Rilsan® Clear G170 MED

PA* ARKEMA

PA,,MT,C12-020

Rilsan® Clear G170 MED is a high performance transparent polyamide resin with outstanding thermal resistance. This grade offers the highest quality and is specifically designed to meet the stringent requirements of the medical applications. Upon request letters regarding USP class VI compliance can be provided.

Main applications:

- Medical perfusion tube accessories
- Breathing mask

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	2 / *	cm³/10min	ISO 1133
Temperature	275 / *	°C	-
Load	2.16 / *	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	2100 / 2020	MPa	ISO 527
Yield stress	76 / 74	MPa	ISO 527
Yield strain	8 / 9	%	ISO 527
Nominal strain at break	>50 / >50	%	ISO 527
Notched Impact Strength (Charpy), +23°C	- / 13	kJ/m²	ISO 179/1eA
Notched Impact Strength (Charpy), -30°C	- / 13	kJ/m²	ISO 179/1eA
Shore Hardness D (15s)	79 / -	-	ISO 868

Thermal Properties	dry / cond	Unit	Test Standard
ISO Data			
Glass Transition Temperature (10°C/min)	168 / *	°C	ISO 11357-1/-2
Temp. of deflection under load (1.80 MPa)	136 / *	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	150 / *	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	160 / *	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	70 / *	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nom. Thickn.	V-2 / *	class	UL 94
Thickness tested	1.6 / *	mm	-
Burning Behav. at thickness h	HB / *	class	UL 94
Thickness tested	0.8 / *	mm	-
Oxygen index	26 / *	%	ISO 4589-1/-2

Electrical Properties	dry / cond	Unit	Test Standard
ISO Data			
Volume Resistivity	- / 1E11	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 1E12	Ohm	IEC 62631-3-2
Electric Strength	- / 50	kV/mm	IEC 60243-1
Comparative tracking index	- / 600	-	IEC 60112

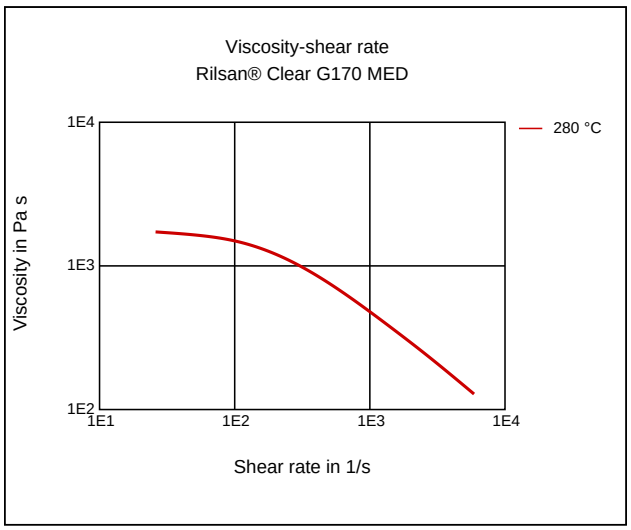
Other Properties	dry / cond	Unit	Test Standard
ISO Data			
Water Absorption	3.8 / *	%	Sim. to ISO 62

Humidity absorption	1.7 / *	%	Sim. to ISO 62
Density	1050 / 1050	kg/m³	ISO 1183

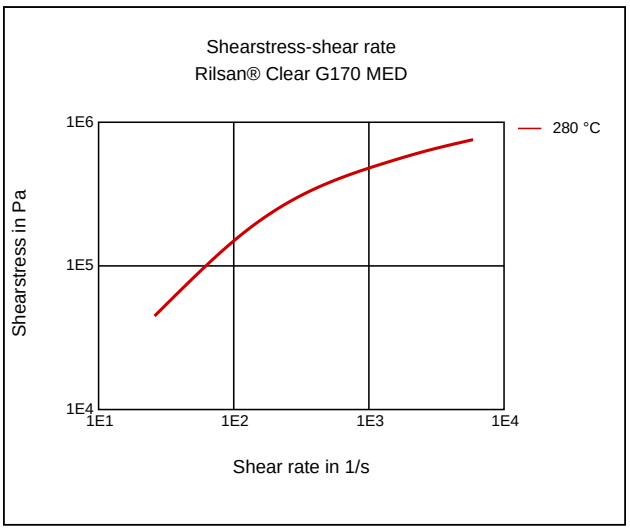
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	90	°C	-
Pre-drying - Time	4 - 6	h	-
Melt temperature	270 - 310	°C	-
Mold temperature	40 - 80	°C	-

