

# CAMPUS® Datasheet



Rilsamid® AMNO TLD - PA12

ARKEMA

## Product Texts

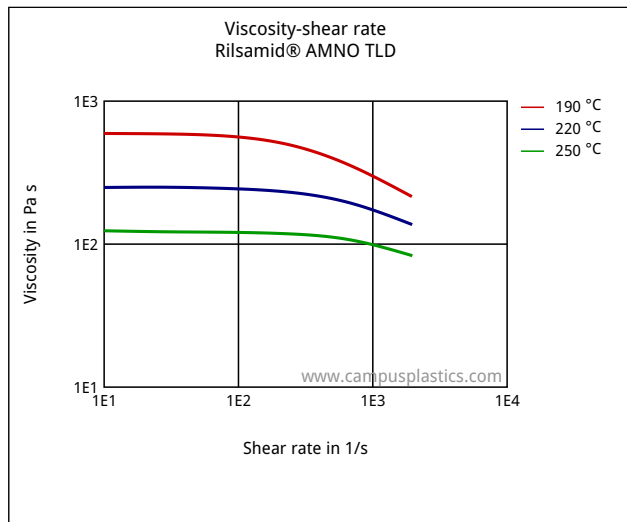
PA12, MHLR, 12-010

Rilsamid® AMNO TLD resin is a natural polyamide. This grade is designed for injection molding.

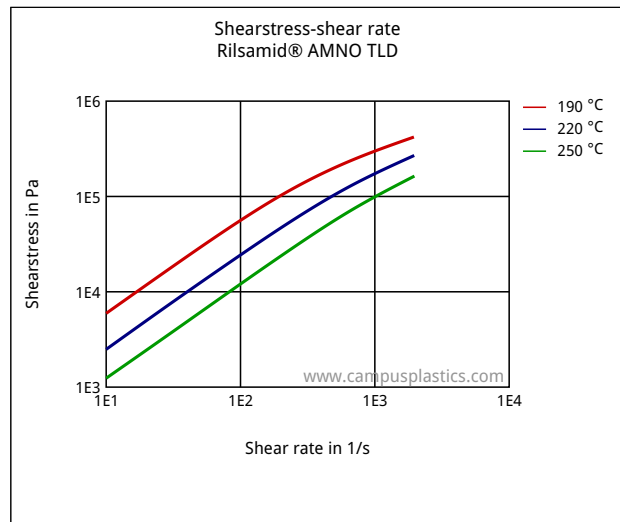
Rheological properties	dry / cond	Unit	Test Standard
Melt volume-flow rate, MVR	57 / *	cm <sup>3</sup> /10min	ISO 1133
Temperature	235 / *	°C	ISO 1133
Load	2.16 / *	kg	ISO 1133
Molding shrinkage, parallel	0.8 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	0.8 / *	%	ISO 294-4, 2577
Mechanical properties	dry / cond	Unit	Test Standard
Tensile modulus	1450 / 1170	MPa	ISO 527-1/-2
Yield stress	42 / 38	MPa	ISO 527-1/-2
Yield strain	7 / 7	%	ISO 527-1/-2
Nominal strain at break	>50 / >50	%	ISO 527-1/-2
Charpy notched impact strength, +23°C	- / 9	kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	- / 5	kJ/m <sup>2</sup>	ISO 179/1eA
Thermal properties	dry / cond	Unit	Test Standard
Melting temperature, 10°C/min	178 / *	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.80 MPa	55 / *	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	135 / *	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	142 / *	°C	ISO 306
Coeff. of linear therm. expansion, parallel	130 / *	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	120 / *	E-6/K	ISO 11359-1/-2
Burning behavior at 1.5 mm nominal thickness	HB / *	class	IEC 60695-11-10
Burning behavior at thickness h	V-2 / *	class	IEC 60695-11-10
Thickness tested (h)	3.2 / *	mm	IEC 60695-11-10
Yellow Card available	Yes / *	-	-
Oxygen index	22 / *	%	ISO 4589-1/-2
Electrical properties	dry / cond	Unit	Test Standard
Relative permittivity, 100Hz	4 / -	-	IEC 62631-2-1
Relative permittivity, 1MHz	3 / -	-	IEC 62631-2-1
Dissipation factor, 100Hz	779 / -	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	290 / -	E-4	IEC 62631-2-1
Volume resistivity	- / 1E12	Ohm*m	IEC 62631-3-1
Surface resistivity	* / 1E14	Ohm	IEC 62631-3-2
Electric strength	- / 30	kV/mm	IEC 60243-1
Comparative tracking index	* / 600	-	IEC 60112
Other properties	dry / cond	Unit	Test Standard
Water absorption	1.8 / *	%	Sim. to ISO 62
Humidity absorption	0.7 / *	%	Sim. to ISO 62
Density	1020 / 1020	kg/m <sup>3</sup>	ISO 1183

