TECHNICAL DATA SHEET VERSION 1.1



STANDARD BLACK

Photopolymer resins for general purpose 3D printing. Suitable to make pieces by LCD and DLP technology. Completely opaque black resin suitable for pieces that require high dimensional stability, low shrinkage, and low odour during printing.

Indicated for open-source printing equipment, in the range of 385 – 420nm.

Recommended applications

- Functional prototypes
- Miniatures
- High precision models



	TIPICAL VALUE	UNITS	TEST METHOD			
PHYSYCAL PROPERTIES	AL PROPERTIES					
Aparience	Black opaque liquid	Black opaque liquid				
Density	1.3	1.3 g/cm ³ ISO 1183				
Viscosity (25 °C)	500	cps				
Glass transition temperature	51	°C	D7028			
Tensile Strength	46	MPa	ASTM D638M			
MECHANICAL PROPERTIES (Values obtained	d after 30 minutes of LIV curing)					
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Tensile Modulus	1100	MPa	ASTM D638M			
Flexural Strenght	68	MPa	ASTM D790M			
Flexural Modulus	1900	MPa	ASTM D2240			
Elongation at break	8	%	ASTM D638M			
IZOD Impacta (notched, 23°C)	17	J/m	ASTM D256A			
Hardness	83	Shore D	ASTM D2240			

PRINTING PROPERTIES (1)	LCD	LCD mono	UNITS
Layer height	0.05	0.05	mm
Base Layer	3	2	number
Exposure time base layer	150	30	seconds
Exposure time	10	1,6	seconds

⁽¹⁾ General printing parameters for a layer height of 25 μm, each printing equipment may require modifications in the settings, for more information about the configuration in a specific model, write to us at the following email: info@smartmaterials3d.com

SIZE	NET WEIGHT	BRUT WEIGHT	COLOR	PACKAGING
М	500 g	550g	Black	Caron box, de Cartón, Black PE bottle, zip lock bag.







USE RECOMENDATIONS

SHAKE PRODUCT BEFORE USING



The composition of the resin can contain suspended particles, over time these can end up precipitating at the bottom of the container, so it is advisable to shake the container before use so that the product mixes again and is completely homogeneous.

RECOMMENDED LAYER HEIGHT



This resin is suitable for working with a layer height according to the indicated range. Layer height is directly related to print resolution so a lower layer height is recommended to achieve a higher quality finish.

RECOMMENDED PRINTING EQUIPMENT



Smart Materials 3D Resin Standard Black has been validated for 3D printing technologies using LCD and DLP equipment.

DISCLAIMER: The information provided in the data sheets is intended to be just a reference. It should not be used as design or quality control values. Actual values may differ significantly depending on the printing conditions. The final performance of the printed components does not only depend on the materials, also the design and printing conditions are important.

Smart Materials assumes no responsibility for any damage, injury or loss produced by the use of its filaments in any particular application



