

## CEHALLOY Instructions For Use

**CEHALLOY is a biocompatible non-precious alloy for porcelain fused to metal restorations.**

**CEHALLOY** contains no beryllium, nickel or gallium and fulfils the recommendations of the standard DIN 13912 for non-precious alloys and DIN EN ISO 9693 for alloys intended for porcelain fused to metal restorations. The relatively low Vicker's hardness of 285 (HV10) leads to good and easy milling and grinding behaviour and gives perfect polished surfaces.

### Recommendations for use Wax-up

Do the wax-up as usual. The wall thickness in wax must not be thinner than **0.35 mm**. Lead wax sprues indirectly. For wax sprues use round wax wires with **ø 2.5 mm** for single crowns and **ø 2.5-3 mm** for bridges. For greater prosthetic constructions with more than 4 pontics use a distribution bar with **ø 4-4.5 mm**.

### Melting and Casting

For investing use phosphate bonded investments for crown and bridge work. Preheat the investment to about **850 to 900 °C**. Hold the end temperature of investment for a minimum period of **30 minutes**. Refer to manufacturer's instructions for use for the casting machines.

For **CEHALLOY** use an individual ceramic crucible to prevent contamination with other alloys. Clean crucible after every use. In case of recasting use sand-blasted old material and add at least 50 % of new material.

When melting by induction heating start casting as soon as the ingots have collapsed and oxide net cracks.

For melting by flame rotate the reductive zone of the flame around ingots. Start casting as soon as the bath begins to vibrate. Allow the cylinder to cool down slowly to the room temperature and then deflask.

### Ceramic

Use ceramic, suitable for porcelain to metal restoration.

1. Sand-blast the surface by use of a pencil-blaster. Blast all the surface on which the porcelain is to be applied with **aluminium oxide abrasives 250 µm** and clean the surface (vapour or boiling water, ethyl acetate).
2. If **oxide firing** is carried out to check the surface, it need to be fired on **960 °C** at vacuum for **5-10 minutes**.  
After cooling the frame has to show slightly dark greenish colour. Oxide layer should be removed with **aluminium oxide abrasives 250 µm** and cleaned again (vapour or boiling water, ethyl acetate).
3. The opaque is then applied on the surface by a first thin wash firing followed by a second covering opaque.

4. Firing has to be done according to the ceramic manufacturer's instructions.
5. **After each firing step (dentine bake, build-up and glazing) carry out slow cooling down to 700 °C.**
6. Remove ceramic mechanically. Hydrofluoric acid (HF) corrodes metal frame.

### **Finishing**

After firing of the metal-ceramic prosthetic work sand-blast visible surface of the frame with **aluminium oxide abrasives 50 micr.** and polish it with suitable grinding and polishing instruments. At the end use **Universal polishing paste for Cr-Co-Mo alloys** and polish up to high gloss.

### **Soldering and Welding**

Soldering before firing of the frame can be carried out with suitable base-metal-solder and high temperature flux.

For welding with laser use suitable base-metal welding wires.

Store in a dry place at room temperature.

### **Final Safety Notes!**

Metal dusts are harmful. Use a dust extractor. Consider allergic hypersensitivities to contents of the alloy.

### **Reciprocal Actions!**

In case of occlusal and approximal contact of different alloys electrochemically based reactions may very rarely occur.

### **Warranty!**

Whether given verbally, in writing or by practical instructions, our recommendations for use are based upon our own experience and trials and can only be considered as standard values. Our product is subject to further development. Therefore alterations in construction and composition are reserved.

### **Proof of conformity:**



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