Resin

smart materials 3D

CRYSTAL FLEX

Photopolymer resins for 3D printing for technical use, suitable for manufacturing using LCD and DLP type printers, it maintains great dimensional stability, low shrinkage and low odor during printing.

CRYSTAL FLEX, in addition to being optically transparent, has a low surface hardness and great flexibility, which makes it suitable for the manufacture of flexible and elastic objects with a soft touch.

Indicated for open source printing equipment for a range of 385 to 420 nm.

Recommended apps

- Functional parts.
- Flexible objects.
- Transparent models.

	TIPICAL VALUE	UNITS	TEST METHOD
PHYSYCAL PROPERTIES			
Aparience	Transparent liquid		
Density	1.18	g/cm^3	ISO 1183
Viscosity (25 ˚C)	700	cps	

MECHANICAL PROPERTIES (Values obtained after 30 minutes of UV curing)			
Tensile Strength	1.7	MPa	ASTM D638M
Elongation at break	50 - 80	%	ASTM D638M
Tear strength	4.3	kN/m	ASTM D624
Hardness	63	Shore A	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	100	50	seconds
Exposure time	14	6.5	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

25-100 μM

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

LCD DLP

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

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