RILSAN®
BESNO P40 TL

PA11-P, EHL, 22-003

Rilsan® BESNO P40 TL resin is a polyamide 11 produced from a renewable source. This natural grade is plasticized and designed for extrusion.

The percentage of renewable carbon according to ASTM D 6866 (calculated) is >**89%.**

MAIN CHARACTERISTICS

PROPERTIES	DRY / COND	UNIT	TEST STANDARD
MECHANICAL PROPERTIES			
Tensile Modulus	- / 345	MPa	ISO 527-1/-2
Yield stress	- / 26	MPa	ISO 527-1/-2
Yield strain	- / 50	%	ISO 527-1/-2
Nominal Strain at Break	- / >50	%	ISO 527-1/-2
Shore D Hardness	60 / *	-	ISO 868
Charpy Impact Strength, +23°C	- / No Break	kJ/m²	ISO 179/1eU
Charpy Impact Strength, -30°C	- / No Break	kJ/m²	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	- / No Break	kJ/m²	ISO 179/1eA
Charpy Notched Impact Strength, -30°C	- / 7	kJ/m²	ISO 179/1eA
Puncture - Maximum Force, -30°C	- / 6000	N	ISO 6603-2
Puncture Energy, -30°C	- / 70	J	ISO 6603-2
THERMAL PROPERTIES			
Melting Temperature, 10°C/min	181 / *	°C	ISO 11357-1/-3
Temp. of Deflection Under Load, 1.80 MPa	45 / *	°C	ISO 75-1/-2
Temp. of Deflection Under Load, 0.45 MPa	130 / *	°C	ISO 75-1/-2
Vicat Softening Temperature, 50°C/h 50N	140 / *	°C	ISO 306
Coeff. of Linear Thermal Expansion, parallel	110 / *	E-6/K	ISO 11359-1/-2
ELECTRICAL PROPERTIES			
Relative Permittivity, 100Hz	9 / -	-	IEC 60250
Relative Permittivity, 1MHz	4 / -	-	IEC 60250
Dissipation Factor, 100Hz	2440 / -	E-4	IEC 60250
Dissipation Factor, 1MHz	1040 / -	E-4	IEC 60250
Volume Resistivity	- / 1E9	Ohm*m	IEC 60093
Surface Resistivity	* / 5E11	Ohm	IEC 60093
Dielectric (Electric) Strength	- / 23	kV/mm	IEC 60243-1

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OTHER PROPERTIES			
Water Absorption	1.6 / *	%	Sim. to ISO 62
Density	1040 / 1040	kg/m³	ISO 1183
%Bio-Based	89	-	ASTM D6866

MAIN APPLICATIONS:

- Fluid transportation
- Air brake line
- Fuel line
- Tubing for use in motor vehicle

PACKAGING:

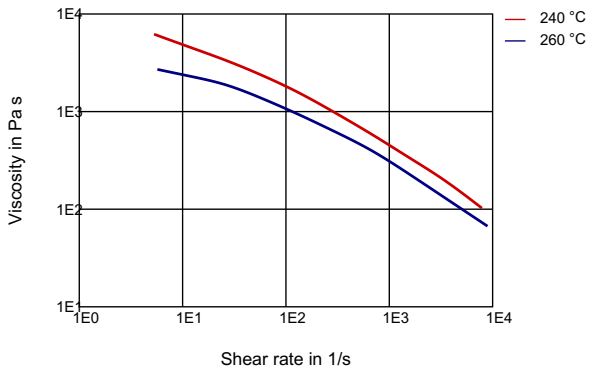
This grade is delivered dried in sealed packaging (25 kg bags, 44 lb bags, 550 kg rigid containers, 1000 lb rigid containers) ready to be processed.

SHELF LIFE:

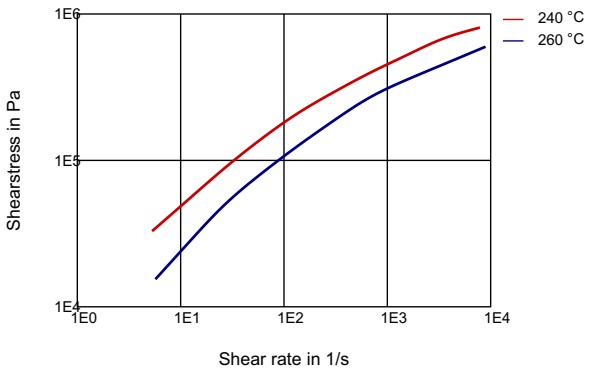
Two years from the delivery. For any use above this limit, please refer to our technical services.

