

# RILSAN® BESNO TL

PA11,EHL,22-010

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

PROPERTIES	DRY / COND	UNIT	TEST STANDARD
<b>RHEOLOGICAL PROPERTIES</b>			
Melt Volume-Flow Rate	1 / *	cm <sup>3</sup> /10 min	ISO 1133
Temperature	235 / *	°C	-
	455 / *	°F	-
Load	2.16 / *	kg	-
	4.76 / *	lb	-
<b>MECHANICAL PROPERTIES</b>			
Tensile Modulus	- / 1280	MPa	ISO 527-1/-2
	- / 186000	psi	
Yield Stress	- / 38	MPa	ISO 527-1/-2
	- / 5510	psi	
Yield Strain	- / 5	%	ISO 527-1/-2
Nominal Strain at Break	- / >50	%	ISO 527-1/-2
Shore D Hardness, after 15 s	72 / *	-	ISO 868
Charpy Impact Strength, +23°C	- / No Break	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy Impact Strength, -30°C	- / No Break	kJ/m <sup>2</sup>	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	- / 11	kJ/m <sup>2</sup>	ISO 179/1eA
	- / 5.23	ftlb/in <sup>2</sup>	
Charpy Notched Impact Strength, -30°C	- / 12	kJ/m <sup>2</sup>	ISO 179/1eA
	- / 5.71	ftlb/in <sup>2</sup>	
Puncture - Maximum Force, -30°C	- / 6000	N	ISO 6603-2
Puncture Energy, -30°C	- / 70	J	ISO 6603-2
<b>THERMAL PROPERTIES</b>			
Melting Temperature, 10°C/min	186 / *	°C	ISO 11357-1/-3
Temp. of Deflection Under Load, 1.80 MPa	50 / *	°C	ISO 75-1/-2
	122 / *	°F	
Temp. of Deflection Under Load, 0.45 MPa	145 / *	°C	ISO 75-1/-2
	293 / *	°F	
Vicat Softening Temperature, 50°C/h 50N	160 / *	°C	ISO 306
	320 / *	°F	
Coeff. of Linear Thermal Expansion, parallel	85 / *	E-6/K	ISO 11359-1/-2

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 Source: automatically generated TDS from Material Database on 12-08-2024

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Burning Behav. at 1.5 mm Nominal Thickness	HB / *	class	IEC 60695-11-10
Thickness Tested	1.6 / *	mm	-
	0.0630 / *	in	
Yellow Card available	yes / *	-	-
<b>ELECTRICAL PROPERTIES</b>			
Relative Permittivity, 100Hz	3 / -	-	IEC 60250
Relative Permittivity, 1MHz	3 / -	-	IEC 60250
Dissipation Factor, 100Hz	308 / -	E-4	IEC 60250
Dissipation Factor, 1MHz	183 / -	E-4	IEC 60250
Volume Resistivity	- / 1E12	Ohm* m	IEC 62631-3-1
Surface Resistivity	* / 1E14	Ohm	IEC 62631-3-2
Dielectric (Electric) Strength	- / 30	kV/mm	IEC 60243-1
	- / 762	kV/in	
<b>OTHER PROPERTIES</b>			
Water Absorption, 23°C, immersion, equilibrium	1.9 / *	%	ISO 62
Density	1020 / 1020	kg/m <sup>3</sup>	ISO 1183
	1.02 / 1.02	g/cm <sup>3</sup>	

## MAIN APPLICATIONS:

- Fluid transportation

## PACKAGING:

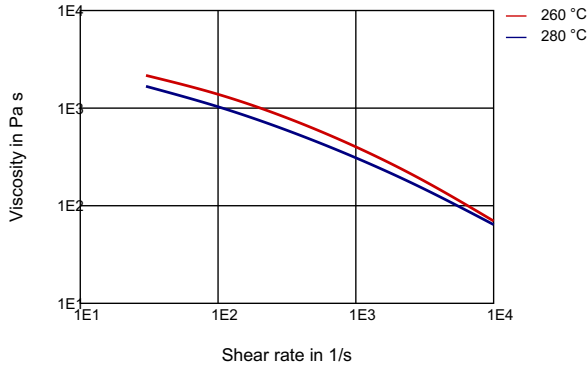
This grade is delivered dried in sealed packaging (25 kg bags, 44 lb bags, 1000 lb rigid containers) ready to be processed.

