

Grilon AZ 3/2

PA66

EMS-GRIVORY | a unit of EMS-CHEMIE AG

Product Information

Product designation according to ISO 1874:

PA66-HI, MHR, 14-020 N

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	1700 / 700	MPa	ISO 527-1/-2
Yield stress	45 / *	MPa	ISO 527-1/-2
Yield strain	5 / *	%	ISO 527-1/-2
Nominal strain at break	>50 / *	%	ISO 527-1/-2
Stress at 50% strain	* / 35	MPa	ISO 527-1/-2
Strain at break	* / >50	%	ISO 527-1/-2
Charpy impact strength (+23°C)	N / N	kJ/m ²	ISO 179/1eU
Charpy impact strength (-30°C)	N / N	kJ/m ²	ISO 179/1eU
Charpy notched impact strength (+23°C)	90 / N	kJ/m ²	ISO 179/1eA
Charpy notched impact strength (-30°C)	20 / 20	kJ/m ²	ISO 179/1eA

Mechanical properties (TPE)	dry / cond	Unit	Test Standard
Ball indentation hardness	95 / 55	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)	170 / -	°C	ISO 75-1/-2
Coeff. of linear therm. expansion (parallel)	150 / -	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion (normal)	150 / -	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

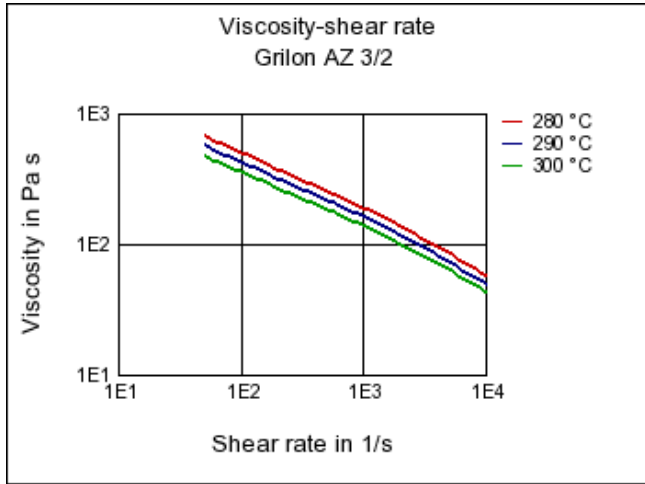
Electrical properties	dry / cond	Unit	Test Standard
Volume resistivity	1E12 / 1E11	Ohm*m	IEC 60093
Surface resistivity	- / 1E12	Ohm	IEC 60093
Electric strength	29 / 27	kV/mm	IEC 60243-1
Comparative tracking index	- / 600	-	IEC 60112

Other properties	dry / cond	Unit	Test Standard
Water absorption	8 / -	%	Sim. to ISO 62
Humidity absorption	2 / -	%	Sim. to ISO 62
Density	1070 / -	kg/m ³	ISO 1183

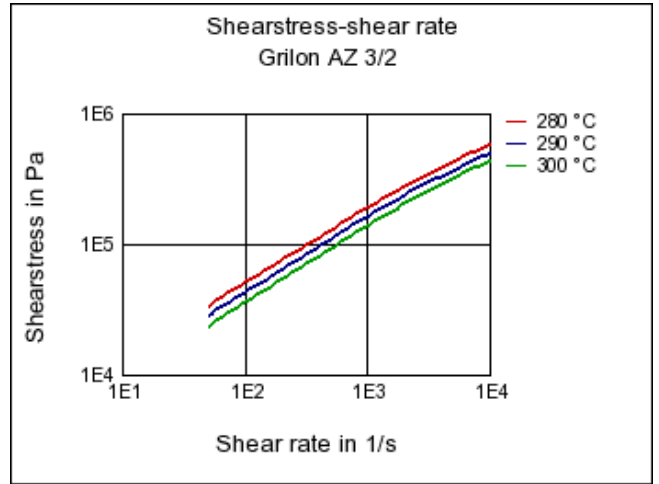
Rheo/Phys properties	dry / cond	Unit	Test Standard
Molding shrinkage (parallel)	1.6 / -	%	ISO 294-4, 2577
Molding shrinkage (normal)	1.8 / -	%	ISO 294-4, 2577

