

## 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

プロパティ	価値	テスト基準
Melt volume flow rate (MVR), 235°C / 5 kg (455°F / 11 lb)	2 cm <sup>3</sup> /10min	ISO 1133

## MECHANICAL PROPERTIES

プロパティ	DRY / COND VALUE*	テスト基準
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.

# RILSAN® BESNO P20 TL

## THERMAL PROPERTIES

プロパティ	価値	テスト基準
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

プロパティ	DRY / COND VALUE*	テスト基準
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

プロパティ	価値	テスト基準
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

## 包装

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

## 賞味期限

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:

- 典型的な熔融温度 (最小 / 推奨 / 最大) - 射出成形: 230°C / 250°C / 270°C (445°F / 480°F / 520°F)
- 典型的な金型温度 - 射出成形: 20-60°C (70-140°F)
- Drying time and temperature: 80-90°C (175-195°F) / 4-6 hours

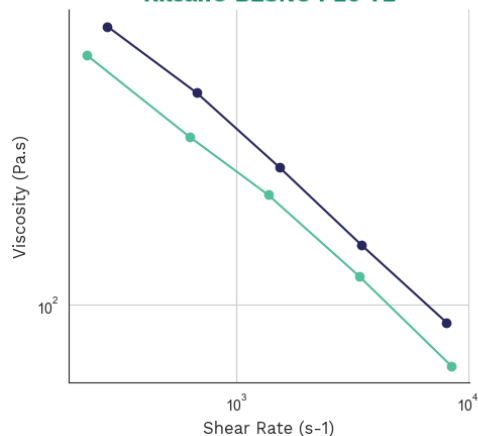
## SPECIAL CHARACTERISTICS

- Bio-based
- Low oligomers

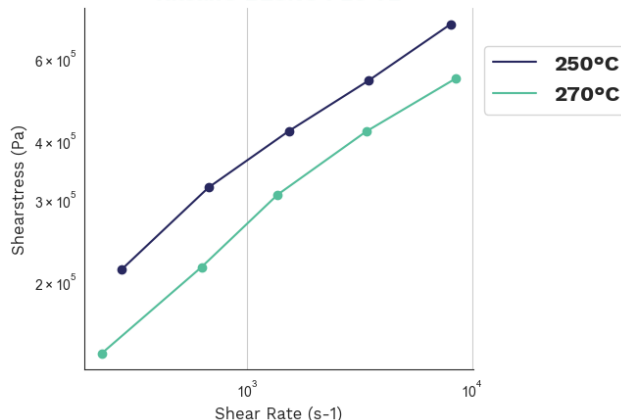
# RILSAN® BESNO P20 TL

## DIAGRAMS

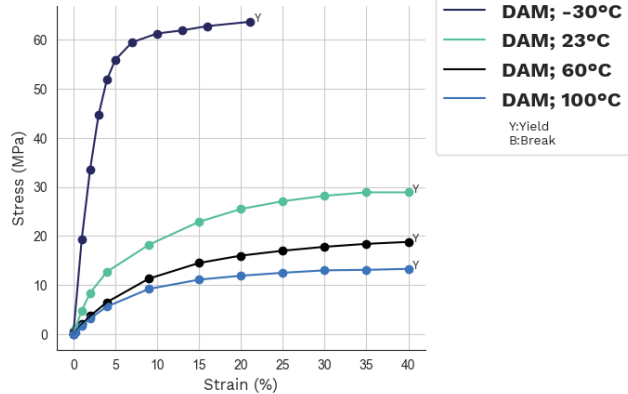
**Viscosity-shear rate**  
Rilsan® BESNO P20 TL



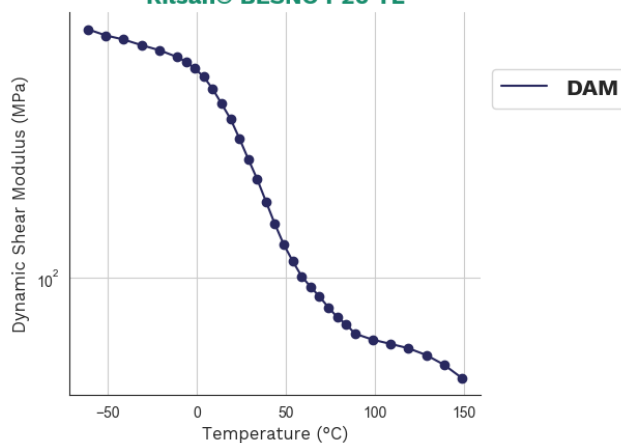
**Shearstress-shear rate**  
Rilsan® BESNO P20 TL



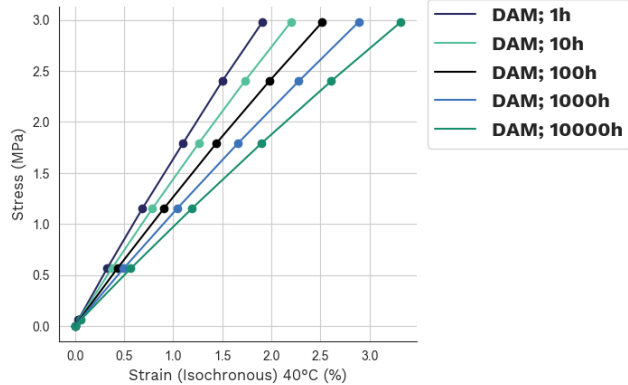
**Stress-strain**  
Rilsan® BESNO P20 TL



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



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



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

Disclaimer - Please consult Arkema's disclaimer regarding the use of Arkema's products on <https://www.arkema.com/global/en/products/product-safety/disclaimer/> which is incorporated herein by reference and made a part hereof.

Arkema France, a French société anonyme registered at the Trade and Companies Register of Nanterre under the number 319 632 790

arkema.com

**ARKEMA**