

## TECHNICAL DATA SHEET

# RILSAN® FMNO

## POLYAMIDE 11 PELLET

RILSAN® FMNO is a polyamide 11 resin. . It is produced from a renewable & sustainable source (castor oil). It is unreinforced and designed for injection molding or melt spinning process.

### DESIGNATION

PA11

### MAIN APPLICATIONS

- Yarn - Multifilament - Growth
- Yarn - Bags
- Textile - Others
- Outdoor - Equipment - Growth
- Outdoor - Equipment/Bicycle/Racket
- Outdoor - Apparel
- Accessories
- Others
- Industry - Composites
- CPI - Others
- Monofilament
- Film
- Industry - Distribution
- Polymer Additives
- Auto - Others Injection

### DELIVERY FORM

- Pellets

### TRANSFORMATION PROCESSES

- Injection Molding
- Melt Spinning

## RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Shrinkage, Parallel (t+24h)	1.1 %	ISO 294-4
Shrinkage, Normal (t+24h)	1.1 %	ISO 294-4

## MECHANICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	TEST STANDARD
Flexural modulus, 23°C (73°F)	- / 989 MPa	ISO 178
Tensile modulus, 23°C (73°F), 1 mm/min	1220 / 1200 MPa	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	- / 39 MPa	ISO 527-1/-2
Charpy unnotched impact strength, 23°C (73°F)	No Break / No Break	ISO 179 1eU
Charpy unnotched impact strength, -30°C (-22°F)	No Break / No Break	ISO 179 1eU
Charpy notched impact strength, 23°C (73°F)	- / 7 kJ/m <sup>2</sup>	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	8 / 9 kJ/m <sup>2</sup>	ISO 179 1eA
Hardness, Shore D, 15 s	- / 71	ISO 868

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

## THERMAL PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Heat deflection temperature, 0.45 MPa	129 °C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	42 °C	ISO 75-1/-2
Melting temperature, 10°C/min	189 °C	ISO 11357-1/-3

## OTHER PROPERTIES

PROPERTIES	VALUE	TEST STANDARD
Moisture absorption, At equilibrium at 23°C (73°F) / 50%HR	0.81 %	ISO 62
Water absorption, 23°C (73°F), immersion, equilibrium	1.8 %	ISO 62
Specific gravity, 23°C (73°F)	1.03 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
- 550 kg 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: 200°C / 220°C / 240°C (390°F / 430°F / 465°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

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