## SHELF LIFE:

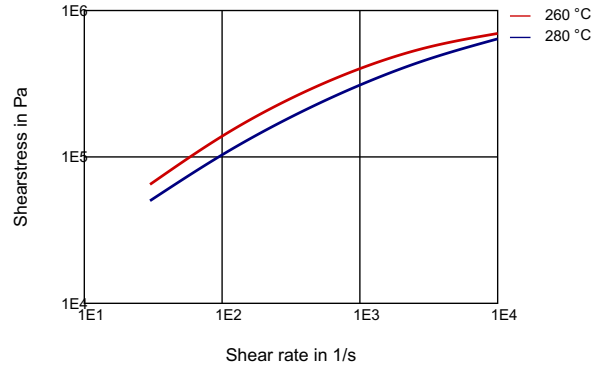
Two years from the delivery. For any use above this limit, please refer to our technical services.

## DIAGRAMS

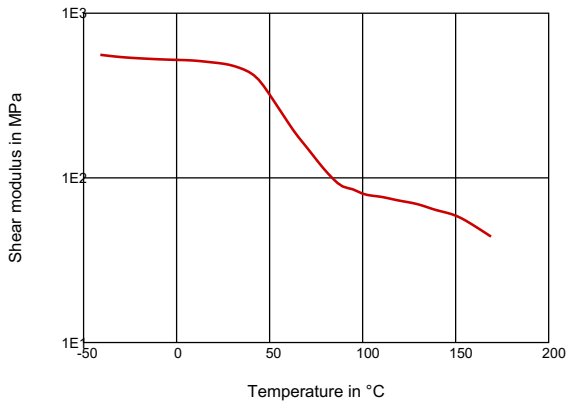
### VISCOSITY-SHEAR RATE



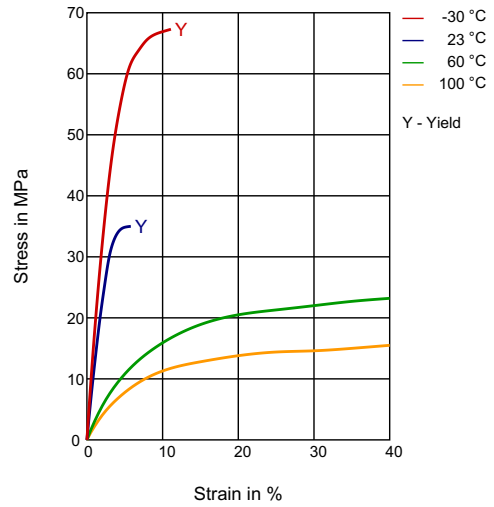
### SHEARSTRESS-SHEAR RATE



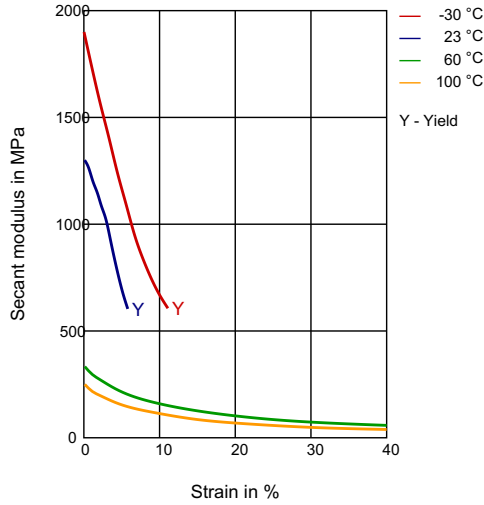
### DYN. SHEAR MODULUS-TEMPERATURE



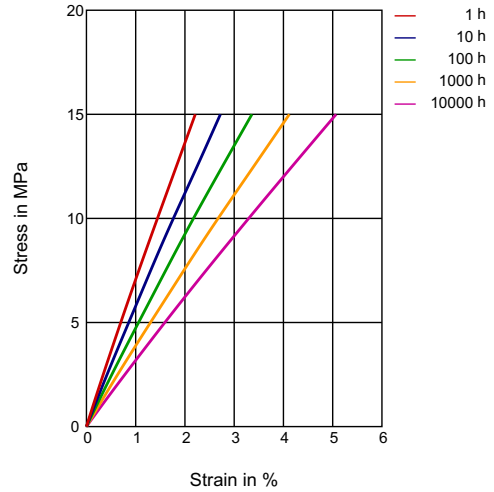
### STRESS-STRAIN



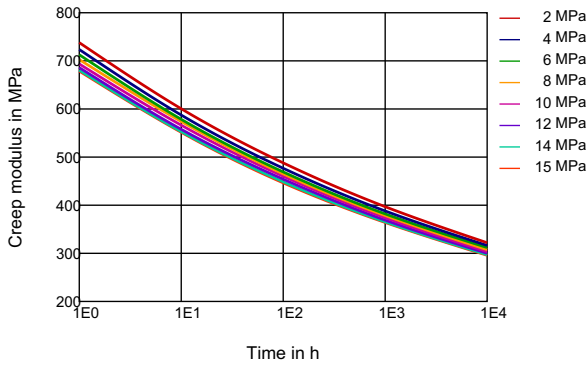
## SECANT MODULUS-STRAIN



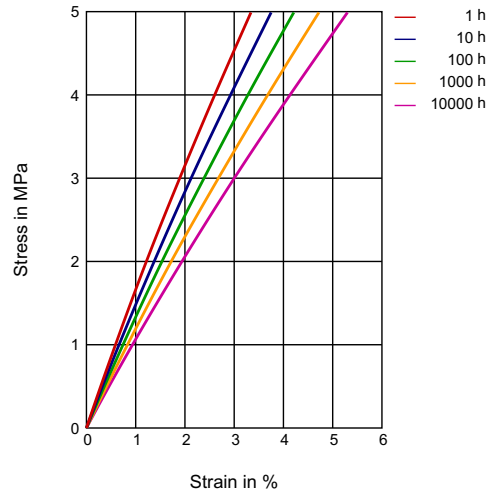
## STRESS-STRAIN (ISOCHRONOUS) 73°F



## CREEP MODULUS-TIME 73°F

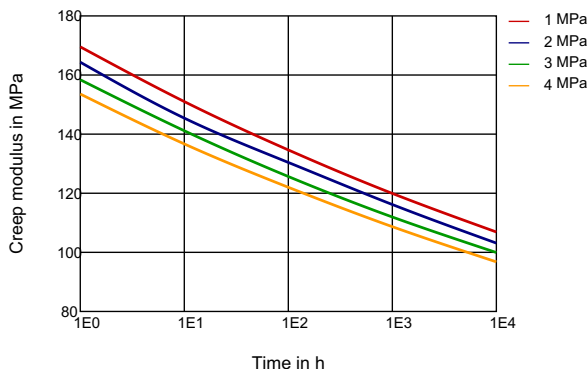


## STRESS-STRAIN (ISOCHRONOUS) 176°F



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## CREEP MODULUS-TIME 176°F



### 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.

<p><b>PROCESSING</b></p> <p>Film Extrusion, Profile Extrusion, Sheet Extrusion, Other Extrusion</p>	<p>Headquarters:</p> <p>Arkema France 420 rue d'Estienne d'Orves 92705 Colombes Cedex France T +33 (0)1 49 00 80 80 hpp.arkema.com</p> <p>Arkema Inc. – High Performance Polymers 900 First Avenue King of Prussia, PA 19406 Tel.: +1 610 205 7000 hpp.arkema.com</p>
<p><b>DELIVERY FORM</b></p> <p>Pellets</p>	
<p><b>ADDITIVES</b></p> <p>Lubricants</p>	
<p><b>SPECIAL CHARACTERISTICS</b></p> <p>Bio-Based, Heat Stabilized, Light Stabilized</p>	
<p><b>REGIONAL AVAILABILITY</b></p> <p>North America, Europe, Asia Pacific, South and Central America, Near East/Africa</p>	

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