RILSAN®

TECHNICAL DATA SHEET

RILSAN® BESNO TL

POLYAMIDE 11 PELLET

RILSAN® BESNO TL is a polyamide 11 compound. It is produced from a renewable & sustainable source (castor oil). This natural grade is designed for tube extrusion.

Designation : ISO 16396 - PA11, EG1HL, C22-010

TYPE

PA11

MAIN APPLICATIONS

- Yarn - Multifilament - Growth
- Downstream - Gas Station Piping
- Oil And Gas - Others
- CPI - Others
- Industry - Distribution
- Auto - Metal Tube Coating
- Auto - Others Injection

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

- Extrusion - General
- Sheet Extrusion
- Tube Extrusion

ADDITIVES

- Heat Stabilized
- Light Stabilized

RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Melt volume flow rate (MVR), 235°C / 2.16 kg (455°F / 4.4 lb)	1	cm^3/10min	ISO 1133

MECHANICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	UNIT	TEST STANDARD
Flexural modulus, 23°C (73°F)	- / 1085	MPa	ISO 178
Tensile modulus, 23°C (73°F), 1 mm/min	- / 1280	MPa	ISO 527-1/-2
Yield stress, 23°C (73°F), 50 mm/min	- / 38	MPa	ISO 527-1/-2
Yield strain, 23°C (73°F), 50 mm/min	- / 5	%	ISO 527-1/-2
Nominal strain at break, 23°C (73°F), 50 mm/min	- / > 50	%	ISO 527-1/-2
Charpy unnotched impact strength, 23°C (73°F)	- / No break		ISO 179 1eU
Charpy unnotched impact strength, -30°C (-22°F)	- / No break		ISO 179 1eU
Charpy notched impact strength, 23°C (73°F)	- / 11	kJ/m2	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	- / 12	kJ/m2	ISO 179 1eA
Hardness, Shore D, 15 s	- / 72		ISO 868

*DRY: Dry As Molded (DAM) if pellet / Dry if powder.
COND: Conditionned.

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THERMAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Vicat softening temperature, 50N at 50°C/h	160	°C	ISO 306
Heat deflection temperature, 0.45 MPa	145	°C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	50	°C	ISO 75-1/-2
Melting temperature, 10°C/min	186	°C	ISO 11357-1/-3
Burning behavior, minimum thickness 1.5 mm	HB		IEC 60695-11-10
Burning behavior, minimum thickness 3.0 mm	HB		IEC 60695-11-10
Yellow card available	YES		

ELECTRICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	UNIT	TEST STANDARD
Surface resistivity, 23°C (73°F)	- / 1.0E+14	Ohm/sq	IEC 62631-3-2
Volumic (transversal) resistivity, 23°C (73°F)	- / 1.0E+12	Ohm.m	IEC 62631-3-1
Relative permittivity, 100Hz	- / 3		IEC 62631-2-1
Relative permittivity, 1Mhz	- / 3		IEC 62631-2-1
Dissipation factor, 100Hz	308 / -	E-4	IEC 62631-2-1
Dissipation factor, 1Mhz	183 / -	E-4	IEC 62631-2-1
Comparative tracking index, 23°C (73°F)	- / 600		IEC 60112
Dielectric Strength, 23°C (73°F)	- / 30	kV/mm	IEC 60243-1

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COND: Conditionned.

OTHER PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Water absorption, 23°C (73°F), immersion, equilibrium	1.9	%	ISO 62
Bio-based carbon content, Measured	99	%	ASTM D6866
Density, 23°C (73°F)	1.02	g/cm³	ISO 1183-1

PACKAGING

Available packaging:
- 20 kg / 44 lb bags
- 25 kg / 55 lb bags
- 550 kg rigid containers

SHELF LIFE

Two years from the date of delivery, when stored properly (sealed bags, appropriate moisture, UV protection and temperature). For any use above this limit, please refer to our technical services.

PROCESSING CONDITIONS:

- Typical melt temperature (Min / Recommended / Max) - Injection Molding: 230°C / 250°C / 270°C (445°F / 480°F / 520°F)
- Typical mold temperature - Injection molding: 20-60°C (70-140°F)
- Drying time and temperature: 80-90°C (175-195°F) / 4-6 hours

