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GRATKIT

Technical Datasheet GratKit Resin – Thermochromic Resin



Identification

Name	GratKit Thermochromic Resin
Usage	SLA/DLP/LCD 3D Printing
Manufacturer	GratKit

Recommended print settings

Type Name	Color Printer	Monochrome Printer
Layer Height[mm]	0.025 0.05	0.025 0.05
Bottom Layer Count	5-8	5-8
Bottom Layer Exposure Time[s]	50-60	20-30
Other Layer Exposure Time[s]	5-8	2.5-4.5
Rest Time After Retract[s]	3-5	3-5
Lifting Distance[mm]	5	5
Environment Temperature[°C][1]	20-40	20-40

1. Environment temperatures too high or too low may cause the bottom layer stick to the platform failed.

Note: You can use Isopropanol Alcohol(> 90%) or Ethanol(>75%) to washing the prints. At the same time, it is better and necessary to use a soft brush to clean the surface of the prints. Using an ultrasonic cleaner can clean some parts that are difficult to clean under normal conditions, and we also recommend it.

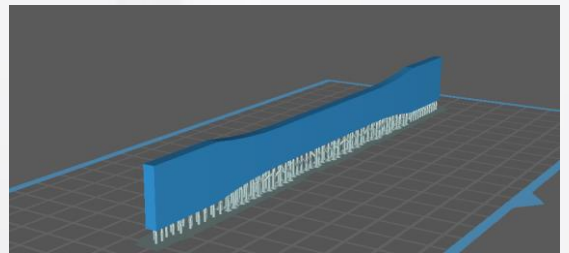
Specification

Physical Properties	Typical Value	Method
Density[g/cm ³][1]	1.05-1.25	Liquid Density Meter
Viscosity[MP.s][1]	600-800	NDJ-8S Viscometer
Color Change Temperature[°C]	50	TM-902C
Shore Hardness[D]	80-86	ISO 164
Tensile Strength[MPa][2]	39.1±3.5	ASTM D638
Tensile Modulus[GPa][2]	0.54±0.05	ASTM D638
Elongation[%][2]	9.4±0.8	ASTM D638
Flexural Modulus[GPa][2]	1.4±0.1	ASTM D790
Flexural Strength[MPa][2]	48.9±3	ASTM D790
Heat Deflection Temperature[66psi][°C][2]	78	ASTM D648
Heat Deflection Temperature[264psi][°C][2]	65	ASTM D648

(1) 25°C ;

(2) Cured: 200mw/cm², in the water, 1min front+1 min back.

Testing Geometries



Testing prints setting: 0.05mm/layer, default setting, bottom layer exposure 30s, layer exposure 3s, print by Elegoo Mars 3.

Safety Information

This resin is not meant for contact with food, drinks, or medical use on or in a human body. Always read the material safety data sheet thoroughly.

Resins are classified as dangerous chemicals and it is necessary to dispose of them properly in designated containers. Resin bottles (empty or full) must never be disposed of or poured into the general waste.

Disclaimer:

The results presented in this data sheet are just for your information and comparison. Values are significantly dependent on print settings, operator experiences, and surrounding conditions. Everyone has to consider suitability and possible consequences of printed parts usage. GratKit can not carry any responsibility for injuries or any loss caused by using GratKit material. Please check SDS of GratKit rigid resin before you use it.