+135-3858-6433 (GuangDong)
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RILSAN®

TECHNICAL DATA SHEET

RILSAN® BMNO TLD

POLYAMIDE 11 PELLET

RILSAN® BMNO TLD is a polyamide 11. It is produced from a renewable & sustainable source (castor oil). This natural grade is designed for injection molding and is used to produce automotive fittings & quick connectors.

Designation : ISO 16396 - PA11, M1G1HLR, C12-010

TYPE

PA11

MAIN APPLICATIONS

- Accessories
- Others
- Industry - Distribution
- Other Transportation
- Auto - Fluid Connectors

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

- Injection Molding

ADDITIVES

- Heat Stabilized
- Light Stabilized
- Release agent

RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Shrinkage, Normal (t+24h)	1.0	%	ISO 294-4
Shrinkage, Parallel (t+24h)	1.1	%	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*	UNIT	TEST STANDARD
Tensile modulus, 23°C (73°F), 1 mm/min	1320 / 1250	MPa	ISO 527-1/-2
Yield stress, 23°C (73°F), 50 mm/min	- / 41	MPa	ISO 527-1/-2
Yield strain, 23°C (73°F), 50 mm/min	- / 5	%	ISO 527-1/-2
Nominal strain at break, 23°C (73°F), 50 mm/min	- / > 50	%	ISO 527-1/-2
Flexural modulus, 23°C (73°F)	- / 1140	MPa	ISO 178
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
Charpy notched impact strength, 23°C (73°F)	- / 8.3	kJ/m2	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	- / 10.5	kJ/m2	ISO 179 1eA
Hardness, Shore D, 15 s	- / 68		ISO 868

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

ARKEMA

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THERMAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Melting temperature, 10°C/min	189	°C	ISO 11357-1/-3
Vicat softening temperature, 50N at 50°C/h	160	°C	ISO 306
Heat deflection temperature, 0.45 MPa	145	°C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	50	°C	ISO 75-1/-2

ELECTRICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	UNIT	TEST STANDARD
Surface resistivity, 23°C (73°F)	- / 1.0E+14	Ohm/sq	IEC 62631-3-2
Volumic (transversal) resistivity, 23°C (73°F)	- / 1.0E+12	Ohm.m	IEC 62631-3-1
Comparative tracking index, 23°C (73°F)	- / 600		IEC 60112
Dielectric stress, 23°C (73°F)	- / 30	kV/mm	IEC 60243-1
Relative permittivity, 100Hz	- / 4		IEC 62631-2-1
Relative permittivity, 1Mhz	- / 3		IEC 62631-2-1
Dissipation factor, 100Hz	- / 598	E-4	IEC 62631-2-1
Dissipation factor, 1Mhz	- / 598	E-4	IEC 62631-2-1

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

OTHER PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Specific gravity, 23°C (73°F)	1.03	g/cm³	ISO 1183-1
Moisture absorption, At equilibrium at 23°C (73°F) / 50%HR	0.8	%	ISO 62
Water absorption, 23°C (73°F), immersion, equilibrium	1.9	%	ISO 62

PACKAGING

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: 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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DIAGRAMS