RILSAN®
CLEAR G170 MED

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.

PROPERTIES	DRY / COND	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	2 / *	cm³/10 min	ISO 1133
Temperature	275 / *	°C	-
	527 / *	°F	
Load	2.16 / *	kg	-
	4.76 / *	lb	
Molding Shrinkage, parallel	1.1 / *	%	ISO 294-4, 2577
Molding Shrinkage, normal	1.1 / *	%	ISO 294-4, 2577
MECHANICAL PROPERTIES			
Tensile Modulus	2100 / 2020	MPa	ISO 527-1/-2
	305000 / 293000	psi	
Yield Stress	76 / 74	MPa	ISO 527-1/-2
	11000 / 10700	psi	
Yield Strain	8 / 9	%	ISO 527-1/-2
Nominal Strain at Break	>50 / >50	%	ISO 527-1/-2
Shore D Hardness, after 15 s	79 / *	-	ISO 868
Charpy Impact Strength, +23°C	- / No Break	kJ/m²	ISO 179/1eU
Charpy Impact Strength, -30°C	No Break / No Break	kJ/m²	ISO 179/1eU
Charpy Notched Impact Strength, +23°C	- / 13	kJ/m²	ISO 179/1eA
	- / 6.18	ftlb/in²	
Charpy Notched Impact Strength, -30°C	- / 13	kJ/m²	ISO 179/1eA
	- / 6.18	ftlb/in²	
THERMAL PROPERTIES			
Glass Transition Temperature, 10°C/min	168 / *	°C	ISO 11357-1/-2
	334 / *	°F	
Temp. of Deflection Under Load, 1.80 MPa	136 / *	°C	ISO 75-1/-2
	277 / *	°F	
Temp. of Deflection Under Load, 0.45 MPa	150 / *	°C	ISO 75-1/-2
	302 / *	°F	

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Vicat Softening Temperature, 50°C/h 50N	160 / *	°C	ISO 306
	320 / *	°F	
Coeff. of Linear Thermal Expansion, parallel	70 / *	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nominal Thickness	V-2 / *	class	IEC 60695-11-10
Thickness Tested	1.6 / *	mm	-
	0.0630 / *	in	
Burning Behav. at Thickness h	HB / *	class	IEC 60695-11-10
Thickness Tested	0.8 / *	mm	-
	0.0315 / *	in	
Oxygen Index	26 / *	%	ISO 4589-1/-2
ELECTRICAL PROPERTIES			
Volume Resistivity	- / 1E11	Ohm*m	IEC 62631-3-1
Surface Resistivity	* / 1E12	Ohm	IEC 62631-3-2
Dielectric (Electric) Strength	- / 50	kV/mm	IEC 60243-1
	- / 1270	kV/in	
Comparative Tracking Index	* / 600	-	IEC 60112
OTHER PROPERTIES			
Water Absorption, 23°C, immersion, equilibrium	3.8 / *	%	ISO 62
Humidity Absorption, 23°C, RH50%, equilibrium	1.7 / *	%	ISO 62
Density	1050 / 1050	kg/m³	ISO 1183
	1.05 / 1.05	g/cm³	
OPTICAL PROPERTIES			
Luminous Transmittance	91	%	ISO 13468-1, -2

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:

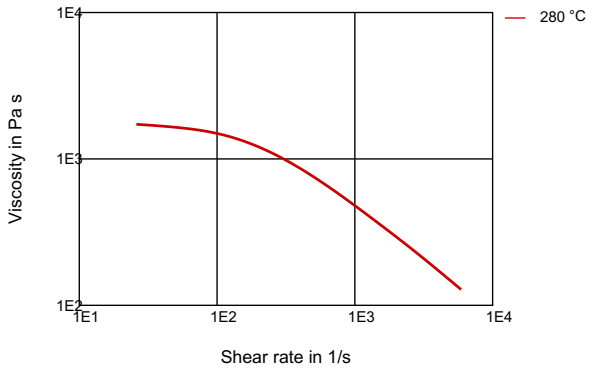
Two years from the delivery. For any use above this limit, please refer to our technical services.

