

TECHNICAL DATA SHEET

RILSAN® BMNO MED

POLYAMIDE 11 PELLET

RILSAN® BMNO MED is a polyamide 11 resin. It is produced from a renewable & sustainable source (castor oil). This natural grade is designed for injection molding and is approved in medical applications. Upon request, letters regarding USP Class VI compliance can be provided.

Designation : ISO 16396 - PA11, M1G1HL, C12-010

DESIGNATION

PA11

MAIN APPLICATIONS

- Health - Consumable - Others
- Health - Consumable - Catheters

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

- Injection Molding

RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Shrinkage, Parallel (t+24h)	1.1 %	ISO 294-4
Shrinkage, Normal (t+24h)	0.9 %	ISO 294-4
Melt volume flow rate (MVR), 235°C / 2.16 kg (455°F / 4.4 lb)	30 cm ³ /10min	ISO 1133

MECHANICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	TEST STANDARD
Hardness, Shore D, 15 s	- / 68	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	- / 5 %	ISO 527-1/-2
Yield stress, 23°C (73°F), 50 mm/min	- / 41 MPa	ISO 527-1/-2
Tensile modulus, 23°C (73°F), 1 mm/min	- / 1280 MPa	ISO 527-1/-2
Charpy notched impact strength, 23°C (73°F)	- / 8.3 kJ/m ²	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	- / 10.5 kJ/m ²	ISO 179 1eA
Flexural modulus, 23°C (73°F)	- / 1140 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
Heat deflection temperature, 0.45 MPa	145 °C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	50 °C	ISO 75-1/-2
Melting temperature, 10°C/min	189 °C	ISO 11357-1/-3

OTHER PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Bio-based carbon content, Measured	98 %	ASTM D6866
Specific gravity, 23°C (73°F)	1.03 g/cm ³	ISO 1183-1

PACKAGING

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

- 20 kg / 44 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: 210°C / 230°C / 260°C (410°F / 445°F / 500°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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