

MOIIN Flex Clear

NOTES FOR USE

MOIIN Flex Clear is a (meth)acrylate-based light-curing resin for the manufacturing of technical objects using 3D printing.

PRINT

MOIIN Flex Clear is designed for 405 nm and 385 nm DLP and LCD printers.

The recommended temperature range is 20°C to 35°C / 68°F to 95°F.

Notes on the printer parameters and starting values for light-curing times can be found at <https://www.moiin-resins.com/technical-data/>

- 405 nm: critical energy $E_c = 6.5 \text{ mJ/cm}^2$ and penetration depth $D_p = 0.11 \text{ mm}$ at an intensity of 10 mW/cm^2
- 385 nm: critical energy $E_c = 2.7 \text{ mJ/cm}^2$ and penetration depth $D_p = 0.11 \text{ mm}$ at an intensity of 6.6 mW/cm^2

CLEANING

Cleaning is important, because all liquid resin residues should be removed from the object before post-curing. First of all, the largest resin residues should be removed with paper towels or similar materials. Subsequent cleaning with solvents can be done in two ways:

Cleaning with MOIIN Smart Clean

The contact time of the object with solvents should be as short as possible. Remove resin residues from the object using MOIIN Smart Clean and a brush or a similar item. For a thorough cleaning, the object is then sprayed or rinsed with ethanol/isopropanol, and any remaining solvents are quickly removed with compressed air.

Cleaning with ethanol/isopropanol

Care should be taken not to leave the printed object in contact with the cleaning agent for too long (less than 10 minutes). In addition, the printed object should be completely dry before post-curing and should be air-dried for at least two hours. Please note that cleaning using ethanol or isopropanol may make surfaces slightly sticky.

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|----|----------|---------------------------|---------------------|-------|
| 1. | Cleaning | Ethanol | Ultrasonic bath | 3 min |
| 2. | Cleaning | Ethanol (clean) | Ultrasonic bath | 2 min |
| 3. | Dry | Compressed air or air-dry | for at least 30 min | |

POST-CURING

To achieve the specified material properties, the printed objects must be post-cured. Use either UV LEDs with wavelengths between 365 nm and 415 nm or lamps with a wide wavelength range.

Post-curing device	UV light source	Light-curing time	Additional settings
Anycubic Wash & Cure	UV LED (405 nm)	2 x 5 min	
RS cure	UV LED (415 and 365 nm)	15 min	170% upper and lower wavelength, 50 mbar
NK-Optik Otoflash	Flash lamp with a wide wavelength range	2 x 2,000 flashes	
Heraeus Heraflash	Flash lamp with a wide wavelength range	2 x 180 s	

Post-curing device	UV light source	Light-curing time	Additional settings
Kulzer HiLitePower3D	Flash lamp with a wide wavelength range	2 x 180 s	

SAFETY INSTRUCTIONS

- Using the device incorrectly and failing to observe the specifications may place the user at risk or impair the quality of the printed object.
- Observe the safety data sheet.
- Irritates the eyes and skin (sensitization possible).
- Wear safety gloves (nitrile gloves), protective clothing and safety goggles while processing.
- Avoid eye contact! In the event of the liquid material accidentally coming into contact with the eyes, immediately rinse eyes thoroughly with plenty of water and consult a doctor if necessary.
- Avoid skin contact with the non-polymerized material and the inhalation of monomer vapors. In rare cases, allergic reactions to components in the material may occur. If this occurs, consult a doctor.
- Avoid release into the environment.

COMPOSITION

Mixture of acrylate and methacrylate resins, photoinitiators and additives.

STORAGE

- Store in a dry place at room temperature (15 °C – 25 °C / 59 °F – 77 °F) protected from light.
- Even low exposure to light can trigger polymerization.
- Do not use after the expiration date.
- Keep out of the reach of children!

DISCLAIMER OF LIABILITY

- These instructions do not represent safety information according to the applicable chemicals legislation.
- No liability for the type and use of the 3D printed products.
- If relevant, applicable laws and regulations must be observed.
- No guarantee for the function and durability of the 3D printed products.
- The use of objects printed with MOIIN Flex Clear in the life science sector is possible, if appropriate testing for the intended purpose is carried out in each case. We would like to point out that it is the responsibility of those placing the printed objects on the market to define the intended purpose of a medical device, to classify and, if necessary, to certify the respective device according to medical device legislation.

PACKAGING

REF 179012 1 Bottle @ 1 kg