

Product Texts

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.

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.

Processing/Physical Characteristics	dry / cond	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	2 / *	cm ³ /10min	ISO 1133
Temperature	275 / *	°C	-
Load	2.16 / *	kg	-
^[C] Molding shrinkage, parallel	1.1 / *	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.1 / *	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	2100 / 2020	MPa	ISO 527
^[C] Yield stress	76 / 74	MPa	ISO 527
^[C] Yield strain	8 / 9	%	ISO 527
^[C] Nominal strain at break	>50 / >50	%	ISO 527
^[C] Charpy notched impact strength, +23°C	- / 13	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	- / 13	kJ/m ²	ISO 179/1eA
^[C] Shore D hardness	79 / *	-	ISO 7619-1

[C]: CAMPUS

Thermal properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Glass transition temperature, 10°C/min	168 / *	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 1.80 MPa	136 / *	°C	ISO 75-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	150 / *	°C	ISO 75-1/-2
^[C] Vicat softening temperature, B	160 / *	°C	ISO 306
^[C] Coeff. of linear therm. expansion, parallel	70 / *	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	V-2 / *	class	IEC 60695-11-10
Thickness tested	1.6 / *	mm	-
Yellow Card available	yes / *	-	-
^[C] Oxygen index	26 / *	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	dry / cond	Unit	Test Standard
ISO Data			
^[C] Volume resistivity	- / 1E11	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	* / 1E12	Ohm	IEC 62631-3-2
^[C] Electric strength	- / 50	kV/mm	IEC 60243-1
^[C] Comparative tracking index	* / 600	-	IEC 60112

[C]: CAMPUS

Other properties	dry / cond	Unit	Test Standard
^[C] Water absorption	3.8 / *	%	Sim. to ISO 62
^[C] Humidity absorption	1.7 / *	%	Sim. to ISO 62
^[C] Density	1050 / 1050	kg/m ³	ISO 1183

[C]: CAMPUS

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	-

Characteristics

Processing

Injection Molding, Other Extrusion

Special Characteristics

Transparent

Delivery form

Pellets

Regional Availability

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

Other text information

Injection molding

Injection molding conditions:

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