

TECHNICAL DATA SHEET

RILSAMID® AZM 50 BLACK T6LD

POLYAMIDE 12 PELLET

RILSAN® AZM 50 BLACK T6LD is a polyamide 12 compound. This glass fiber reinforced grade is designed for injection molding and is used to produce air brake or automotive fittings & quick connectors, the incorporation of a high amount of glass fibers leading to a very rigid and tough product.

Designation : ISO 16396 - PA12, GF50, M1G1HLR, C16-120

TYPE

PA12-GF50

MAIN APPLICATIONS

- Auto - Fluid Connectors
- Heavy Truck - Air Brake Connectors

DELIVERY FORM

- Pellets

TRANSFORMATION PROCESSES

- Injection Molding

ADDITIVES

- Heat Stabilized
- Light Stabilized
- Release agent

RHEOLOGICAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Melt volume flow rate (MVR), 235°C / 5 kg (455°F / 11 lb)	6	cm³/10min	ISO 1133
Shrinkage, Parallel (t+24h)	0.2	%	ISO 294-4
Shrinkage, Normal (t+24h)	0.7	%	ISO 294-4

MECHANICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	UNIT	TEST STANDARD
Tensile modulus, 23°C (73°F), 1 mm/min	12500 / 12000	MPa	ISO 527-1/-2
Yield stress, 23°C (73°F), 50 mm/min	153 / 145	MPa	ISO 527-1/-2
Yield strain, 23°C (73°F), 50 mm/min	3.8 / 3.6	%	ISO 527-1/-2
Stress at break, 23°C (73°F), 50 mm/min	152 / 144	MPa	ISO 527-1/-2
Nominal strain at break, 23°C (73°F), 50 mm/min	4.6 / 4.9	%	ISO 527-1/-2
Flexural modulus, 23°C (73°F)	- / 8300	MPa	ISO 178
Charpy unnotched impact strength, 23°C (73°F)	84 / 80	kJ/m2	ISO 179 1eU
Charpy unnotched impact strength, -30°C (-22°F)	90 / 84	kJ/m2	ISO 179 1eU
Charpy notched impact strength, 23°C (73°F)	- / 22	kJ/m2	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	15 / 15	kJ/m2	ISO 179 1eA

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

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THERMAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Melting temperature, 10°C/min	175	°C	ISO 11357-1/-3
Thermal degradation temperature, Under air at 10°C/min (1%_wt_Loss)	224	°C	ISO 11358-1
Thermal degradation temperature, Under nitrogen at 10°C/min (1%_wt_Loss)	224	°C	ISO 11358-1

OTHER PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Specific gravity, 23°C (73°F)	1.47	g/cm ³	ISO 1183-1

PACKAGING

Available packaging:

- 25 kg / 55 lb bags

SHELF LIFE

6 months 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: 270°C / 285°C / 300°C (520°F / 545°F / 570°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

REGIONAL AVAILABILITY

Asia Pacific, Europe, Northern America