DIAGRAMS

VISCOSITY-SHEAR RATE



SHEARSTRESS-SHEAR RATE



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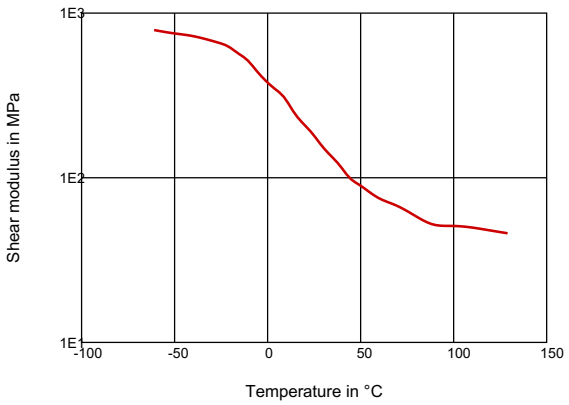
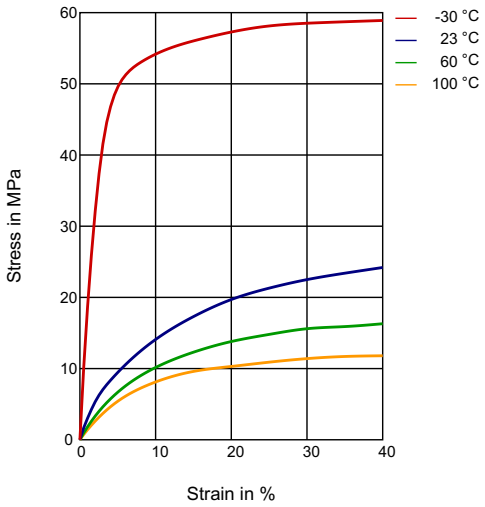
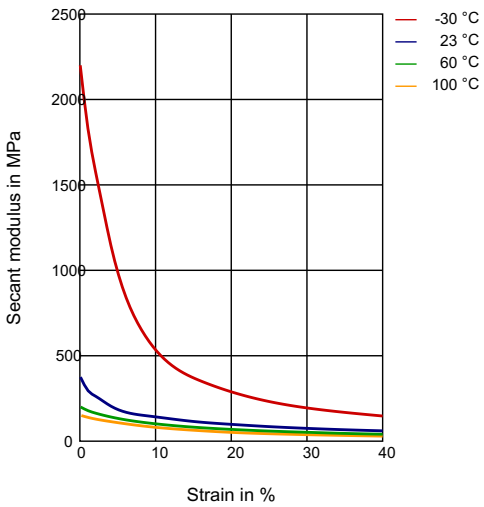
DYNAMIC SHEAR MODULUS-TEMPERATURE