Diagrams

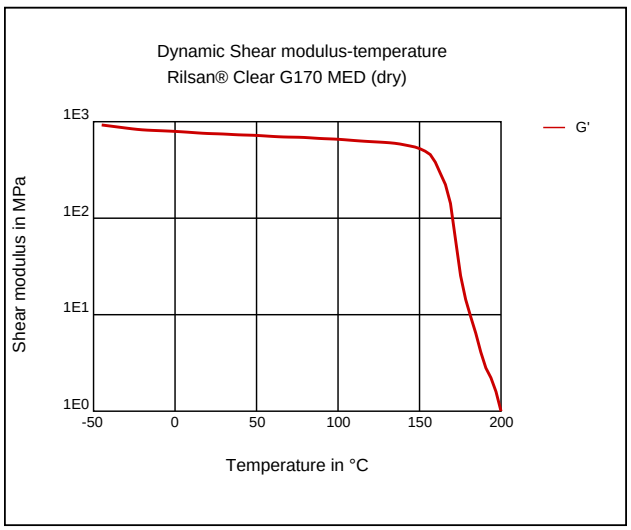
Viscosity-shear rate



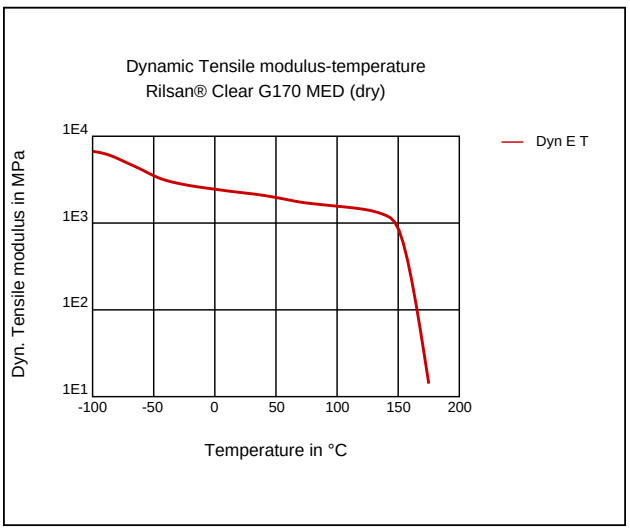
Shearstress-shear rate



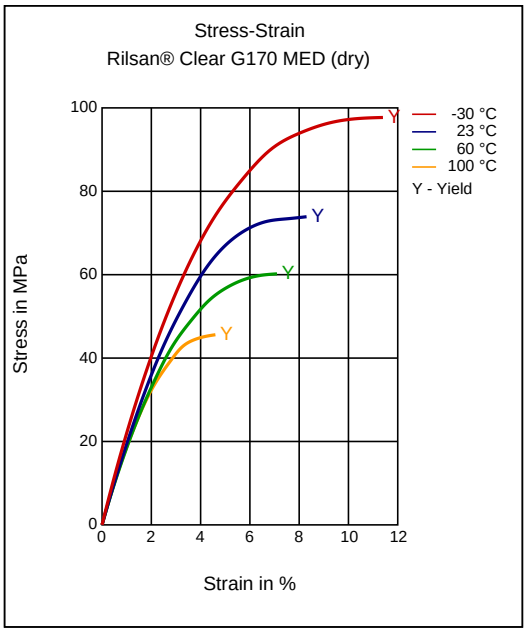
Dynamic Shear modulus-temperature



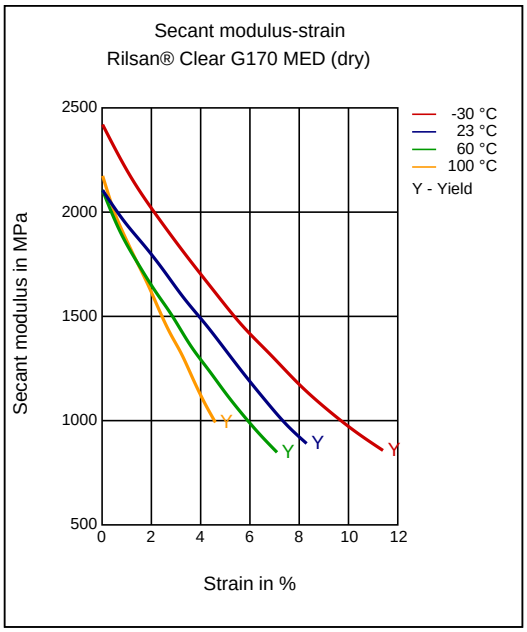
Dynamic Tensile Modulus-temperature



Stress-strain



Secant modulus-strain



Characteristics

Processing
Injection Molding, Other Extrusion

Special Characteristics
Transparent

Delivery form
Pellets

Certifications
Medical, US Pharmacopeia Class VI Approved

Injection Molding

Injection molding conditions:

- Typical melt temperature (Min / Recommended / Max) : 270°C / 290°C / 310°C.
- Typical mold temperature : 40 - 80 °C.
- Dyring time and temperature (only for bags opened for more than two hours): 4 - 6 hours at 90°C.

Film Extrusion

Extrusion conditions:

- Typical melt temperature (Min / Recommended / Max) : 270°C / 280°C / 290°C.
- Dyring time and temperature (only for bags opened for more than two hours): 4 - 6 hours at 90°C.

Disclaimer

Liability Exclusion
These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

Any information given on the chemical and physical characteristics of our products, including, without limitation, technical advice on applications, whether verbally, in writing or by testing the product, is given to the best of our knowledge and in good faith and does not exempt the buyer from carrying out their own investigations and tests in order to ascertain the product's specific suitability for the purpose intended.

The buyer is solely responsible for confirming the suitability of the product for a particular application, its utilization and processing and must observe any applicable laws and government regulations. **NO EXPRESS OR IMPLIED RECOMMENDATION OR WARRANTY IS GIVEN WITH REGARD TO THE SUITABILITY OF THE PRODUCT FOR A PARTICULAR APPLICATION, SUCH AS, BUT NOT LIMITED TO, SAFETY-CRITICAL COMPONENTS OR SYSTEMS.**

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Important: irrespective of product type or designation, ALBIS does not recommend or support the use of any products it supplies which fall into the following medical, pharmaceutical or diagnostic application categories:

- risk class III applications according to EU directive 93/42/EEC
- any bodily implant application for greater than 30 days

- any critical component in any medical device that supports or sustains human life.

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