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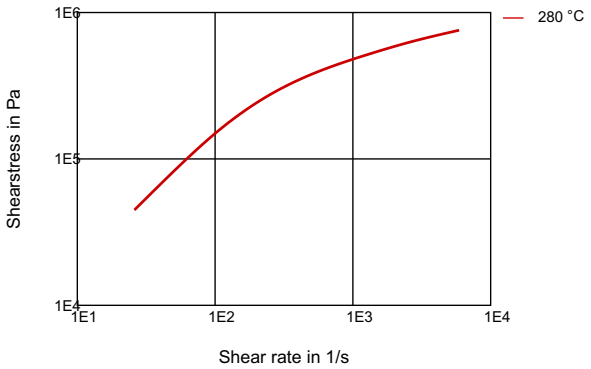
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DIAGRAMS

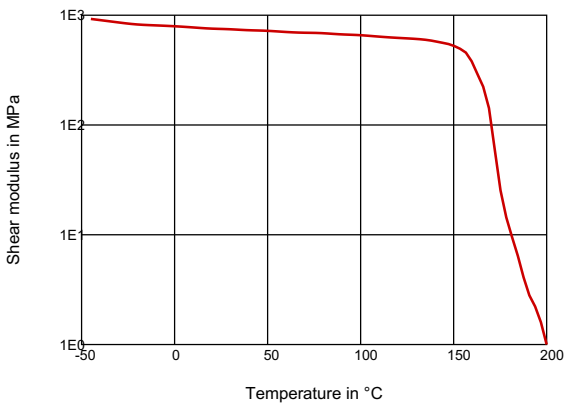
VISCOSITY-SHEAR RATE



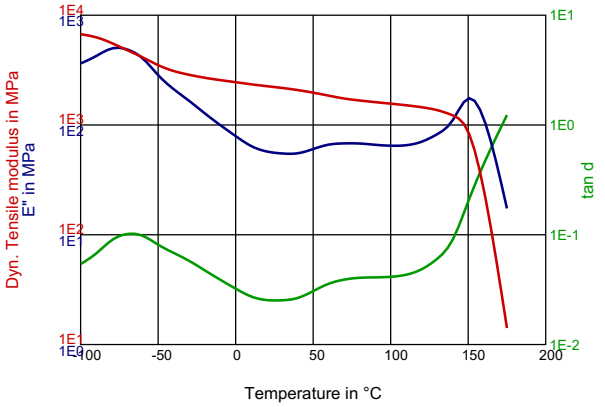
SHEARSTRESS-SHEAR RATE



DYN. SHEAR MODULUS-TEMPERATURE



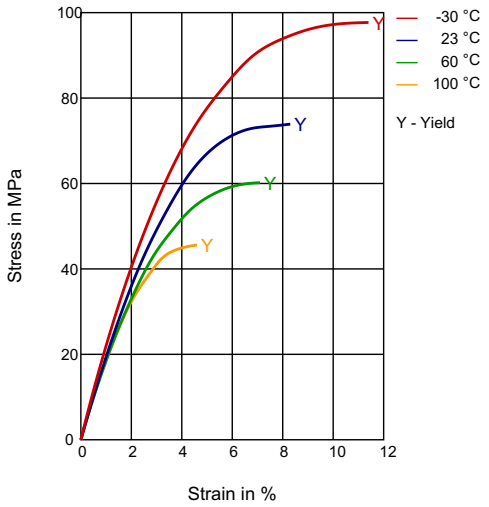
DYN. TENSILE MODULUS-TEMPERATURE



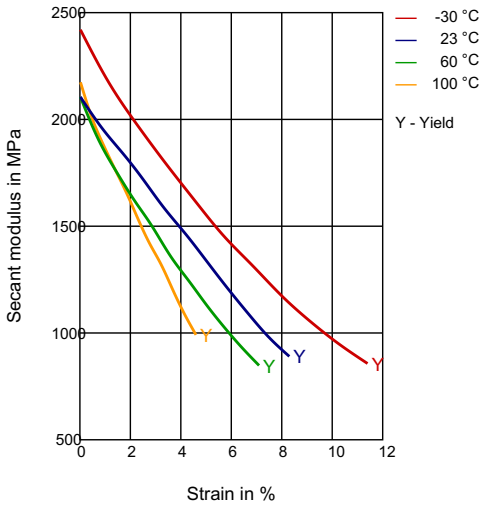
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STRESS-STRAIN



SECANT MODULUS-STRAIN



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.

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.

PROCESSING

Injection Molding, Other Extrusion

DELIVERY FORM

Pellets

SPECIAL CHARACTERISTICS

Transparent

REGIONAL AVAILABILITY

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

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