RILSAN®

TECHNICAL DATA SHEET

RILSAN® BESNO P20 TL

POLYAMIDE 11 PELLET

RILSAN® BESNO P20 TL is a polyamide 11 compound. It is produced from a renewable & sustainable source (castor oil). This natural plasticized grade is designed for tube extrusion.

Designation : ISO 16396 - PA11-P, EG1HL, C22-005

DESIGNATION

PA11-P

MAIN APPLICATIONS

- Auto - Gasoline Lines

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

- Extrusion - General
- Tube Extrusion

ADDITIVES

- Heat Stabilized
- Light Stabilized
- Plasticizer

RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Melt volume flow rate (MVR), 235°C / 5 kg (455°F / 11 lb)	2 cm³/10min	ISO 1133

MECHANICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	TEST STANDARD
Hardness, Shore D, 15 s	- / 64	ISO 868
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
Nominal strain at break, 23°C (73°F), 50 mm/min	- / > 50 %	ISO 527-1/-2
Yield strain, 23°C (73°F), 50 mm/min	- / 40 %	ISO 527-1/-2
Yield stress, 23°C (73°F), 50 mm/min	31 / 31 MPa	ISO 527-1/-2
Tensile modulus, 23°C (73°F), 1 mm/min	510 / 510 MPa	ISO 527-1/-2
Charpy notched impact strength, 23°C (73°F)	No Break / No Break	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	- / 11 kJ/m2	ISO 179 1eA
Flexural modulus, 23°C (73°F)	- / 450 MPa	ISO 178

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

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THERMAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Vicat softening temperature, 50N at 50°C/h	146 °C	ISO 306
Heat deflection temperature, 0.45 MPa	135 °C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	47 °C	ISO 75-1/-2
Melting temperature, 10°C/min	182 °C	ISO 11357-1/-3

ELECTRICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	TEST STANDARD
Surface resistivity, 23°C (73,4°F)	- / 2.0E+12 ohm/sq	IEC 62631-3-2
Volumic (transversal) resistivity, 23°C (73,4°F)	- / 1.0E+10 ohm/m	IEC 62631-3-1
Dielectric stress, 23°C (73,4°F)	- / 24	IEC 60243-1

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

OTHER PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Bio-based carbon content, Measured	94 %	ASTM D6866
Water absorption, 23°C (73°F), immersion, equilibrium	1.8 %	ISO 62
Specific gravity, 23°C (73°F)	1.04 g/cm³	ISO 1183-1

PACKAGING

This grade is delivered dried in sealed packaging ready to be processed. Available packaging:
- 25 kg / 55 lb bags
- 454 kg / 1000 lb 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

SPECIAL CHARACTERISTICS

- Bio-based
- Low oligomers

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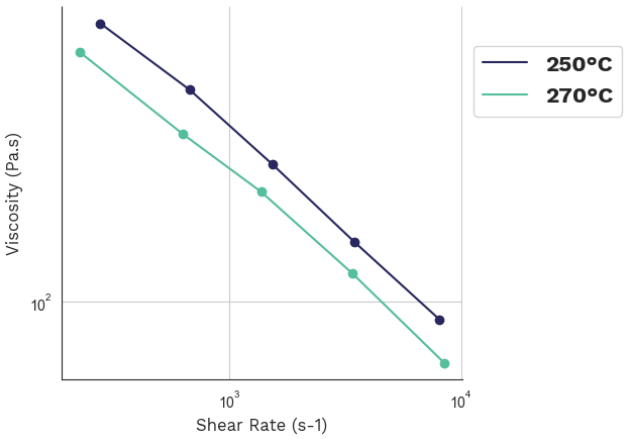
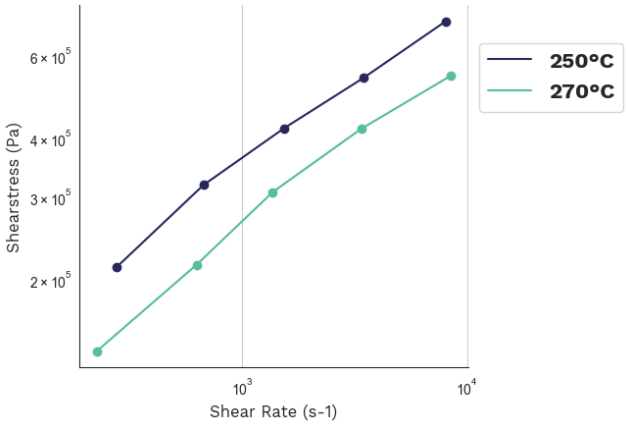
DIAGRAMS

