Instruction for Use
Ultracur3D® DM 2505

The following Instruction for Use is for dental professionals who use: **Ultracur3D® DM 2505** as a technical dental model material.

The safety data given in this publication is for information purposes only and does not constitute a legally binding Material Safety Data Sheet (MSDS). The relevant MSDS can be obtained upon request from your supplier or you may contact BASF directly at *sales@basf-3dps.com.*

For more information, please refer to the country specific MSDS for advice.

Manufacturer

BASF 3D Printing Solutions GmbH

69115 Heidelberg

GERMANY

E-mail address: sales@basf-3dps.com

http://www.forward-am.com/

Storage Conditions and Disposal Considerations

Keep container tightly closed in a room temperature, well-ventilated place. Keep container dry. If Material is not being used fill it back through a filter in the corresponding material bottle. The filter prevents to fill cured pieces or failed prints back into the bottle. Ultracur3D® DM 2505 must be disposed of or incinerated in accordance with local regulations.

For more information, please refer to the country specific MSDS for advice.

Delivery units

Ultracur3D® DM 2505 is available in the following packaging sizes: 1 kg, 5 kg and *10 kg* (available soon).

Intended Use

These instructions are intended to produce dental models and dental models for thermoforming. Ultracur3D® DM 2505 is a technical material based on (meth-)acrylate resin for suggested LCD and DLP systems. Working **wavelength**: 385 nm or 405 nm. Attached a list of suggest 3D printer and Printing parameters. For more information contact BASF directly at sales@basf-3dps.com.

Available Color

- Beige

Suitable 3D Printer and Settings

PRINTER	**MIICRAFT ULTRA 125**
Wavelength	405 nm
Power	4 mW / cm²
Curing time	3.5 s
Voxel depth	100 µm

Design Information

For designing the dental model and the model for thermoforming, we recommend using only certified Software. If the model is hollowed make sure to have drainage channels (if no platform with holes is used) to make sure that the material is not trapped inside. For some hollowed models support structures might be needed. We recommend printing horizontal and always with a connector.

Printing Process

Preparation of Resin

The material should be processed at room temperature. Before usage the material should be mixed well. It's recommend to use a e.g. bottle roller (roller bench) for mixing with suitable ceramic beads/balls for at least 30 minutes. Pour it slowly in the vat and wait a couple minutes, until the bubbles are gone before starting the print job. Ultracur3D® DM 2505 should be well mixed before each print job, color deviation or failed prints might occur when not mixed thoroughly.

Printing Process

Suitable 3D printer and setting are guidelines the optimal setting must be defined by the user himself. Please see Instruction for Use of the used 3D-Printer for the printer settings and handling.

Removing parts

Remove the parts carefully from the build platform with a suite able tool, for more information see the Instruction for Use of the used 3D-Printer.

Cleaning and Post-curing process

Cleaning Process

Ultracur3D® DM 2505 can be cleaned with dest. Water as well as with Glycol Ether based solvent (ex. Resin Away [Monocure 3D]) & 2-propanol, please refer to either one for the following cleaning procedures.

Cleaning with dest. Water

Step 1: Place the parts in a container filled with used dest. Water and in an Ultrasonic bath filled with Water for 3 minutes.

Step 2: Rinse the parts with dest. Water for a few seconds. Fine structures or holes may be better cleaned by using dest. water and a syringe or by separate brushing. The parts should be placed afterwards in a container filled with fresh dest. Water and subsequently treated in an ultrasonic bath filled with water for 3 minutes.

Step 3: Blow dry the parts with pressure air/nitrogen, until the parts are clean.

Cleaning with Glycol Ether based solvent & 2-propanol

Step 1: Place the parts in a container filled with Glycol Ether based solvent and in an Ultrasonic bath filled with water for 2 minutes.

Step 2: Rinse the parts with 2-propanol for a few seconds. Fine structures or holes may be better cleaned by using 2-propanol and a syringe or by separate brushing. The parts should be placed afterwards in a container filled with fresh 2-propanol and subsequently treated in an ultrasonic bath filled with water for 3 minutes.

Step 3: Blow dry the parts with pressure air/nitrogen, until the parts are clean.

Drying

Place the parts into a warming cabinet @40°C for 30 minutes.

Post curing

Ultracur3D® DM 2505 parts require adequate post curing to achieve the optimized final mechanical properties. After each post-curing cycle, the part needs to be flipped to achieve an even curing.

Examples of post curing procedures

MiiCraft Ultra 125

Post-curing unit	**Otoflash G171**
Amount of cycles	2
Duration of one curing cycle	2000 flashes

Finishing Process

Supports can be removed with a conventional dental handpiece and a dental grinding tool for plastics, if needed.

These proceedings are only general guidelines, the optimal printing settings as well as curing time must be defined by the user himself. The post-curing might differ by using different 3D-Printers and different post-curing units may require different settings.