RILSAN®
CLEAR G170

PA,,MT,C12-020

Rilsan® Clear G170 is a high performance transparent polyamide resin with outstanding thermal resistance. This grade has been designed for injection molding applications.

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	
Vicat Softening Temperature, 50°C/h 50N	160 / *	°C	ISO 306
	320 / *	°F	

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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	
Yellow Card available	yes / *	-	-
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:

- Coffee machine, Fuel filter container, Inner layer of fiber optic, Copper telephone cables resistant to rodents, power cables resistant to rodents.
- Note: This grade is not recommended by Arkema for usage in medical applications. For such applications Rilsan® Clear G170 MED should be used.

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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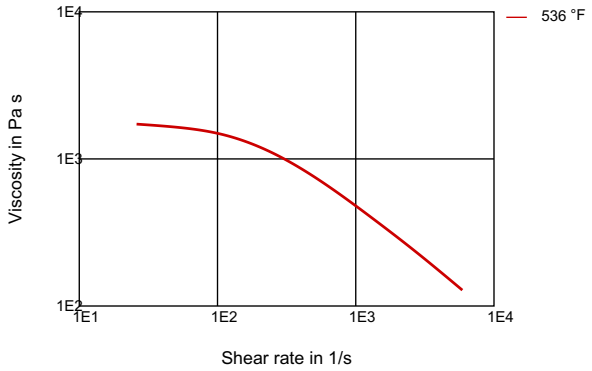
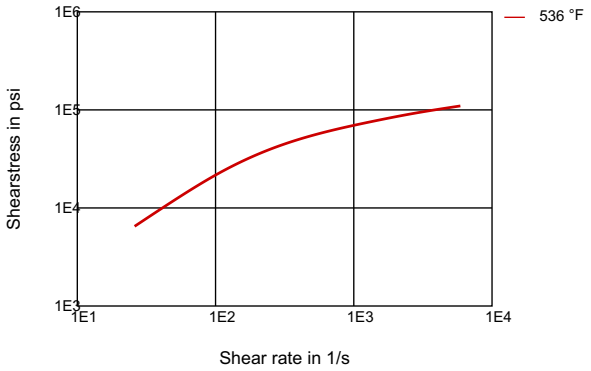
DIAGRAMS

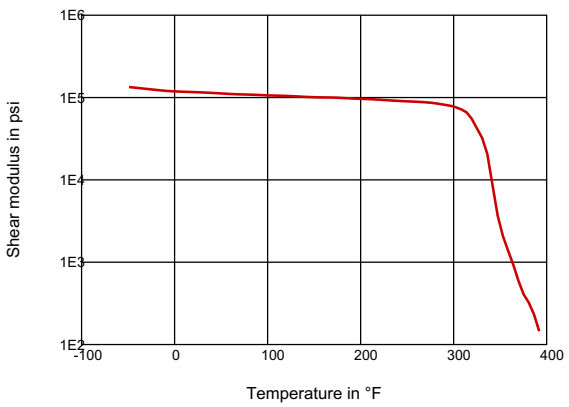
VISCOSITY-SHEAR RATE



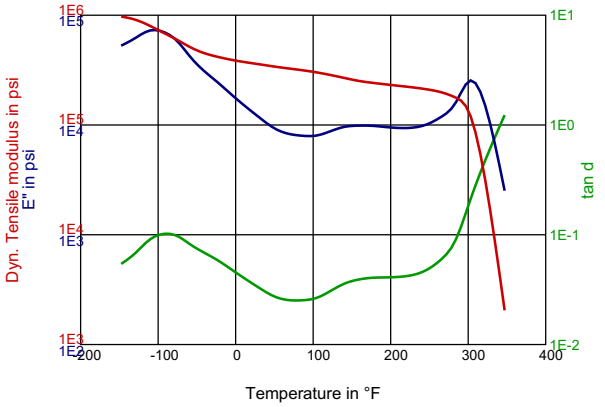
SHEARSTRESS-SHEAR RATE



DYN. SHEAR MODULUS-TEMPERATURE



DYN. TENSILE MODULUS-TEMPERATURE



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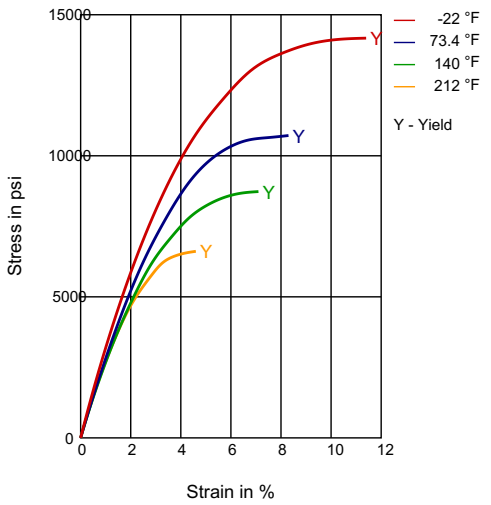
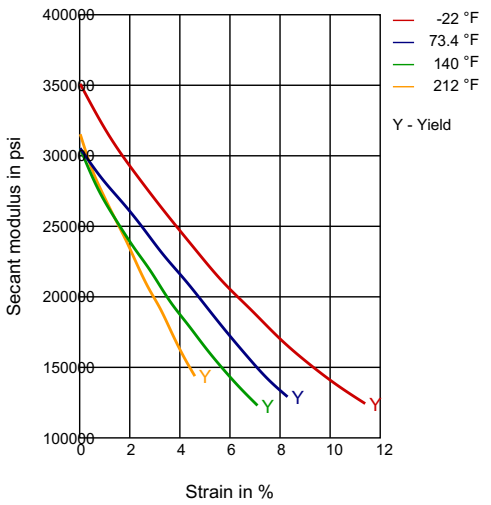
STRESS-STRAIN



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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