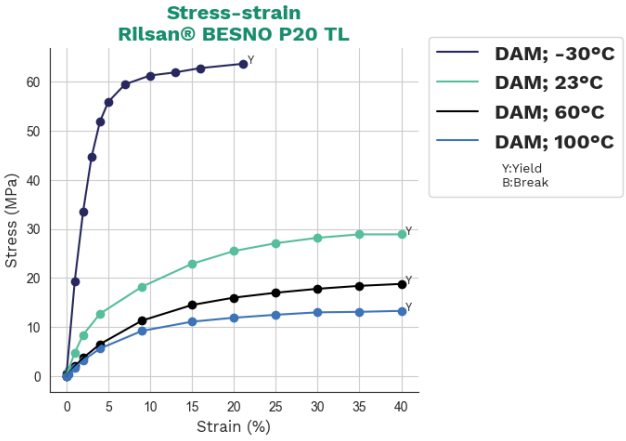
Viscosity-shear rate
Rilsan® BESNO P20 TL



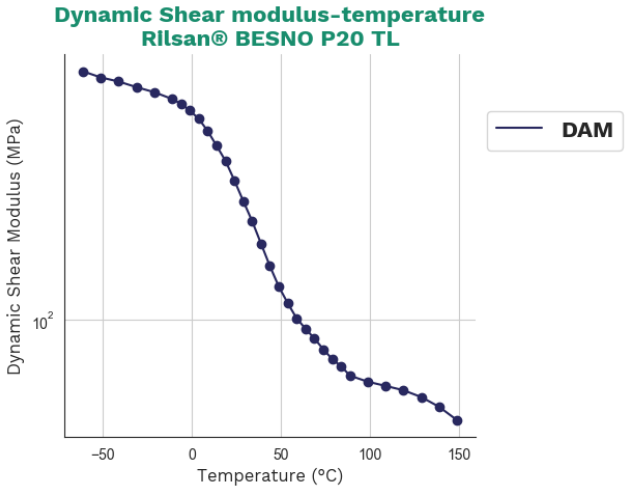
Shearstress-shear rate
Rilsan® BESNO P20 TL



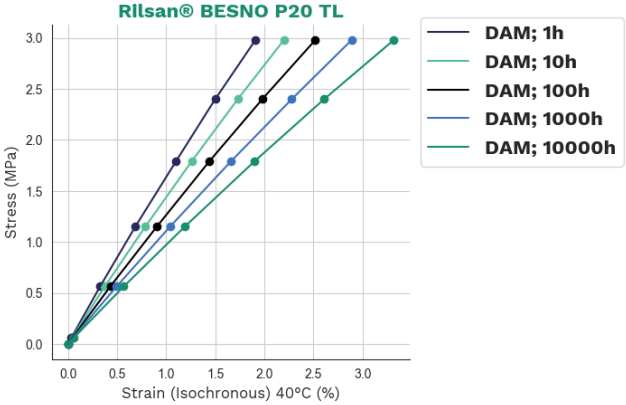
Stress-strain
Rilsan® BESNO P20 TL



Dynamic Shear modulus-temperature
Rilsan® BESNO P20 TL



Stress-strain (Isochronous) 40°C
Rilsan® BESNO P20 TL



Headquarter: Arkema France
420, rue d'Estienne d'Orves
92705 Colombes Cedex – France
T +33 (0)1 49 00 80 80