

## TECHNICAL DATA SHEET RILSAN® BZM 23 G9

### POLYAMIDE 11 PELLET

RILSAN® BZM 23 G9 is a polyamide 11 compound. It is produced from a renewable & sustainable source (castor oil). This black glass fiber reinforced grade with improved friction properties is designed for injection molding.

Designation : ISO 16396 - PA11, GF23+CDx, M1G1HLRS, C18-060

#### DESIGNATION

PA11-GF23

#### DELIVERY FORM

- Pellets

#### TRANSFORMATION PROCESSES

- Injection Molding

#### ADDITIVES

- Lubricants

### RHEOLOGICAL PROPERTIES

속성	값	테스트 표준
Shrinkage, Parallel (t+24h)	0.3 %	ISO 294-4
Shrinkage, Normal (t+24h)	1.0 %	ISO 294-4
Melt volume flow rate (MVR), 235°C / 5 kg (455°F / 11 lb)	9 cm³/10min	ISO 1133

### MECHANICAL PROPERTIES

속성	DRY / COND VALUE*	테스트 표준
Tensile modulus, 23°C (73°F), 1 mm/min	5600 / 5600 MPa	ISO 527-1/-2
Flexural modulus, 23°C (73°F)	- / 5400 MPa	ISO 178
Charpy unnotched impact strength, 23°C (73°F)	- / 74 kJ/m2	ISO 179 1eU
Charpy unnotched impact strength, -30°C (-22°F)	- / 83 kJ/m2	ISO 179 1eU
Charpy notched impact strength, 23°C (73°F)	- / 13 kJ/m2	ISO 179 1eA
Charpy notched impact strength, -30°C (-22°F)	- / 10 kJ/m2	ISO 179 1eA
Hardness, Shore D, 15 s	- / 74	ISO 868

\*DRY: Dry As Molded (DAM) if pellet / Dry if powder.  
COND: Conditionned.

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속성	값	테스트 표준
Melting temperature, 10°C/min	186 °C	ISO 11357-1/-3
Vicat softening temperature, 50N at 50°C/h	170 °C	ISO 306
Heat deflection temperature, 0.45 MPa	178 °C	ISO 75-1/-2
Heat deflection temperature, 1.8 MPa	170 °C	ISO 75-1/-2

## THERMAL PROPERTIES/ELECTRICAL PROPERTIES

속성	DRY / COND VALUE*	테스트 표준
Surface resistivity, 23°C (73,4°F)	- / 6.0E+12 ohm/sq	IEC 62631-3-2
Volumic (transversal) resistivity, 23°C (73,4°F)	- / 2.0E+11 ohm/m	IEC 62631-3-1
Comparative tracking index, 23°C (73,4°F)	- / 300	IEC 60112
Dielectric stress, 23°C (73,4°F)	- / 22	IEC 60243-1
Relative permittivity, 100Hz	- / 5	IEC 60250
Relative permittivity, 1Mhz	- / 5	IEC 60250
Dissipation factor, 100Hz	- / 334	IEC 60250
Dissipation factor, 1Mhz	- / 334	IEC 60250

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## OTHER PROPERTIES

속성	값	테스트 표준
Specific gravity, 23°C (73°F)	1.22 g/cm <sup>3</sup>	ISO 1183-1
Water absorption, 23°C (73°F), immersion, equilibrium	1.2 %	ISO 62

## PACKAGING

This grade is delivered dried in sealed packaging ready to be processed. Available packaging:

- 26 kg / 55 lb bags

## SHELF LIFE

Two years from the date of delivery, when stored properly (sealed bags, appropriate moisture, UV protection and temperature). For any use above this limit, please refer to our technical services.

