

TECHNICAL DATA SHEET

RILSAN® PA11 INVENT BLACK

POLYAMIDE 11 POWDER

Rilsan® Invent Black is a mass-colored Polyamide 11 powder made from 100% renewable source (castor oil). Polyamide 11 is a thermoplastic polymer that demonstrates excellent chemical resistance, high UV resistance, low water re-uptake and low density.

The Invent range of powders has been especially designed for use with all Laser Sintering (LS) systems (adjustments to construction parameters required depending on the equipment).

Rilsan® Invent Black can be used in rapid prototyping of small, complex parts, showing excellent detail resolution, together with an outstanding color stability eliminating the need for post- processing.

Rilsan® Invent Black exhibits consistent performance while maintaining superior mechanical properties compared to other polymers such as Polyamide 12. The superior mechanical performance of this material, combined with its low refreshing factor (typically 50%), makes Rilsan® Invent Black the best choice for rapid manufacturing of black parts.

TYPE

PA11

MAIN APPLICATIONS

- 3D Printing

DELIVERY FORM

- Powder

TRANSFORMATION PROCESSES

- Additive manufacturing

ADDITIVES

- Heat Stabilized

MECHANICAL PROPERTIES

PROPERTIES	DRY / COND VALUE*	UNIT	TEST STANDARD
Tensile modulus	- / 1500	MPa	ISO 527-1/-2
Strain at break	- / 45	%	ISO 527-1/-2
Stress at break	- / 45	MPa	ISO 527-1/-2
Flexural modulus	- / 1200	MPa	ISO 178
Hardness, Shore D, 23°C (73°F)	- / 77		ISO 868

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

THERMAL PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Heat deflection temperature, 1.8 MPa	44	°C	ISO 75-1/-2
Melting temperature, 20°C/min	201	°C	

OTHER PROPERTIES

PROPERTIES	VALUE	UNIT	TEST STANDARD
Apparent density, Compacted	0.66	g/cm ³	ISO 1068
Coarse particles (D90), Coarse particles (D90)	10	%	ISO 13320
Fine particles (D10), Fine particles (D10)	10	%	ISO 13320

RILSAN® PA11 INVENT BLACK

PACKAGING

Available packaging:

- 20 kg / 44 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.

REGIONAL AVAILABILITY

Africa, Asia Pacific, Europe, Latin America and the Caribbean, Middle East, Northern America, Oceania