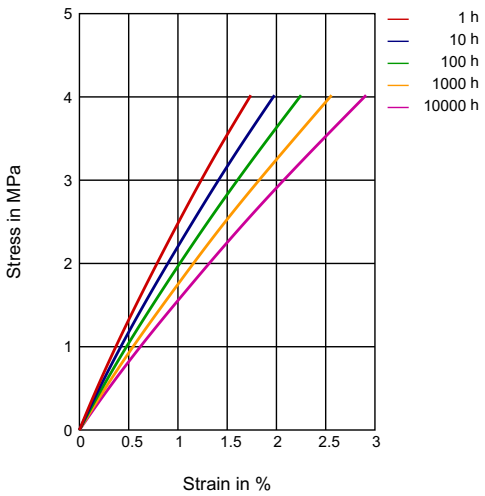
STRESS-STRAIN



SECANT MODULUS-STRAIN



STRESS-STRAIN (ISOCHRONOUS) 23°C



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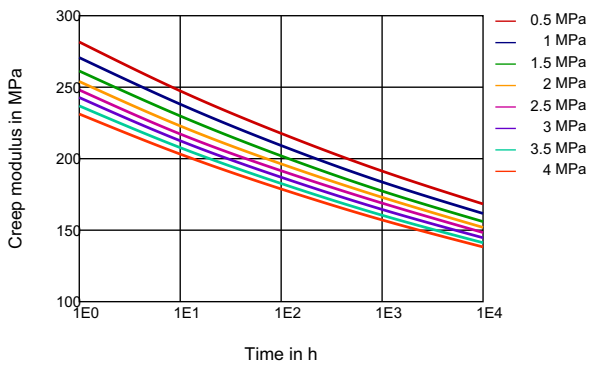
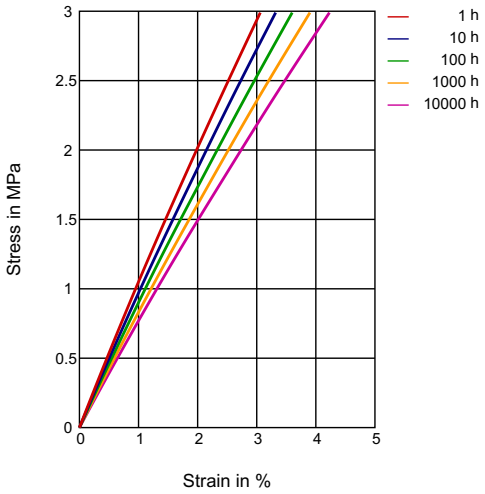
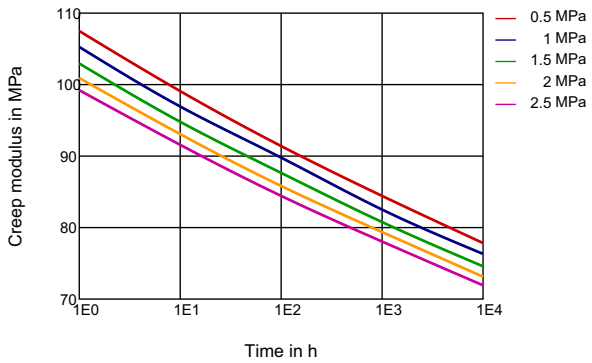
CREEP MODULUS-TIME 23°C



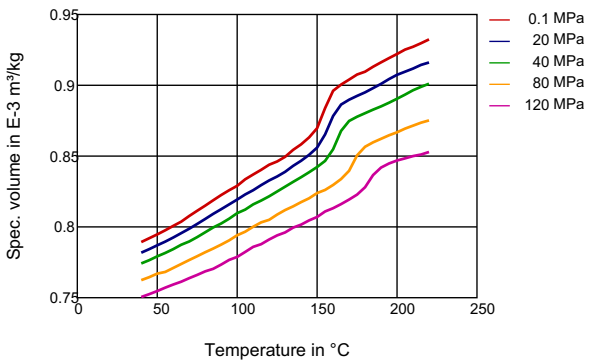
STRESS-STRAIN (ISOCHRONOUS) 100°C



CREEP MODULUS-TIME 100°C



SPECIFIC VOLUME-TEMPERATURE (PVT)



Processing conditions:

- Typical melt temperature (Min / Recommended / Max) : 230°C / 250°C / 280°C.

- Drying time and temperature (only necessary for bags opened for more than two hours) : 4-8 hours at 80-90°C.

PROCESSING

Profile Extrusion, Other Extrusion

SPECIAL CHARACTERISTICS

Bio-Based, Heat Stabilized, Light Stabilized

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DELIVERY FORM

Pellets

ADDITIVES

Lubricants, Plasticizer

REGIONAL AVAILABILITY

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

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ARKEMA

Arkema Inc - High Performance Polymers
900 First Avenue
King of Prussia, PA 19406
Tel.: +1 610 205 7000
Fax: +1 610 205 7497
hpp.arkema.com

Headquarters: Arkema France
420, rue d'Estienne d'Orves
92705 Colombes Cedex – France
Tel.: +33 1 49 00 80 80
Fax: +33 1 49 00 83 96
arkema.com