Grilon TSS/4

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	**3000** / **1100**	MPa	ISO 527-1/-2
Yield stress	**80** / **50**	MPa	ISO 527-1/-2
Yield strain	**5** / **15**	%	ISO 527-1/-2
Nominal strain at break	**15** / **>50**	%	ISO 527-1/-2
Stress at break	**55** / **-**	MPa	ISO 527-1/-2
Charpy impact strength (+23°C)	**N** / **N**	kJ/m²	ISO 179/1eU
Charpy impact strength (-30°C)	**N** / **N**	kJ/m²	ISO 179/1eU
Charpy notched impact strength (+23°C)	**5** / **40**	kJ/m²	ISO 179/1eA
Charpy notched impact strength (-30°C)	**6** / **5**	kJ/m²	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	**145** / **65**	MPa	ISO 2039-1

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature (10°C/min)	**260** / **-**	°C	ISO 11357-1/-3
Temp. of deflection under load (1.80 MPa)	**65** / **-**	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	**220** / **-**	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	**70** / **-**	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	**80** / **-**	E-6/K	ISO 11359-1/-2
Burning Behav. at thickness h	**HB** / **-**	class	IEC 60695-11-10
Thickness tested	**0.8** / **-**	mm	IEC 60695-11-10
Max. usage temperature (long term)	**90 - 110**	°C	EMS
Max. usage temperature (short term)	**220**	°C	EMS

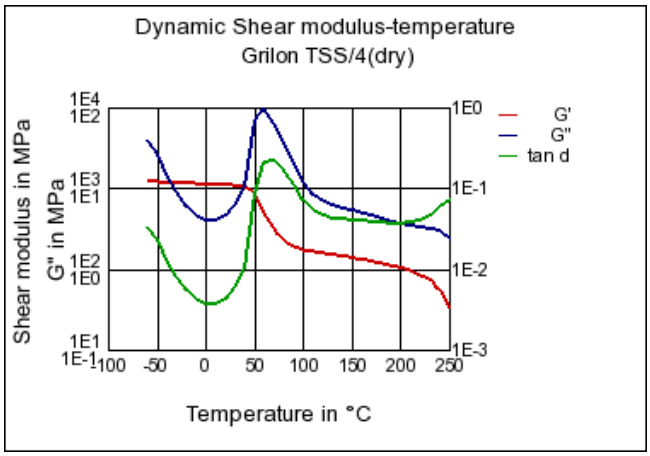
Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	**1E12** / **1E11**	Ohm*m	IEC 60093
Surface resistivity	**-** / **1E12**	Ohm	IEC 60093
Electric strength	**28** / **26**	kV/mm	IEC 60243-1
Comparative tracking index	**-** / **600**	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	**8** / **-**	%	Sim. to ISO 62
Humidity absorption	**2.5** / **-**	%	Sim. to ISO 62
Density	**1130** / **-**	kg/m³	ISO 1183

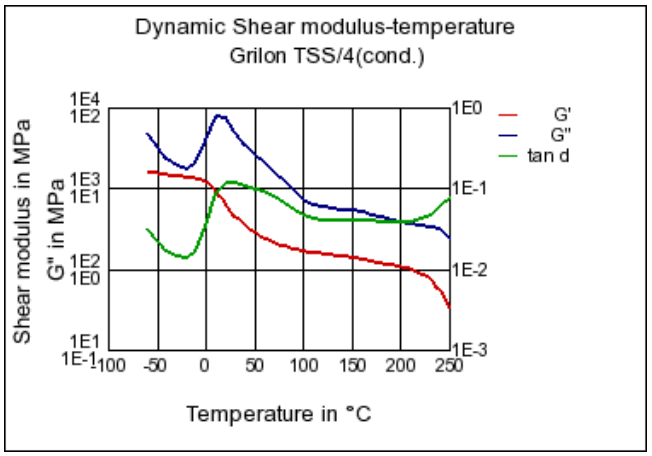
Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	**1.2** / **-**	%	ISO 294-4, 2577
Molding shrinkage (normal)	**1.4** / **-**	%	ISO 294-4, 2577