**Diagrams**

**Viscosity-shear rate**



**Shearstress-shear rate**



**Characteristics**

**Processing**

Injection Molding

**Delivery form**

Pellets

**Additives**

Release agent

**Special Characteristics**

Light stabilized or stable to light, Heat stabilized or stable to heat

**Regional Availability**

North America, Europe, Asia Pacific, South and Central America, Near East/Africa

**Other text information**

**Injection molding**

**Processing conditions, Injection:**

- Typical melt temperature (Min / Recommended / Max) : 230°C / 270°C / 290°C.
- Mold temperature : 20 - 40°C
- Drying time and temperature (only necessary for bags opened for more than two hours) : 4-6 hours at 80 - 90°C.

**Chemical Media Resistance**

**Acids**

- 😊 Acetic Acid (5% by mass) (23°C)
- 😊 Citric Acid solution (10% by mass) (23°C)
- 😊 Lactic Acid (10% by mass) (23°C)
- 🚫 Hydrochloric Acid (36% by mass) (23°C)
- 🚫 Nitric Acid (40% by mass) (23°C)
- 🚫 Sulfuric Acid (38% by mass) (23°C)
- 😊 Sulfuric Acid (5% by mass) (23°C)
- 🚫 Chromic Acid solution (40% by mass) (23°C)

**Bases**

- 😊 Sodium Hydroxide solution (35% by mass) (23°C)

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- ☺ Sodium Hydroxide solution (1% by mass) (23°C)
- ☺ Ammonium Hydroxide solution (10% by mass) (23°C)

#### Alcohols

- ☺ Methanol (23°C)
- ☺ Ethanol (23°C)

#### Hydrocarbons

- ☺ n-Hexane (23°C)
- ☺ Toluene (23°C)

#### Ketones

- ☺ Acetone (23°C)

#### Mineral oils

- ☺ SAE 10W40 multigrade motor oil (23°C)
- ☺ SAE 10W40 multigrade motor oil (130°C)
- ☺ SAE 80/90 hypoid-gear oil (130°C)
- ☺ Insulating Oil (23°C)

#### Standard Fuels

- ☺ ISO 1817 Liquid 1 (60°C)
- ☺ ISO 1817 Liquid 2 (60°C)
- ☺ ISO 1817 Liquid 3 (60°C)
- ☺ ISO 1817 Liquid 4 (60°C)
- ☺ Standard fuel without alcohol (pref. ISO 1817 Liquid C) (23°C)
- ☺ Standard fuel with alcohol (pref. ISO 1817 Liquid 4) (23°C)
- ☺ Diesel fuel (pref. ISO 1817 Liquid F) (23°C)
- ☺ Diesel fuel (pref. ISO 1817 Liquid F) (90°C)
- ☺ Diesel fuel (pref. ISO 1817 Liquid F) (>90°C)

#### Salt solutions

- ☺ Sodium Chloride solution (10% by mass) (23°C)
- ☺ Sodium Hypochlorite solution (10% by mass) (23°C)
- ☺ Zinc Chloride solution (50% by mass) (23°C)

#### Other

- ☺ Ethyl Acetate (23°C)
- ☺ Hydrogen peroxide (23°C)
- ☺ DOT No. 4 Brake fluid (130°C)
- ☺ Ethylene Glycol (50% by mass) in water (108°C)

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