

TECHNICAL DATA SHEET

RILSAN® BZM 30 O TL

POLYAMIDE 11 PELLET

RILSAN® BZM 30 O TL is a polyamide 11 compound. It is produced from a renewable & sustainable source (castor oil). This natural glass fiber reinforced grade is designed for injection molding.

Designation : ISO 16396 - PA11, GF30, M1G1HLR, C18-070

DESIGNATION

PA11-GF30

MAIN APPLICATIONS

- Industry - Others
- Industry - Distribution
- Auto - Fluid Connectors
- Heavy Truck - Air Brake Connectors

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

- Injection Molding

ADDITIVES

- Heat Stabilized
- Light Stabilized

RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Shrinkage, Parallel (t+24h)	0.2 %	ISO 294-4
Shrinkage, Normal (t+24h)	0.8 %	ISO 294-4
Melt volume flow rate (MVR), 235°C / 5 kg (455°F / 11 lb)	9 cm ³ /10min	ISO 1133

MECHANICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	TEST STANDARD
Tensile modulus, 23°C (73°F), 1 mm/min	6300 / 6300 MPa	ISO 527-1/-2
Flexural modulus, 23°C (73°F)	- / 5560 MPa	ISO 178
Charpy unnotched impact strength, 23°C (73°F)	- / 89 kJ/m ²	ISO 179 1eU
Charpy unnotched impact strength, -30°C (-22°F)	- / 96 kJ/m ²	ISO 179 1eU
Charpy notched impact strength, 23°C (73°F)	- / 24 kJ/m ²	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	- / 17 kJ/m ²	ISO 179 1eA
Hardness, Shore D, 15 s	- / 74	ISO 868

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

RILSAN® BZM 30 0 TL

THERMAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Melting temperature, 10°C/min	189 °C	ISO 11357-1/-3
Vicat softening temperature, 50N at 50°C/h	170 °C	ISO 306
Heat deflection temperature, 0.45 MPa	180 °C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	175 °C	ISO 75-1/-2

ELECTRICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	TEST STANDARD
Surface resistivity, 23°C (73,4°F)	- / 1.0E+14 ohm/sq	IEC 62631-3-2
Volumic (transversal) resistivity, 23°C (73,4°F)	- / 7.0E+11 ohm/m	IEC 62631-3-1
Comparative tracking index, 23°C (73,4°F)	- / 600	IEC 60112
Dielectric stress, 23°C (73,4°F)	- / 45	IEC 60243-1
Relative permittivity, 100Hz	- / 4	IEC 60250
Relative permittivity, 1Mhz	- / 4	IEC 60250
Dissipation factor, 100Hz	- / 578	IEC 60250
Dissipation factor, 1Mhz	- / 578	IEC 60250

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

OTHER PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Specific gravity, 23°C (73°F)	1.25 g/cm ³	ISO 1183-1
Bio-based carbon content, Measured	100 %	ASTM D6866
Moisture absorption, At equilibrium at 23°C (73°F) / 50%HR	0.5 %	ISO 62
Water absorption, 23°C (73°F), immersion, equilibrium	1.4 %	ISO 62

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: 250°C / 270°C / 290°C (480°F / 520°F / 555°F)
- Typical mold temperature - Injection molding: 40-90°C (105-195°F)
- Drying time and temperature: 80-90°C (175-195°F) / 4-6 hours