## PROCESSING CONDITIONS:

- Typical melt temperature (Min / Recommended / Max) - Injection Molding: 250°C / 270°C / 290°C (480°F / 520°F / 555°F)
- Typical mold temperature - Injection molding: 40-90°C (105-195°F)
- Drying time and temperature: 80-90°C (175-195°F) / 4-6 hours

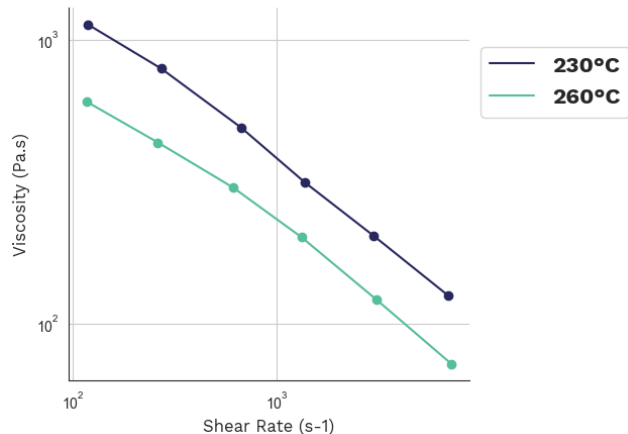
## SPECIAL CHARACTERISTICS

- Bio-based
- Low oligomers

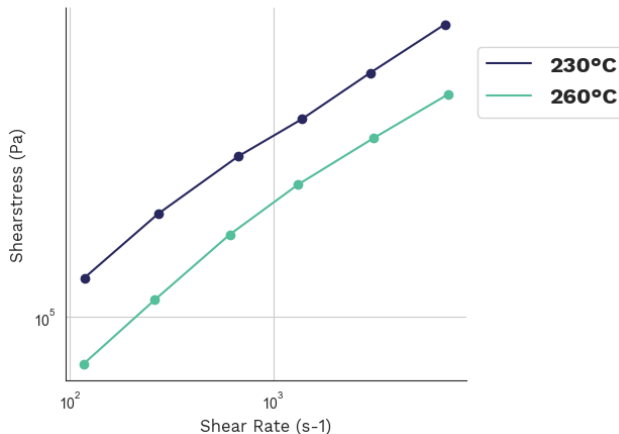
# RILSAN® BZM 23 G9

## DIAGRAMS

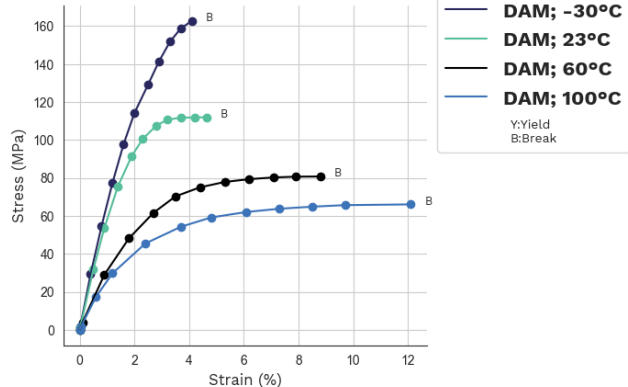
**Viscosity-shear rate**  
Rilsan® BZM 23 G9



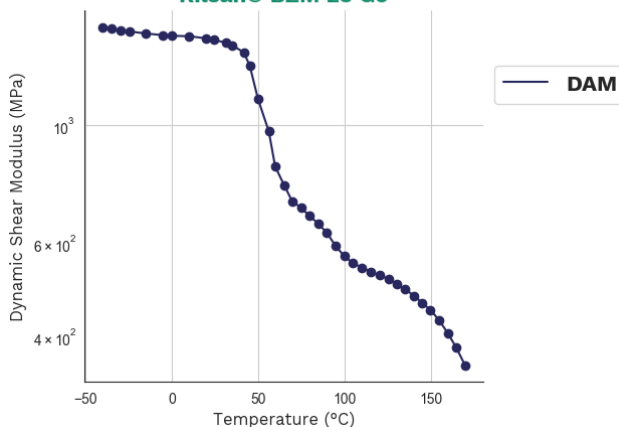
**Shearstress-shear rate**  
Rilsan® BZM 23 G9



**Stress-strain**  
Rilsan® BZM 23 G9



**Dynamic Shear modulus-temperature**  
Rilsan® BZM 23 G9



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