

# VOCO

## V-Print® dentbase

**USA | EN** Instructions for use

Carefully read instructions prior to use

### Product description:

**V-Print dentbase** is a light-curing resin for the generative manufacture of denture bases for removable prostheses using CAD/CAM technology.

### Shade:

– Pink

### Indications:

– Removable denture bases

### Contraindications:

**V-Print dentbase** contains (meth)acrylate and phosphine oxide. **V-Print dentbase** should not be used on patients with known hypersensitivities (allergies) to these ingredients.

### Patient target group:

**V-Print dentbase** is suitable for use in all patients, without any age or gender restrictions.

### Performance features:

The product's performance features satisfy the requirements of its intended use and the relevant product standards.

### User:

**V-Print dentbase** should only be applied by a professionally trained dental practitioner.

### Hardware and software requirements

CAD software <sup>1</sup> Dental scanner	Software for the planning and design of removable denture bases. The software and dental scanner must satisfy local and current medical device specifications and allow for issuance of the patient-specific design as an STL data set. For example: - Design Software: 3Shape Ortho System Version 2017 or later - 3Shape Dental System (Splint Designer Module) Version 2017 or later - 3Shape Dental Scanners: TRIOS, E1, E2, E3, D500, D700, D800, D900, D750, D850, D900L, D1000, D2000
CAM-software	Software for preparation of the print order. The part will not be modified during this process. Structures that facilitate the 3D printing are simply created. For example: - Autodesk Netfabb version 2020 or later for SolFlex 3D printing.

<sup>1</sup>The designation **Software as Medical Device SaMD** includes standalone (autonomous) software that is a medical device (MD) and not part of one.

Manufacturing equipment	For example: VOCO SolFlex 170 (PowerVat) VOCO SolFlex 170 HD (PowerVat) VOCO SolFlex 350 (PowerVat) VOCO SolFlex 650 (PowerVat)
Post-curing devices	For example: Otoflash G171

See also: accompanying list of resources or [www.voco.dental/3dprintingpartners](http://www.voco.dental/3dprintingpartners)

All manuals and/or operating instructions for the respective programs, and for device, materials and/or parts manufacturers, which are required for the manufacturing process, must be observed.

Clarify ahead of time whether the programs, devices and/or objects that you intend to use have been designed and approved for the corresponding applications.

**CAUTION:** Non-authorized changes to the process equipment, parameters, or software could result in the **V-Print dentbase** end object not satisfying specifications.

### Use:

#### Preparation:

For an indication-appropriate CAD construction, the following design conditions must be observed:

- The minimum wall thickness of the denture base must be at least 2.0 mm.
- The internal edges on the outside should be rounded off.
- The tooth socket (alveolus) should touch the tooth neck by a minimum of 1.0 mm.

Prepare a print job using slicing software. In addition to the material-dependent construction specifications in these Instructions for use, please also observe the dependencies of the positioning, support type, and fit found in our other documents, for your construction. The pertinent documents can be downloaded from the VOCO website.

**V-Print dentbase** has been conceived for a high-precision application. It is thus recommended that a small layer thickness be selected when generating the print data set.

#### Processing:

**Note:** Use separate material containers and cleaning baths for each printing material, in order to prevent cross contamination.

**Note:** Do not shake the material before starting the printing process.

The materials container should be filled immediately before the start of the printing process. It is important to ensure that the material is free of bubbles to the extent possible, and filled to the fill level mark. Start the print job observing the parameters that you previously selected. Once the printing process has ended, a dripping time of approximately 10 minutes is recommended. Next, carefully detach the printed objects from the build platform.

In the following steps, the printed objects will need to be cleaned, dried and post-exposed, in order to guarantee the required product characteristics.

A detailed explanation of the steps outlined above can be found under **Post-processing**. After use, **V-Print dentbase** can be returned to its original or a similar container (HDPE, not light trans-missive, airtight).

**V-Print dentbase** can temporarily be stored in the vat under exclusion of light and dust protected. The manufacturer's specifications on the materials container – storage of remaining material – provide information on whether the printing material can be stored in the materials container that you used.

In all cases, including storage in the materials container, make sure that the remaining material is free of contaminants and polymerized residue before further use. Thus, when transferring the printing material, use a stainless steel sieve or clean the material using the 3D printer, as the case may be.

**Recommendation:** Once your work is completed, transfer the remaining material from the materials container into the original container. This allows the materials container to be inspected and facilitates optimal storage of the printing material.

#### Post-processing:

##### Cleaning

For cleaning purposes use isopropanol (purity ≥ 98%) as a cleaning solution, in a cleaning device. An unheated ultrasonic bath or an unheated stirring bath may be used as a cleaning device.

The printed objects must be cleaned in two, or optionally in three steps. Position the unclean printed objects inside the cleaning bath so that any openings point downwards. Use tweezers or suitable submersible baskets to fill the baths. Please ensure that the printed objects do not come into contact with one another during cleaning.

	Ultrasonic bath	Stirring bath
Pre-cleaning (optional)	Carefully pre-clean the printed objects by submerging them several times in a beaker with isopropanol.	
Preliminary cleaning*	3 minutes – may be used multiple times	3 minutes – may be used multiple times
Final cleaning	2 minutes – fresh cleaning bath	2 minutes – fresh cleaning bath

\*Note: The bath's cleaning efficacy decreases with increased use. Resin residue on the surface could indicate that the cleaning efficacy of the bath has diminished, or that the parts came into contact with one another. When the cleaning efficacy decreases, the respective bath must be replaced.

