

## TECHNICAL DATA SHEET

# RILSAN® BMNO P40 TLD

## POLYAMIDE 11 PELLET

RILSAN® BMNO P40 TLD is a polyamide 11 compound. It is produced from a renewable & sustainable source (castor oil). This natural plasticized grade is designed for injection molding

**Designation :** ISO 16396 - PA11-P, M1G1HLR, C12-003

### DESIGNATION

PA11-P

### MAIN APPLICATIONS

- Outdoor - Equipment/Bicycle/Racket
- Accessories
- Industry - Distribution

### DELIVERY FORM

- Pellets

### TRANSFORMATION PROCESSES

- Injection Molding

### ADDITIVES

- Heat Stabilized
- Light Stabilized
- Plasticizer
- Release agent

## RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Shrinkage, Normal (t+24h)	1.4 %	ISO 294-4
Shrinkage, Parallel (t+24h)	1.4 %	ISO 294-4
Melt volume flow rate (MVR), 235°C / 2.16 kg (455°F / 4.4 lb)	35 cm <sup>3</sup> /10min	ISO 1133

## MECHANICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	TEST STANDARD
Hardness, Shore D, 15 s	- / 58	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 / > 50 %	ISO 527-1/-2
Tensile modulus, 23°C (73°F), 1 mm/min	345 / - 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)	- / 6 kJ/m <sup>2</sup>	ISO 179 1eA
Flexural modulus, 23°C (73°F)	- / 315 MPa	ISO 178

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

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## THERMAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Vicat softening temperature, 50N at 50°C/h	140 °C	ISO 306
Heat deflection temperature, 0.45 MPa	130 °C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	45 °C	ISO 75-1/-2
Melting temperature, 10°C/min	181 °C	ISO 11357-1/-3

## ELECTRICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	TEST STANDARD
Surface resistivity, 23°C (73,4°F)	- / 5.0E+11 ohm/sq	IEC 62631-3-2
Volumic (transversal) resistivity, 23°C (73,4°F)	- / 1.0E+9 ohm/m	IEC 62631-3-1
Comparative tracking index, 23°C (73,4°F)	- / 600	IEC 60112
Dielectric stress, 23°C (73,4°F)	- / 23	IEC 60243-1
Relative permittivity, 100Hz	- / 10	IEC 60250
Relative permittivity, 1Mhz	- / 4	IEC 60250
Dissipation factor, 100Hz	- / 1790	IEC 60250
Dissipation factor, 1Mhz	- / 1790	IEC 60250

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## OTHER PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Water absorption, 23°C (73°F), immersion, equilibrium	1.6 %	ISO 62
Specific gravity, 23°C (73°F)	1.05 g/cm <sup>3</sup>	ISO 1183-1

## PACKAGING

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

- 25 kg / 55 lb bags

## 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:

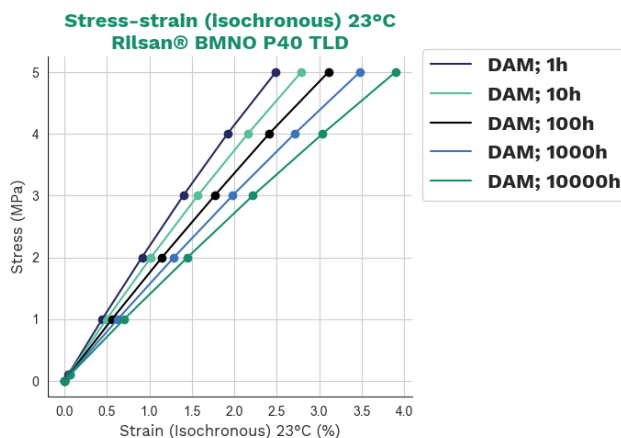
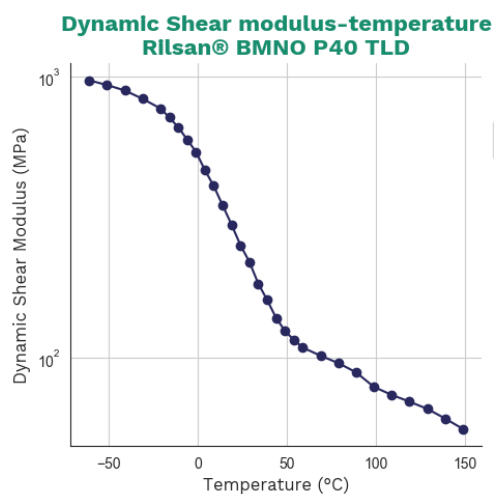
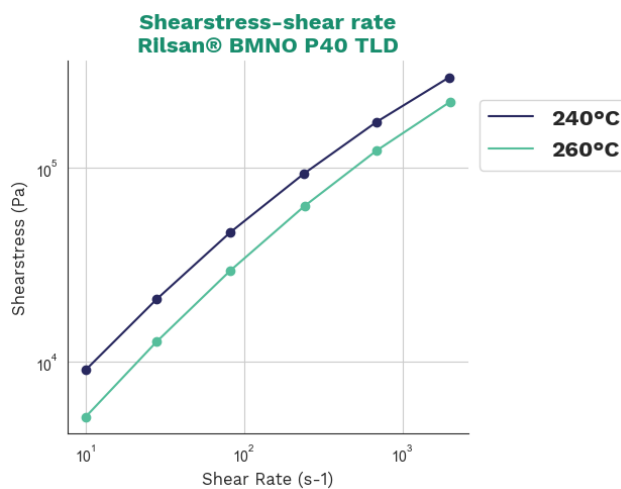
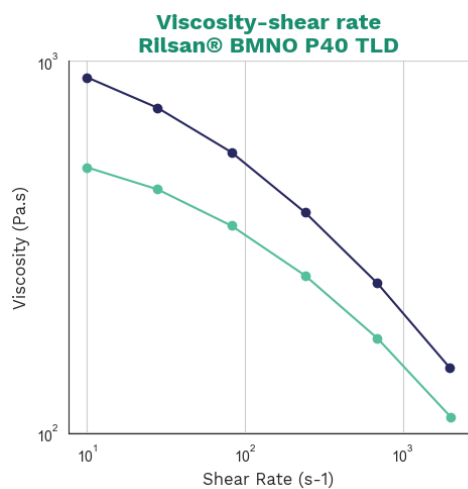
- Typical melt temperature (Min / Recommended / Max) - Injection Molding: 230°C / 250°C / 270°C (445°F / 480°F / 520°F)
- Typical mold temperature - Injection molding: 20-60°C (70-140°F)
- Drying time and temperature: 80-90°C (175-195°F) / 4-6 hours

## SPECIAL CHARACTERISTICS

- Bio-based
- Low oligomers

# RILSAN® BMNO P40 TLD

## DIAGRAMS



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