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RILSAN®
BZM 23 G9

PA11, MRS, 18-060, GF 23 + CD

Rilsan® BZM 23 G9 is a fiberglass reinforced polyamide 11 produced from a renewable source. This black grade with improved friction properties is designed for injection molding.

The percentage of renewable carbon according to ASTM D 6866 (calculated) is **>86%.**

PROPERTIES	DRY / COND	UNIT	TEST STANDARD
RHEOLOGICAL PROPERTIES			
Melt Volume-Flow Rate	9 / *	cm³/10min	ISO 1133
Temperature	235 / *	°C	-
	455 / *	°F	
Load	5 / *	kg	-
	11 / *	lb	
MECHANICAL PROPERTIES			
Tensile Modulus	- / 6100	MPa	ISO 527-1/-2
	- / 885000	psi	
Stress at Break	- / 108	MPa	ISO 527-1/-2
	- / 15700	psi	
Strain at Break	- / 5	%	ISO 527-1/-2
Shore D Hardness	74 / *	-	ISO 868
Charpy Impact Strength, +23°C	- / 74	kJ/m²	ISO 179/1eU
	- / 35.2	ftlb/in²	
Charpy Impact Strength, -30°C	- / 83	kJ/m²	ISO 179/1eU
	- / 39.5	ftlb/in²	
Charpy Notched Impact Strength, +23°C	- / 13	kJ/m²	ISO 179/1eA
	- / 6.18	ftlb/in²	
Charpy Notched Impact Strength, -30°C	- / 10	kJ/m²	ISO 179/1eA
	- / 4.76	ftlb/in²	
THERMAL PROPERTIES			
Melting Temperature, 10°C/min	186 / *	°C	ISO 11357-1/-3
Temp. of Deflection Under Load, 1.80 MPa	170 / *	°C	ISO 75-1/-2
	338 / *	°F	
Temp. of Deflection Under Load, 0.45 MPa	178 / *	°C	ISO 75-1/-2
	352 / *	°F	

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Vicat Softening Temperature, 50°C/h 50N	170 / *	°C	ISO 306
	338 / *	°F	
Coeff. of Linear Thermal Expansion, parallel	50 / *	E-6/K	ISO 11359-1/-2
Burning Behav. at 1.5 mm Nominal Thickness	HB / *	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	3.2 / *	mm	-
	0.1260 / *	in	
Oxygen Index	22 / *	%	ISO 4589-1/-2
ELECTRICAL PROPERTIES			
Relative Permittivity, 100Hz	5 / -	-	IEC 60250
Relative Permittivity, 1MHz	5 / -	-	IEC 60250
Dissipation Factor, 100Hz	334 / -	E-4	IEC 60250
Dissipation Factor, 1MHz	208 / -	E-4	IEC 60250
Volume Resistivity	- / 2E11	Ohm*m	IEC 60093
Surface Resistivity	* / 6E12	Ohm	IEC 60093
Dielectric (Electric) Strength	- / 22	kV/mm	IEC 60243-1
	- / 559	kV/in	
Comparative Tracking Index	* / 300	-	IEC 60112
OTHER PROPERTIES			
Water Absorption	1.2 / *	%	Sim. to ISO 62
Density	1220 / 1220	kg/m³	ISO 1183
	1.22 / 1.22	g/cm³	
%Bio-Based	86	-	ASTM D6866

MAIN APPLICATIONS:

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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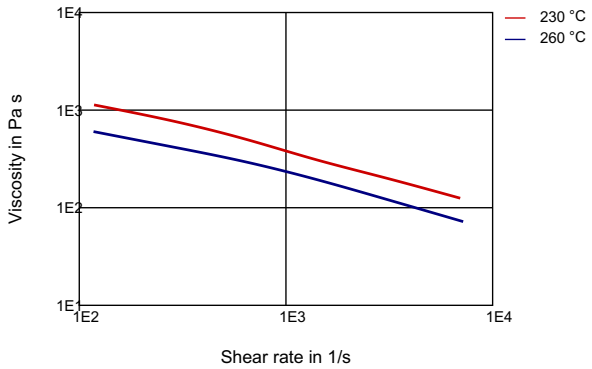
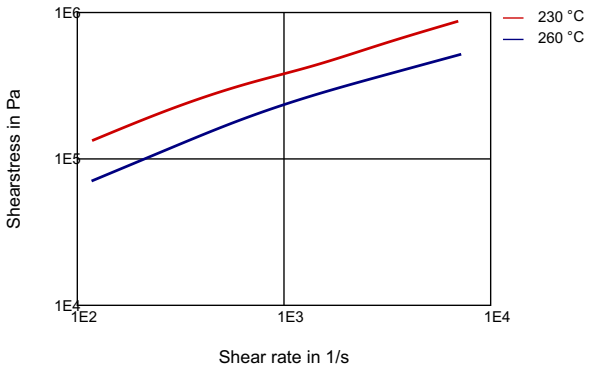
DIAGRAMS

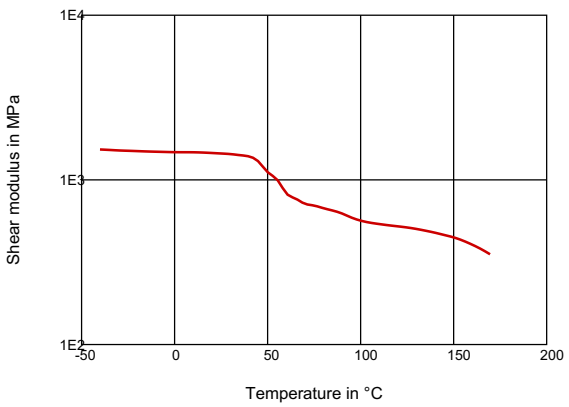
VISCOSITY-SHEAR RATE



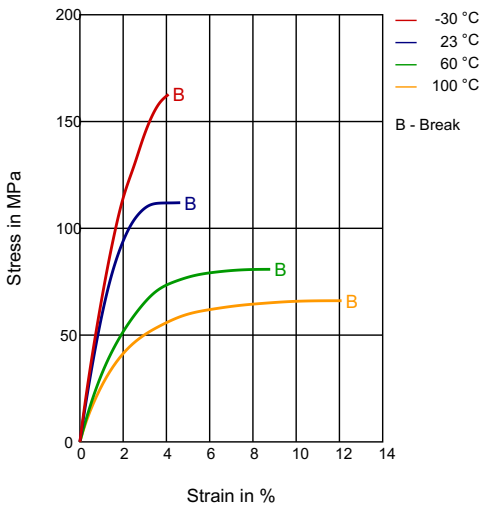
SHEARSTRESS-SHEAR RATE



DYNAMIC SHEAR MODULUS-TEMPERATURE



STRESS-STRAIN



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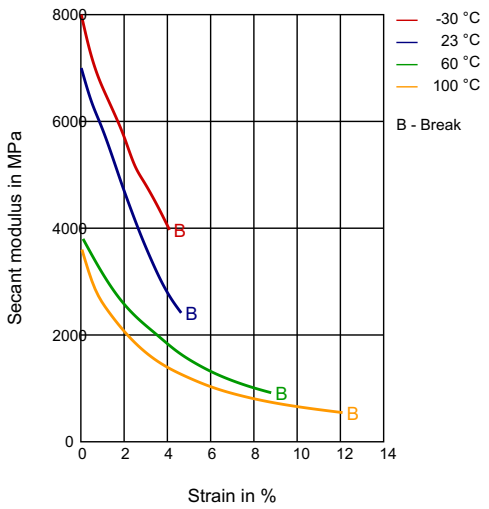
SECANT MODULUS-STRAIN



Processing conditions:

- Typical melt temperature (Min / Recommended / Max) : 250°C / 270°C / 290°C.
- Mold temperature : 40 - 90°C

- Drying time and temperature (only necessary for bags opened for more than two hours) : 4-6 hours at 80-90°C.

PROCESSING

Injection Molding

DELIVERY FORM

Pellets

ADDITIVES

Release agent

SPECIAL CHARACTERISTICS

Bio-Based

REGIONAL AVAILABILITY

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

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