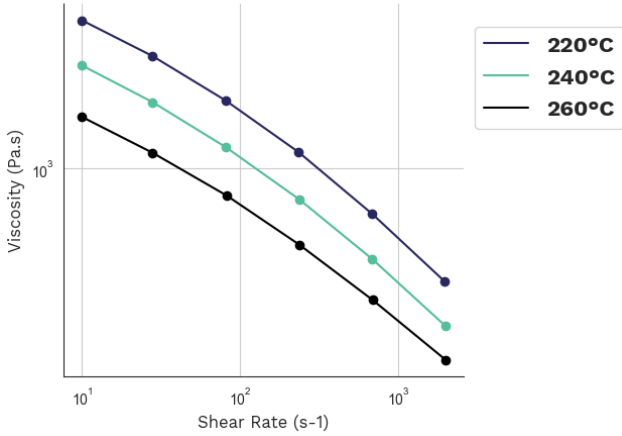
SPECIAL CHARACTERISTICS

- Bio-based
- Low oligomers

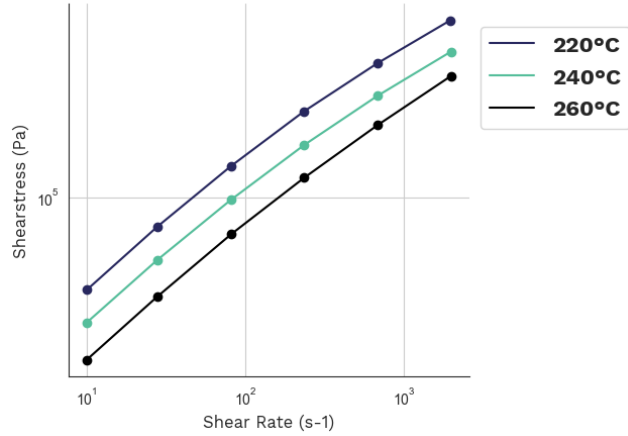
RILSAN® BZM 30 0 TL

DIAGRAMS

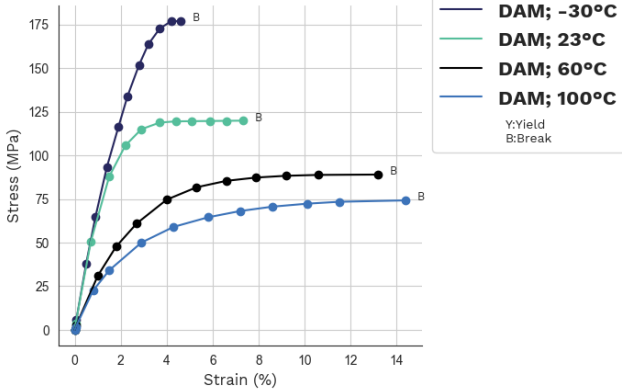
Viscosity-shear rate
Rilsan® BZM 30 0 TL



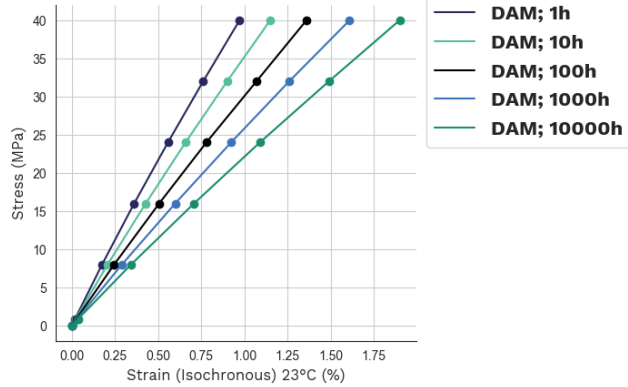
Shearstress-shear rate
Rilsan® BZM 30 0 TL



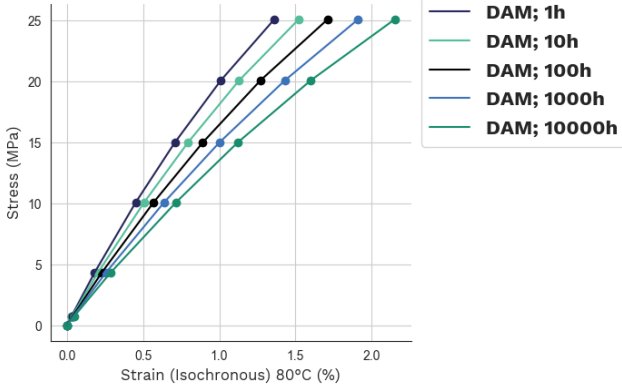
Stress-strain
Rilsan® BZM 30 0 TL



Stress-strain (isochronous) 23°C
Rilsan® BZM 30 0 TL



Stress-strain (isochronous) 80°C
Rilsan® BZM 30 0 TL



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