

## 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

### DELIVERY FORM

- Pellets

### TRANSFORMATION PROCESSES

- Extrusion - General
- Tube Extrusion

### ADDITIVES

- Heat Stabilized
- Light Stabilized
- Plasticizer

## RHEOLOGICAL PROPERTIES

속성	값	테스트 표준
Melt volume flow rate (MVR), 235°C / 5 kg (455°F / 11 lb)	2 cm <sup>3</sup> /10min	ISO 1133

## MECHANICAL PROPERTIES

속성	DRY / COND VALUE*	테스트 표준
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/m <sup>2</sup>	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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속성	값	테스트 표준
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

## THERMAL PROPERTIES/ELECTRICAL PROPERTIES

속성	DRY / COND VALUE*	테스트 표준
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

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COND: Conditionned.

## OTHER PROPERTIES

속성	값	테스트 표준
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/cm <sup>3</sup>	ISO 1183-1

## PACKAGING

This grade is delivered dried in sealed packaging ready to be processed. Available packaging:

- 26 kg / 55 lb bags
- 455 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

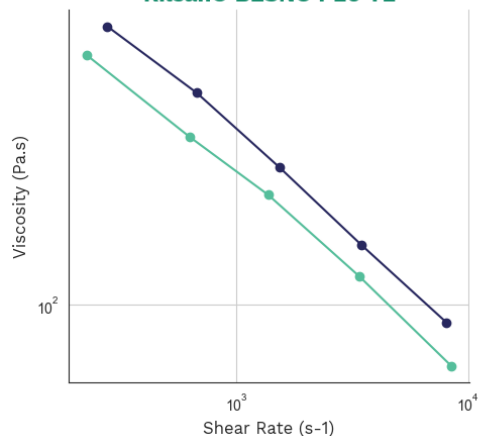
## SPECIAL CHARACTERISTICS

- Bio-based
- Low oligomers

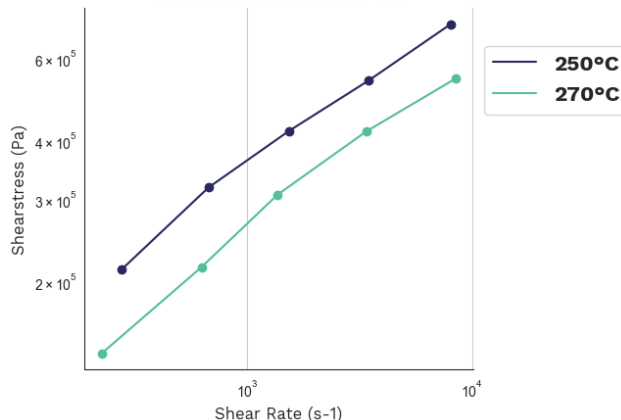
# RILSAN® BESNO P20 TL

## DIAGRAMS

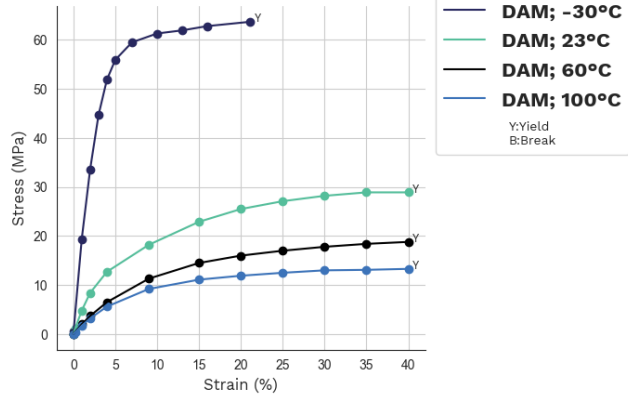
**Viscosity-shear rate**  
Rilsan® BESNO P20 TL



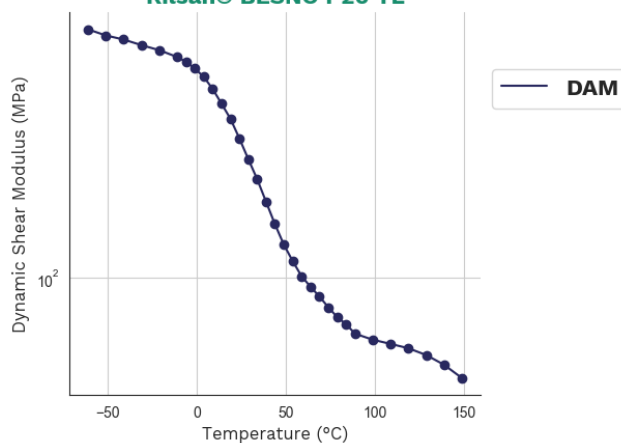
**Shearstress-shear rate**  
Rilsan® BESNO P20 TL



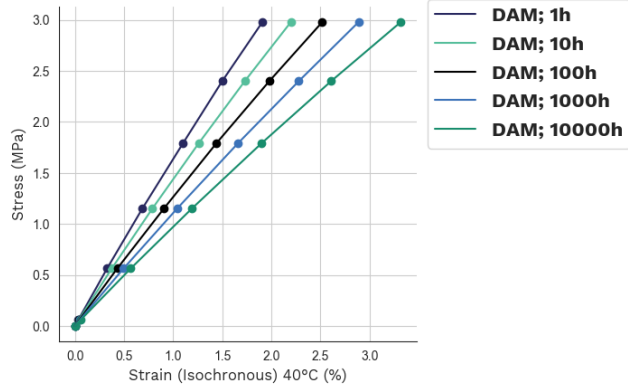
**Stress-strain**  
Rilsan® BESNO P20 TL



**Dynamic Shear modulus-temperature**  
Rilsan® BESNO P20 TL



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



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