Rilsan® BESVO A MED

PA11 ARKEMA

PA11, E, 22-010
Rilsan® BESVO A MED resin is a polyamide 11 produced from a renewable source. This natural grade, dedicated to extrusion, contains a negligible amount of oligomers. **Rilsan® BESVO A MED resin** offers the highest quality and it is specially designed to meet the stringent requirements of the medical applications such as minimally invasive devices.

Upon request letters regarding USP Class VI compliance can be provided.

Main applications:

- Nutritional bags
- Catheters

Packaging:
This grade is delivered dried in sealed packaging (25 kg bags) ready to be processed.

Shelf Life:
Two years from the delivery. For any use above this limit, please refer to our technical services.

Rheological properties	dry / cond	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	6 / *	cm³/10min	ISO 1133
Temperature	235 / *	°C	-
Load	10 / *	kg	-
Molding shrinkage, parallel	1.1 / *	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1 / *	%	ISO 294-4, 2577

Mechanical Properties	dry / cond	Unit	Test Standard
ISO Data			
Tensile Modulus	- / 1180	MPa	ISO 527
Yield stress	- / 36	MPa	ISO 527
Yield strain	- / 5	%	ISO 527
Nominal strain at break	- / >50	%	ISO 527
Notched Impact Strength (Charpy), +23°C	- / 15	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	- / 13	kJ/m²	ISO 179/1eA
Shore Hardness D (15s)	71 / -	-	ISO 868

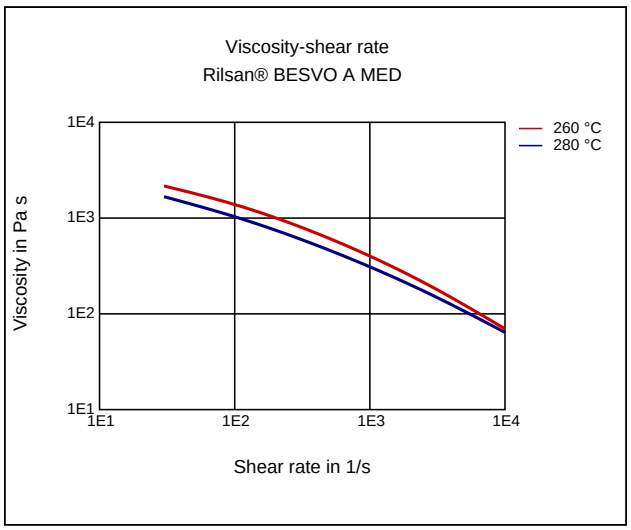
Thermal Properties	dry / cond	Unit	Test Standard
ISO Data			
Melting Temperature (10°C/min)	186 / *	°C	ISO 11357-1/-3
Oxygen index	25 / *	%	ISO 4589-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Electric Strength	- / 30	kV/mm	IEC 60243-1

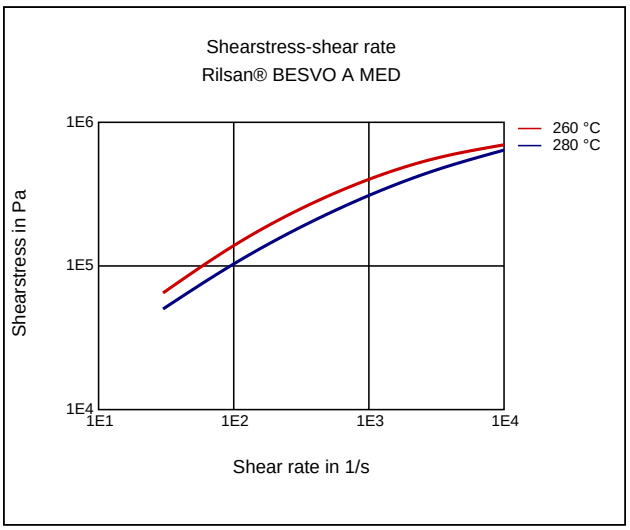
Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	1.9 / *	%	Sim. to ISO 62
Density	1030 / 1030	kg/m³	ISO 1183
Biobased carbon content	100	%	-

Diagrams

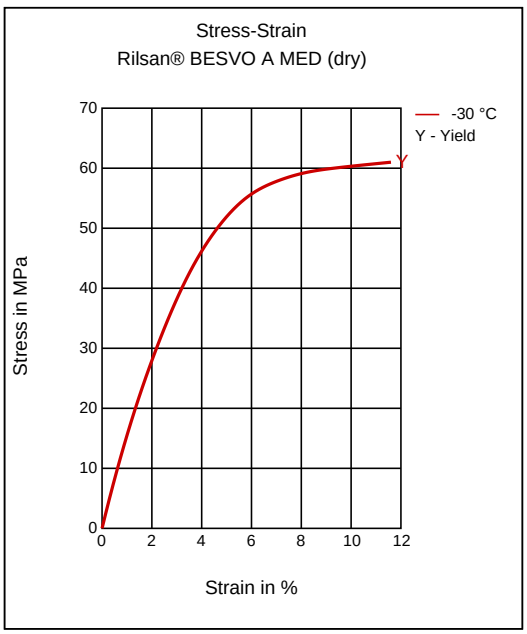
Viscosity-shear rate



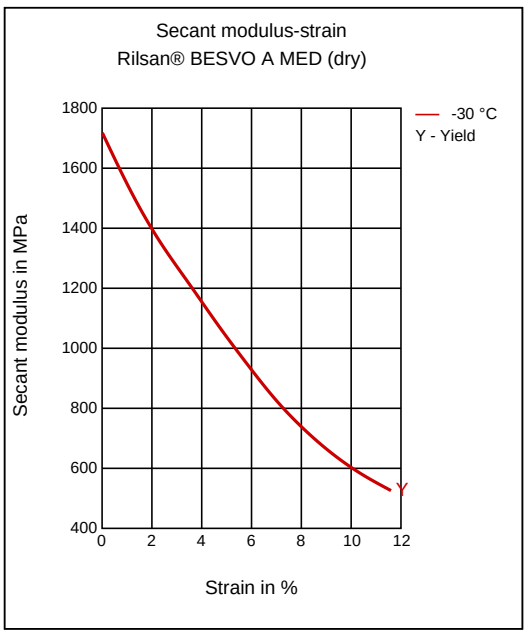
Shearstress-shear rate



Stress-strain



Secant modulus-strain



Characteristics

Processing

Injection Molding, Film Extrusion, Profile Extrusion, Other Extrusion

Delivery form

Pellets

Certifications

Contains renewable resources, Medical, US Pharmacopeia Class VI Approved

Applications

Medical

Other Extrusion

Processing conditions:

- Typical melt temperature (Min / Recommended / Max) : 230 °C / 250 °C / 280 °C.

- Drying time and temperature (only necessary for bags opened for more than two hours) : 4-6 hours at 65-80°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)
- ✔ 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)

Disclaimer