Diagrams

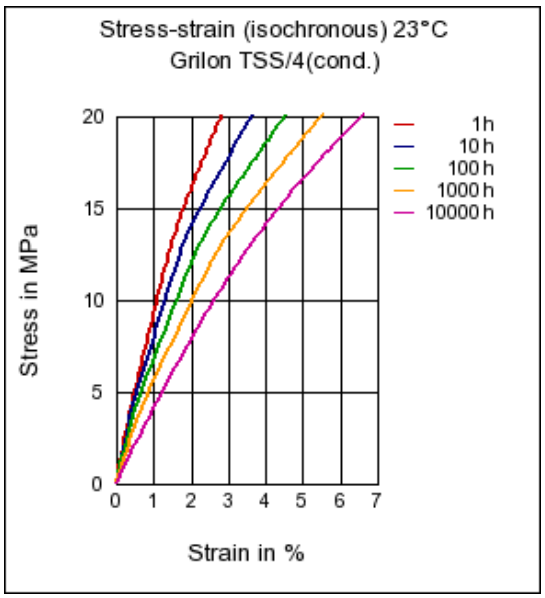
Dynamic Shear modulus-temperature



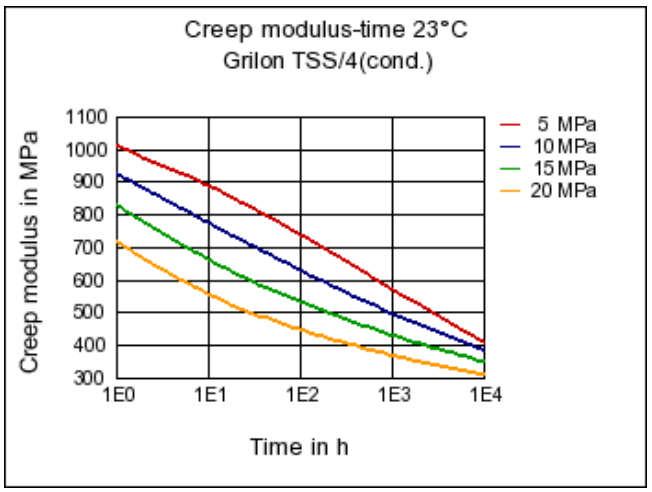
Dynamic Shear modulus-temperature



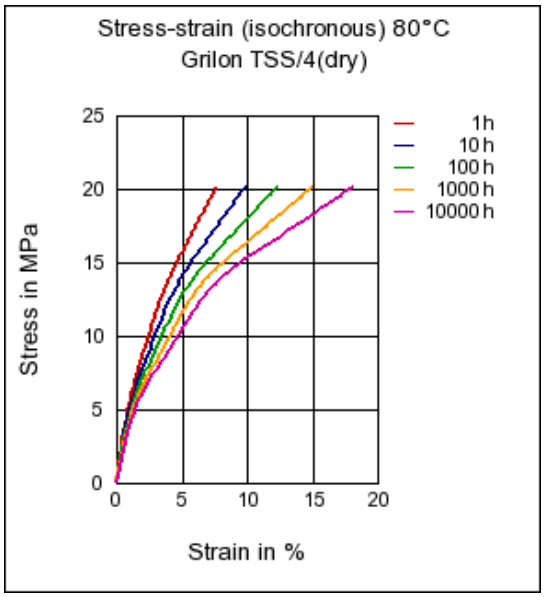
Stress-strain (isochronous) 23°C



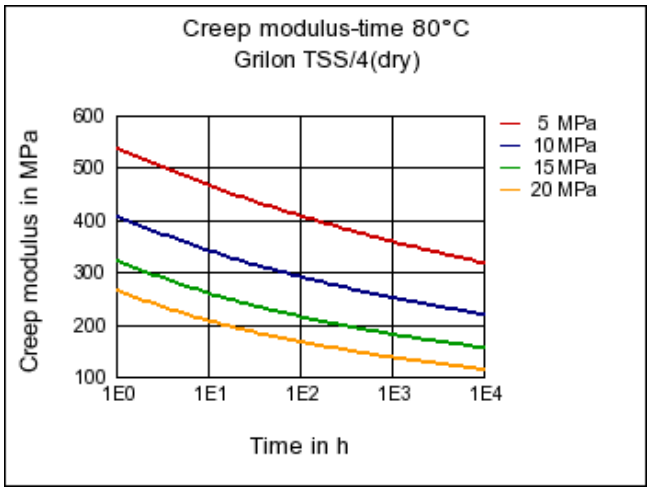
Creep modulus-time 23°C



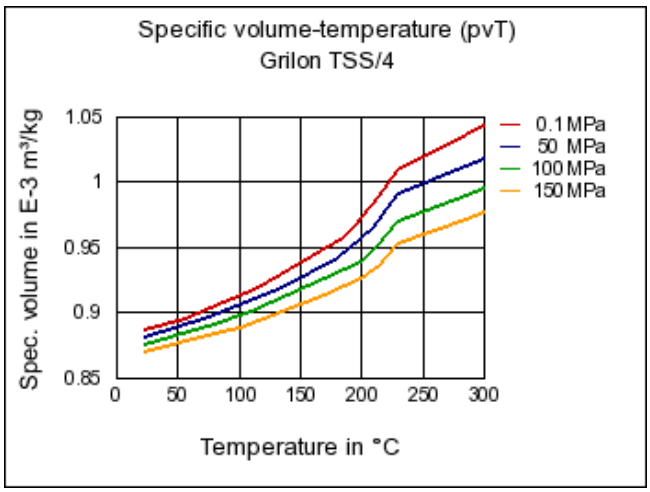
Stress-strain (isochronous) 80°C



Creep modulus-time 80°C



Specific volume-temperature (pvT)



Characteristic

Processing

Injection Molding

Regional Availability

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

Product Attributes

Nucleated

Automotive

Automotive electr. and electronics, lighting, Interior

Electricals & Electronics

Electrical appliances, Connectors

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)