TECHNICAL DATA SHEET VERSION 1.1

CRYSTAL IMPACT

Photopolymer resins for 3D printing for technical use, suitable for making pieces with LCD, DLP and SLA printers. It maintains great dimensional stability, low shrinkage and low odor during printing.

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

CRYSTAL IMPACT is optically transparent and recommended for parts requiring high impact resistance, suitable for functional parts that may be repeatedly stressed due to its toughness and slight flexibility.

Recommended applications

- Functional parts.
- High precision models
- Transparent models.
- Outdoor pieces.

	TIPICAL VALUE	UNITS	TEST METHOD
PHYSYCAL PROPERTIES			
Aparience	Transparent liquid		
Density	1.12	g/cm^3	ISO 1183
Viscosity (25 ˚C)	1000	cps	
MECHANICAL PROPERTIES (Values obtained after 30 minutes of UV curing)			
Tensile Strength	47	MPa	ASTM D638M
Tensile Modulus	1400	MPa	ASTM D638M
Flexural Strenght	58	MPa	ASTM D790M
Flexural Modulus	1700	MPa	ASTM D2240
Elongation at break	15 – 25	%	ASTM D638M
IZOD Impacta (notched, 23˚C)	31	J/m	ASTM D256A
Hardness	68	Shore D	ASTM D2240

PRINTING PROPERTIES [1]	LCD	LCD mono	UNITS
Layer height	0.05	0.05	mm
Base Layer	2	2	number
Exposure time base layer	170	40	seconds
Exposure time	27	7.5	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
M	500 g	550g	Transparent	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, DLP and SLA equipment.

IMPROVED IMPACT RESISTANCE

Resin of high tenacity and slight flexibility with a great resistance to impact suitable for the manufacture of functional parts.