)

## Standard Fuels

- ☺ 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)
- ☺ 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 with alcohol (pref. ISO 1817 Liquid 4) (23 °C)
- ☺ Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23 °C)

## Salt solutions

- ☺ Sodium Carbonate solution (2% by mass) (23 °C)
- ☺ Sodium Carbonate solution (20% by mass) (23 °C)
- ☺ Sodium Chloride solution (10% by mass) (23 °C)
- ☹ Sodium Hypochlorite solution (10% by mass) (23 °C)
- ☺ Zinc Chloride solution (50% by mass) (23 °C)

## Other

- ☺ 1% nonylphenoxy-polyethyleneoxy ethanol in water (23 °C)
- ☺ 50% Oleic acid + 50% Olive Oil (23 °C)
- ☺ DOT No. 4 Brake fluid (130 °C)
- ☺ Deionized water (90 °C)
- ☺ Ethyl Acetate (23 °C)
- ☺ Ethylene Glycol (50% by mass) in water (108 °C)
- ☹ Hydrogen peroxide (23 °C)
- ☹ Phenol solution (5% by mass) (23 °C)
- ☺ Water (23 °C)