

Rilsan® BZM 30 O TL

PA11-GF30

Rilsan® BZM 30 O TL (PA11,MHL,18-070,GF30) resin

Rilsan® BZM 30 O TL is a fiberglass reinforced polyamide produced from a renewable source. This natural grade is designed for injection molding.

Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	9 / *	cm ³ /10min	ISO 1133
Temperature	235 / *	°C	-
Load	5 / *	kg	-

Mechanical properties	dry / cond	Unit	Test Standard
Tensile Modulus	- / 7300	MPa	ISO 527-1/-2
Stress at break	- / 134	MPa	ISO 527-1/-2
Strain at break	- / 6	%	ISO 527-1/-2
Charpy impact strength, +23°C	- / 89	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	- / 96	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	- / 24	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	- / 17	kJ/m ²	ISO 179/1eA

Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 10°C/min	189 / *	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.80 MPa	175 / *	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	180 / *	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	170 / *	°C	ISO 306
Coeff. of linear therm. expansion, parallel	50 / *	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm nom. thickn.	HB / *	class	IEC 60695-11-10
Thickness tested	1.6 / *	mm	-
Burning Behav. at thickness h	HB / *	class	IEC 60695-11-10
Thickness tested	3.2 / *	mm	-
Oxygen index	22 / *	%	ISO 4589-1/-2

Electrical properties	dry / cond	Unit	Test Standard
Relative permittivity, 100Hz	4 / -	-	IEC 60250
Relative permittivity, 1MHz	4 / -	-	IEC 60250
Dissipation factor, 100Hz	578 / -	E-4	IEC 60250
Dissipation factor, 1MHz	210 / -	E-4	IEC 60250
Volume resistivity	- / 7E11	Ohm*m	IEC 60093
Surface resistivity	* / 1E14	Ohm	IEC 60093

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Electric strength	- / 45	kV/mm	IEC 60243-1
Comparative tracking index	* / 600	-	IEC 60112

Other properties

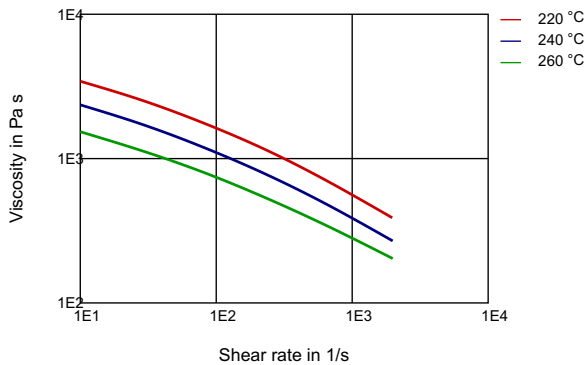
	dry / cond	Unit	Test Standard
Water absorption	1.4 / *	%	Sim. to ISO 62
Humidity absorption	0.5 / *	%	Sim. to ISO 62
Density	1250 / 1250	kg/m ³	ISO 1183

Test specimen production

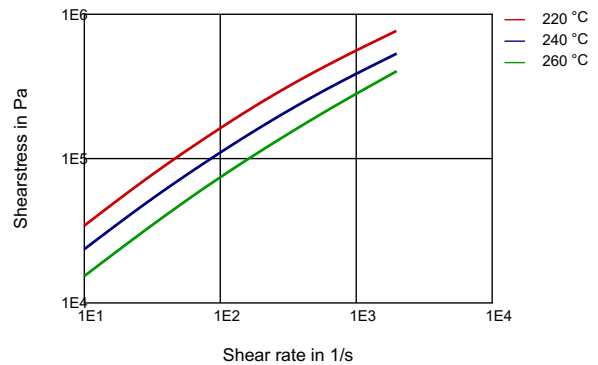
	Value	Unit	Test Standard
Injection Molding, melt temperature	280	°C	ISO 294
Injection Molding, mold temperature	60	°C	ISO 10724
Injection Molding, pressure at hold	22	MPa	ISO 294