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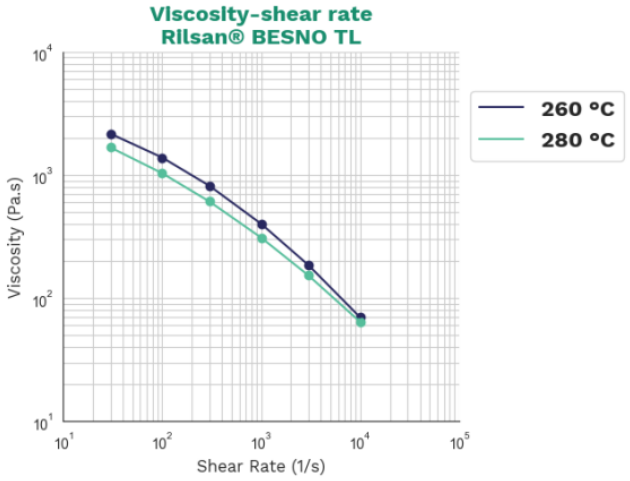
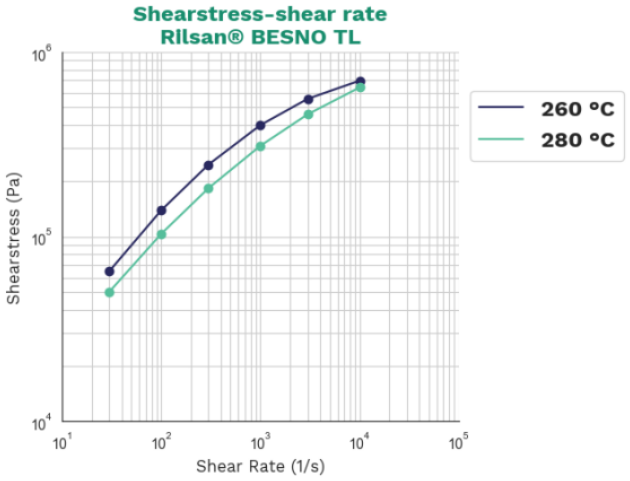
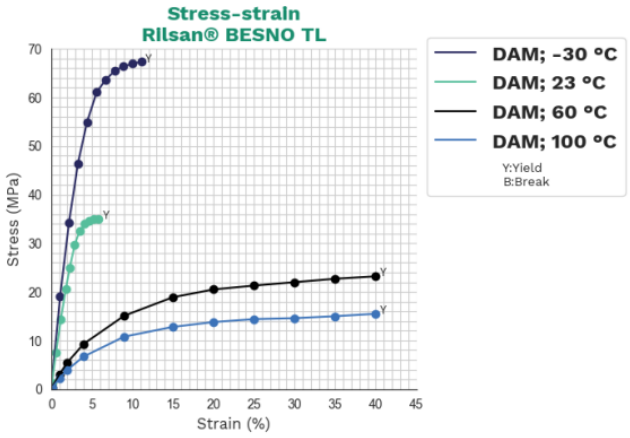
SPECIAL CHARACTERISTICS

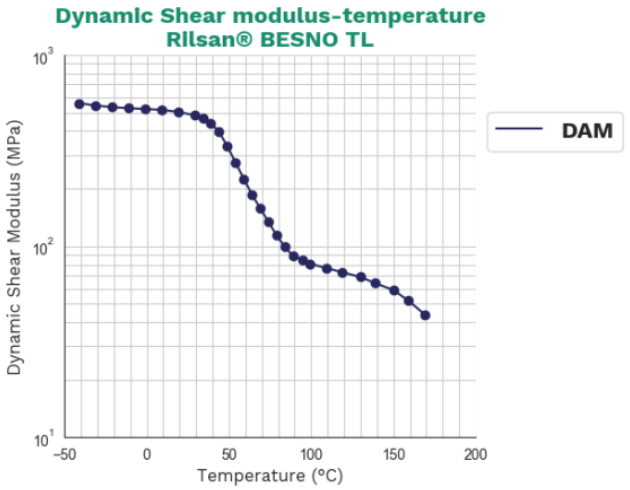
- Bio-based
- Low oligomers

DIAGRAMS









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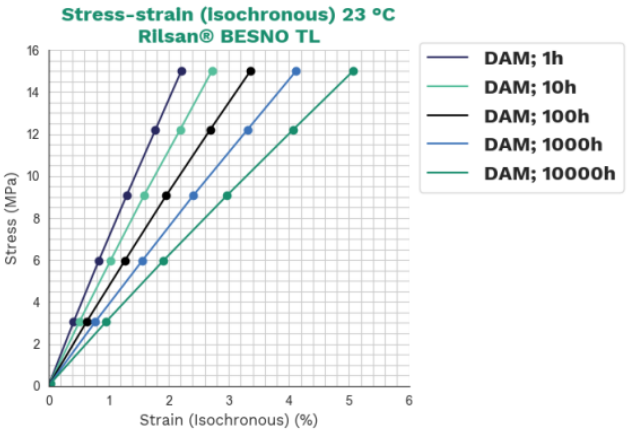

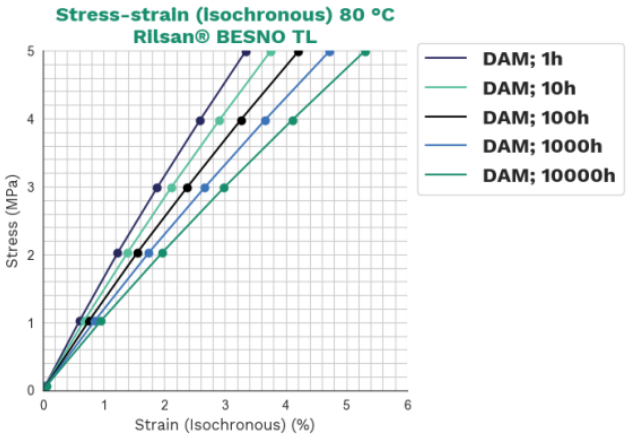

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