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<http://envisiontec.com>

# E-DENT 400

Monomer based on acrylic esters for manufacturing of  
3D-printed crowns and bridges



## Instruction For Use

### E-Dent 400

E-Dent 400 is a monomer based on acrylic esters for manufacturing of 3D-printed crowns and bridges. E-Dent 400 is a class IIa material and CE-certified.

The following instructions for use are for dental professionals who use E-Dent 400 as a crown and bridge material. E-Dent 400 is intended exclusively for professional dental work. This instruction for use also provides information about safety and environmental aspects, a safety datasheet is available on <http://envisiontec.com> and at local dealers. In case more information is needed about the processing of E-Dent 400 material contact the EnvisionTEC office. Also see information at the end of this document.

E-Dent 400 is a monomer based on acrylic esters for manufacturing of 3D-printed crowns and bridges. Suitable for printing all types of crowns and bridges. E-Dent 400 is a Class IIa and CE-certified material.

IFU ID: IEDENT400201702UK

## Description and effects

E-Dent 400 can be used in combination with DLP based 3D printers which support EnvisionTEC materials.

## Contra-indication

E-Dent 400 should not be used for any other purpose than dental work only. Any deviation from this instruction for use may have an adverse on the chemical and physical quality of E-Dent 400. In case of an allergic reaction, please contact a medical physician.

## Hazard & Precaution (H&P phrases)

### Inhalation:

Irritating to respiratory system. High atmospheric concentrations may lead to irritation of the respiratory tract, dizziness, headache and anesthetic effects.

### Skin contact:

May cause sensitization by skin contact. Irritating to skin, repeated and/or prolonged contact may cause dermatitis.

### Eye contact:

High vapor concentration may cause irritation.

### Ingestion:

Low oral toxicity, but ingestion may cause irritation of the gastrointestinal tract.

### Protection:

Wear protection when handling E-Dent 400. Protective glasses and gloves are advised. Information about the handling of the product can be found in the safety data-sheet, which is available on <http://envisiontec.com>.

### Hazard Phrases:

Pictogram



Signal word Warning

### Hazard statements

H317 May cause an allergic skin reaction  
H413 May cause long lasting harmful effect to aquatic life

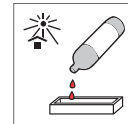
## Processing / Post-curing

**Make sure that you work as clean as possible, dirty reservoirs or machines can cause deformation and therefore failure of the printed objects!**



### Thoroughly mix before using

Before using the material for the first time. Mix it for 2.5 hours in its original packaging. Each subsequent time you use this material. Mix for 1 hour. We advise to use a roller bench to thoroughly mix the material. Color deviation and print failures may occur when mixed insufficiently.



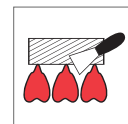
### Fill printerreservoir

Pour the liquid material in the reservoir of the 3D-printing machine.



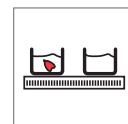
### For printer settings see IFU of 3D Printer

Follow the instructions for use of the printer. These are delivered together with the printer.



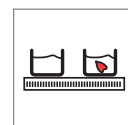
### Remove printed parts from platform

When the machine has finished its program remove the building platform from the machine. Place the platform on some paper or cloth with the built jobs facing upwards. The printed jobs can now be removed from the platform using a suitable knife.



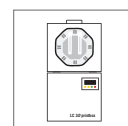
### Cleaning Pieces step 1

Rinse the printed jobs for three minutes in an alcohol solution (>90%) to eliminate any excess material, using of an ultrasonic bath.



### Cleaning Pieces step 2

Rinse for two minutes in a clean alcohol solution (>90%). Rinsing in a alcohol solution should not take longer than 5 minutes, as this may cause defects in the printed parts.



### Post-Cure

After cleaning make sure the printed parts are dry and free of alcohol residual. Then place the printed jobs in a UV- light curing box for final polymerization.

Post-curing is an UV-light treatment to ensure that Envision-TEC materials obtain full polymer conversion. Through this the residual monomer is reduced to a minimum and the required mechanical properties are obtained. This procedure is a necessary step to produce a biocompatible end-product. We strongly advice to make use of the Vertex-Dental™ LC-3DPrint Box.

### Specific curing-time E-Dent 400

EnvisionTEC Material	Time (min.)	Wavelength (nm.)	Total output Light (Watt)	UV lightbox output W*Sek=J (kJ)
E-Dent 400	30	Blue UV-A 315-400 UV-Blue 400-550	UV-A 108 UV-Blue 108	388,8

The unit used at Vertex-Dental has 6x 18W/71 lamps (Dulux L Blue) and 6, 18W/78 lamps (Dulux blue UV-A). The calculated output is based on the UV light UVA lamp Blue. Please notice that the light sources and the printing machine need a routine maintenance following the manufacturer instructions.

### Finishing

Remove any support structures and finish jobs if necessary, using conventional dental methods and instruments. Differences in color nuance may occur due to production in batches of the raw material and product, inadequate shaking of the original packaging before use or insufficient post-curing.

## Storage conditions, expiry date and transport

Store the product in the original packaging at room-temperature in a dry and dark area, preferably not exceeding 25°C. Close the packaging after each use. The expiry date of the product is mentioned on the product label. In case of exceeding the expiry date, the product is no longer guaranteed in terms of treatment. Do not expose to UV-light and moisture.

## Plastic and packaging waste

The product E-Dent 400 in its polymerized form is not environmentally harmful. Residual waste material in its liquid state should be delivered to a collection point for chemical waste material.

## Cleaning instructions

EnvisionTEC 3D-printing material should be cleaned with non-chemical products. If disinfecting before intended use is required, an ethanol solution can be used.

## Delivery units

The product E-Dent 400 is available in the following packaging size: 1000 gr.

## Explanation of symbols on labelling

CE mark with NB number

Batch number of product

Manufacturer

Keep away from sunlight

Consult instructions for use

Use-by date

Temperature limit; recommended storage temperature