Diagrams

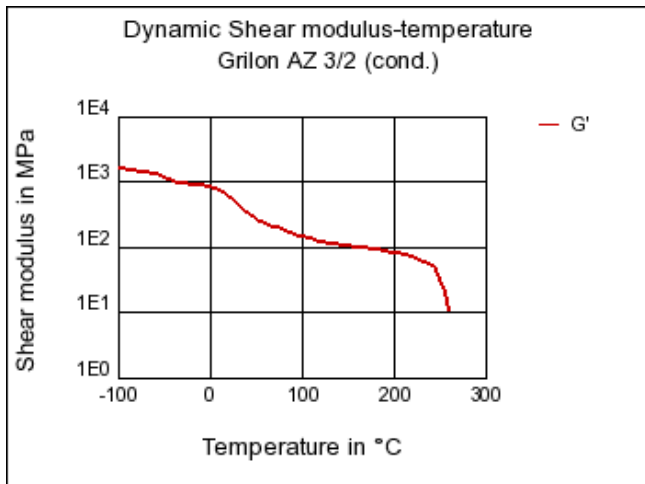
Viscosity-shear rate



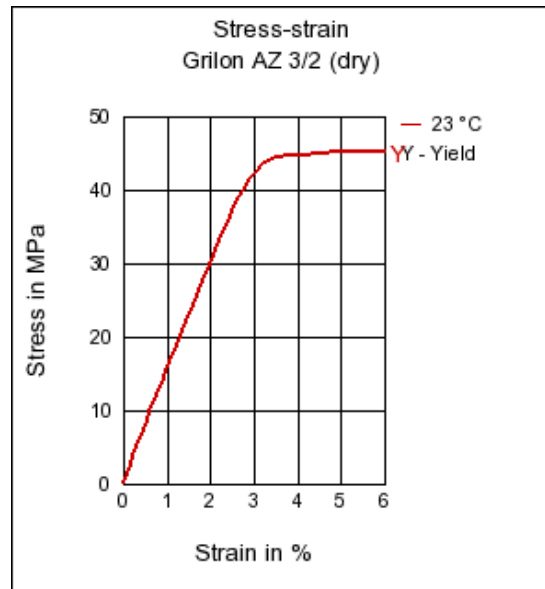
Shearstress-shear rate



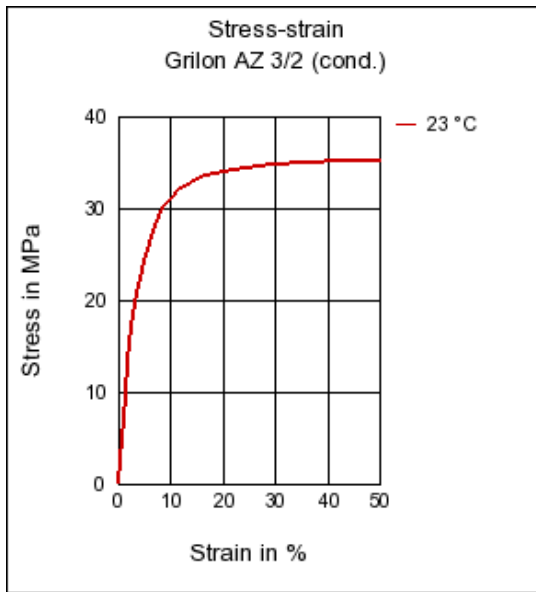
Dynamic Shear modulus-temperature



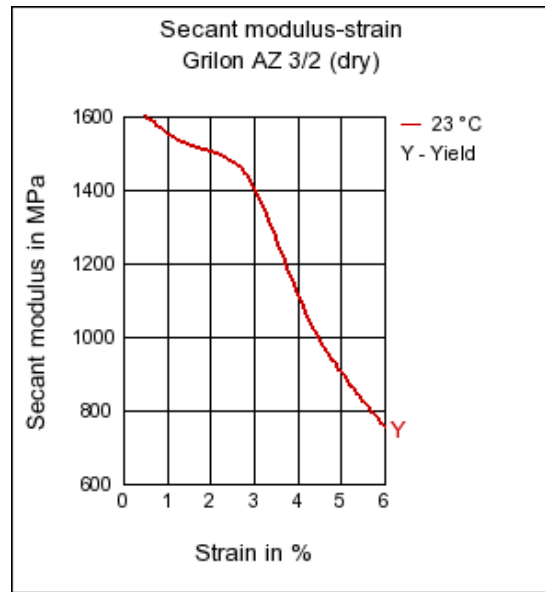
Stress-strain



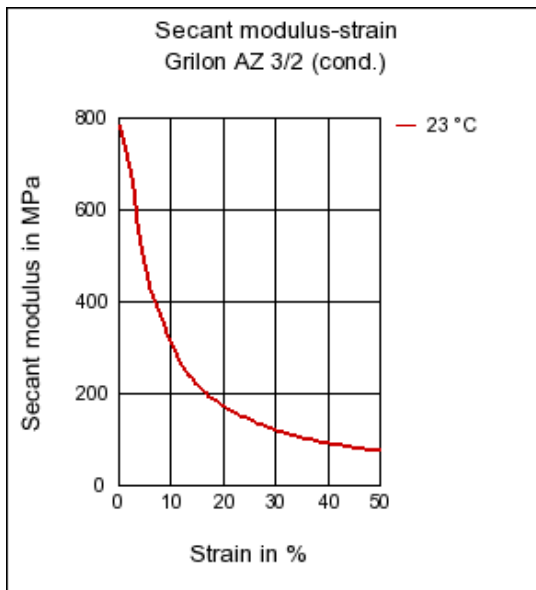
Stress-strain



Secant modulus-strain



Secant modulus-strain



Characteristic

Processing

Injection Molding

Automotive

Powertrain and Chassis

Special Characteristics

Flame retardant

Electricals & Electronics

Electrical appliances, Connectors

Regional Availability

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

Industry & Consumer goods









Housewares, Mechanical Engineering, Sports & Leisure, Tools & Accessories

Product Attributes




Improved friction & wear properties

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)