Diagrams

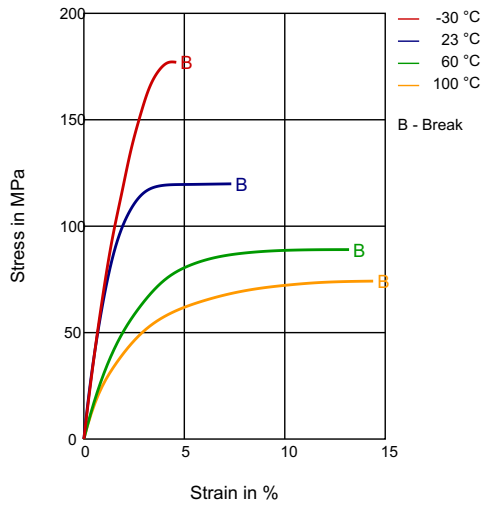
Viscosity-shear rate



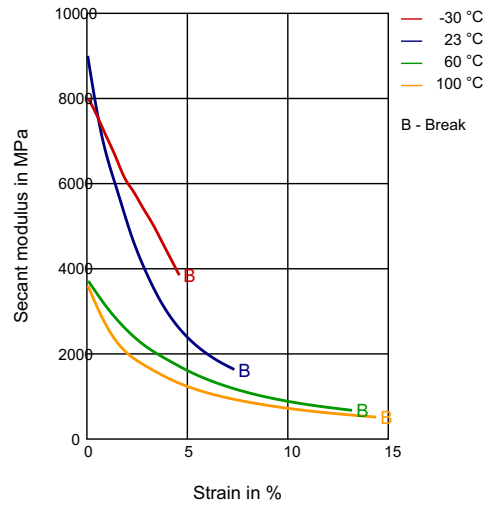
Shearstress-shear rate



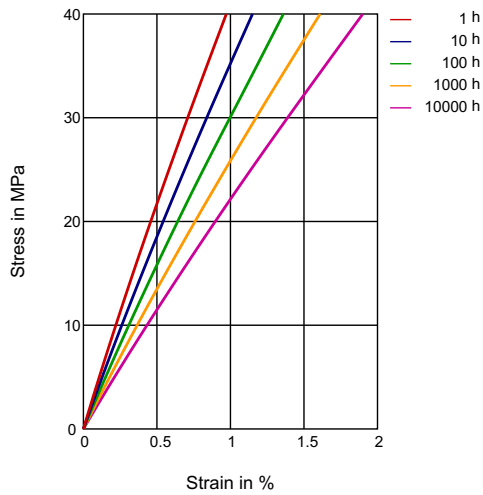
Stress-strain



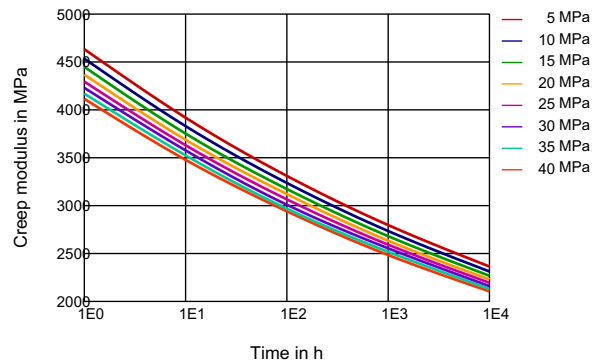
Secant modulus-strain



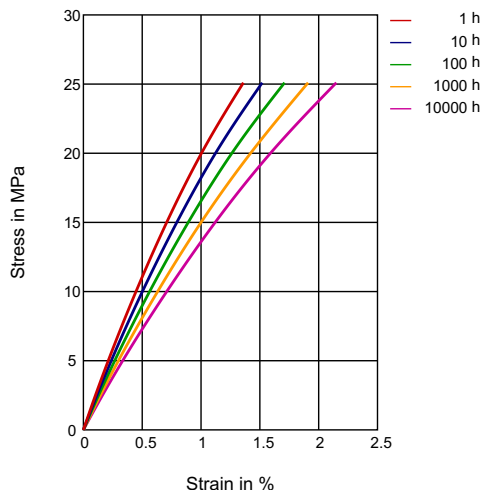
Stress-strain (isochronous) 23°C



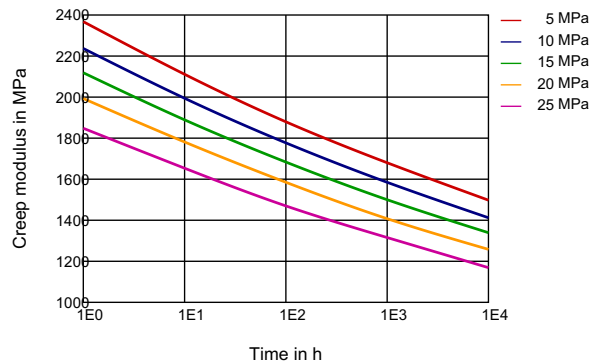
Creep modulus-time 23°C



Stress-strain (isochronous) 80°C



Creep modulus-time 80°C



Characteristics

Processing

Injection Molding

Delivery form

Pellets

Additives

Release agent

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

- ✓ Methanol (23°C)
- ✓ Ethanol (23°C)

Hydrocarbons

- ✓ n-Hexane (23°C)

Special Characteristics

Light stabilized or stable to light, U.V. stabilized or stable to weather, Heat stabilized or stable to heat

Regional Availability

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

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- ✓ Toluene (23°C)

Ketones

- ✓ Acetone (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)
- ✓ 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)