Next, the printed objects must be dried carefully using compressed air. If there is any resin residue on the printed object after the final cleaning, or if residue escapes from the undercuts when drying, the printed object can be briefly immersed once again in the final cleaning bath. Next, repeat the drying process.

##### Preparation for post-exposure:

Obstructive support structures can be removed before the post-exposure process by using a rotary instrument as close to the printed object as possible, carefully and without exerting pressure. Use a suction device. Carefully remove any remaining plastic dust using compressed air. Then, rinse the printed objects with fresh isopropanol for a few seconds. Carefully dry the printed objects once again with compressed air.

##### Post-exposure:

Conduct the post-exposure a minimum of 15 minutes after the most recent contact with isopropanol. A protective gas atmosphere is not required. It is important to ensure that the printed objects do not overlap or contact each other, as post-exposure would be negatively affected by the shadows that are cast.

Post-exposure can be conducted using the following devices:

Post-exposure device	Program	
Xenon photoflash unit Otoflash G171	2x 2000 flashes	After 2000 flashes, observe a cooling phase of at least 2 minutes with open lid. Next, turn over and light-cure with another 2000 flashes.

See also: accompanying list of resources

##### Finishing:

In general, please work with a low contact pressure and reduced speed. This guarantees consistent results and fewer processing marks. In order to sand, the support stubs use a fine-toothed carbide bur, for example. The bur can also be used for additional finishing of special structures. In order to achieve precise sanding, e.g. between the support stub and printed object, it is recommended that the surface be sanded in the corresponding area with sandpaper, if necessary of different grain sizes. A similar result can also be obtained using coarser or finer silicone polishers. In order to obtain a high-gloss finish, polish the object first with a pumice stone. Then, thoroughly remove any pumice dust under running water using a brush. Finally, polish the object to a high-gloss using a buffer and high-gloss polishing paste, without applying excessive pressure.

##### Customization:

In order to achieve a highly aesthetic look, **V-Print dentbase** can be customized or individualized with a composite, at any time. Roughen the restoration surface by sanding or sandblasting it (Al<sub>2</sub>O<sub>3</sub> / 1–2 bar / 50 – 125 µm). Carefully remove any dust residue using a steam cleaner or ultrasonic water bath (free of solvents). Then dry the restoration with air. Apply a suitable adhesive system in accordance with the Instructions for use. The instructions for use of the respective customization systems must be observed.

##### Preparation of adhesion surfaces:

Check the fit of the prosthetic teeth before adhesion. Correct any occlusal interferences directly on the teeth. To attain optimal adhesion, the adhesion surfaces of the restoration made with **V-Print dentbase** should be abraded with aluminum oxide (1–2 bar / 50 to 125 µm). Carefully remove abrasive material residue with a steam cleaner and/or an ultrasonic water bath. Next, the restoration should be thoroughly dried. Final cleaning with medical alcohol is possible. In order to attach prosthetic teeth/segments to a work piece made of **V-Print dentbase**, a suitable luting material (e.g. **CeditEC**, **VOCO**) is to be used. The adhesive can be luted in a pressure pot at max. 55°C and 2–6 bar.

##### Final cleaning:

Clean the object thoroughly. First, remove any coarse residue with the steam jet cleaner. The final cleaning can be conducted by briefly placing the object in an unheated ultrasonic water bath. In order to remove oily or fatty contaminants, a surfactant solution may be used in place of water.

##### Disinfection:

Objects manufactured from **V-Print dentbase** may be disinfected using alcohol- or aldehyde based disinfectants (e.g. Cavex ImpreSafe by Cavex). Observe the manufacturer's instructions for use.

##### Warnings, precautionary measures:

- Only use **V-Print dentbase** intraorally in a fully cured state. Pay attention to the finishing process.
- Contact between uncured **V-Print dentbase** and the skin/mucous membranes and eyes can cause mild irritation and should be avoided. The wearing of protective clothing is recommended. Furthermore, it is important to ensure that no vapors and/or dusts are inhaled. The wearing of a suitable mask and/or the use of suction devices is recommended. Further information on handling can be found in the safety data sheet.
- Our information and/or advice do not relieve you of the obligation of checking that the products supplied by us are suitable for the intended purpose.

##### Disposal:

Dispose of the product in accordance with local regulations.

##### Reporting obligation

Serious events such as death, temporary or permanent serious deterioration of a patient's, user's or other person's health condition, and a serious risk to public health that arise or could have arisen in association with the use of **V-Print dentbase** must be reported to VOCO GmbH and to the responsible authorities.

##### Storage:

Storage at **59 °F - 82 °F (15 °C - 28 °C)**. Reseal bottle immediately after use. The material will cure if exposed to light. Do not use after the expiry date.

##### PRODUCT ORDERING INFORMATION:

Bottle 1,000 g pink

REF 6048

This material has been developed solely for use in dentistry. Processing should be done strictly according to the instructions for use.

VOCO recognizes its responsibility to replace products if proven to be defective. VOCO does not accept liability for any damage or loss, directly or indirectly, stemming from the use of or inability to use the products described. Before using, it is the responsibility of the user to determine the suitability of the product for its intended use. The user assumes all risk and liability in connection therewith. Descriptions and data constitute no warranty of attributes and are not binding.

**CAUTION: U.S. Federal Laws restrict this device to sale by or on the order of a dentist.**

No person is authorized to provide any information which deviates from the information provided in the instructions for use.

For questions or comments, please call 1-888-658-2584.

**Keep this material out of reach of children.**

**For dental use only.**

An explanation of the symbols used in labeling can be found at [www.voco.dental/symbols](http://www.voco.dental/symbols)

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