



# Operating Instructions

State 3/2019

General ~~123~~ms:

**SOLIBOND C plus** is a clinical proved nickel and beryllium free Cobalt-Chrome Alloy for application in dental area. Present documents contains instructions which have to be followed for secure production and proper usage. It is absolutely essential to read this instructions the before usage of Solibond.

**Solibond C plus** corresponds to the requirements of DIN EN ISO 22674 and points out due to its hardness of 280 HV10.

**SOLIBOND C plus** is suitable for open flame melting as well as for high frequency casting, it can be soldered and is characterized by high biocompatibility.

## 1.1. Product description/ Delivery:

Casting	Art.	969-0250	SOLIBOND C plus	250 g
Casting	Art.	969-1000	SOLIBOND C plus	1000 g

## 1.2. Manufacturer:



YETI Dentalprodukte GmbH, Industriestraße 3, D-78234 Engen, Germany  
Tel. : +49 (0) 7733-94100 Fax: +49 (0) 7733-941022 e-mail-adresse: info@yeti-dental.com  
Technical Questions: +49 (0) 7733-9410-20

## 2. General information

Biocompatible Cobalt-Chrome dental alloy with less oxide film, to be used only by dental technicians for dental restorations in the patient's mouth. Medical product according RL 93/42 EWG. This dental alloy serve for the production of custom-made alloy constructions according the instructions of a dentist. Keep away from frost and contamination, use original package for storing.

## 3. Indikation

For production of dental restorations such as crowns, bridges with traditional melting and casting method. Thickness of crown walls and connectors, as well as whole construction are based on the expert knowledge of qualified dental specialists. Preparations in form of chamfer or rounded steps with 1 mm contact area. Substance removal occlusal and incisal 1,5-2 mm, edge radius 0,7 mm, preparation angle 6-8°

### 3.1 Information for usage

Only educated and experienced dental technicians fulfils the requirements for the proper use of this medical product. For the bridge constructions it is advisable to make the sufficient size of connections and to strength the construction by garland. Sufficient wall thickness always have to be taken in account. We advice the thickness of at least 0,35 mm. Massive crowns and bridge connectors should be supplied with casting channel system. The bridge have to be constructed in accordance with necessities of ceramics application.

### 3.2. Embedding

SOLIBOND C plus is compatible with Yeti Expansion Art. 955-0000, Yeti Expansion plus Art. 956-0000 Yetivest Art. 932-0000, Duovest Art. 952-0000 or any other phosphate-bound commercial investments which can be pre-heated up to 900°C following the manufacturers instructions. A setting time of 30 minutes has proved to be good at the praxis.

### 3.3. Casting

**SOLIBOND C plus** must be melted in a **ceramic crucible** using ventilation for removing of vapours. Use same crucible for same alloy. Clean crucible after usage. Never use graphite crucibles. In case of flame melting with Propan / Oxygen or Acetylene / Oxygen pay attention to neutral adjustment of the flame. In case of high frequency melting wait till the ingots lose their form and the melting mass moves itself. Immediately after tearing of the oxyd layer start with the casting.

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## 3.4. Cooling

After casting let the muffle **cool slowly and at room temperature**. Do not reuse already casted alloy. Important ingredients for metal/ceramic bonding will evaporate through the first melting of the alloy. During re-melting, these components decrease and a sufficient metal/ceramic bonding can no longer be guaranteed.

The units are finished using normal tungsten carbides and aluminium-oxide stones. The minimum thickness of the finished units should be 0,2 mm. To avoid any contamination while working with different alloys, we suggest you use the grinding instruments every time with one kind of alloy and not with different alloys.

## 3.5. Ceramic firing

**Oxide firing** can be done at 960°C for 5 minutes. Next, blast frames with 100-250my Aluminium oxide and clean as usual with distilled water, ultrasonic or steam cleaner. Never use acids for **non precious metal to ceramic alloys**. Make firing and cooling down of ceramics according to ceramic processing instructions.

According the present experience long-term cooling down is not necessary for Dentine firing, for corrections and glaze firings up to aprox. 750°C and especially for K2 LF or PoM (Press over Metal).

## 3.6 Soldering

SOLIBOND C plus can be soldered with **LOT UNIVERSAL** Art. 960-0000. Do not use Gold or Palladium soldering Materials.

## 4.0 Storage information

Solibond C plus is delivered in practical zylindric form.

- Store dry in original package between 5° and 50°C, avoid direct sunlight.
- Make visual control of the marking on ingots before usage to make the clear identification of a product possible.

**SOLIBOND C plus** can be soldered with **LOT UNIVERSAL** Art. 960-0000. Do not use Gold or Palladium soldering Materials.

## 5.0 Contradictions

**Do not use in case of intolerances or allergical reactions in the mouth on components of this alloy. Can not be used by not sufficiently trained or unexperienced in construction dental technicians.**

**Prepared tooth stumps shorter than 3mm can not be used.**

## 6.0 Safety instruction

Alloy dust is hazardous, use exhaust system while working. Take in account possible hypersensitivity against the alloy components.

Above-mentioned instructions are based on own experience. Damage claims basd on our recomendation can not be higher than the value of delivered goods.

Cleaning and disinfection of patient mouth have to be maken in accordance with clinical praxis before placement of the constructions. For fixation use commercially available cements or with glass ionomer cement for preparations higher than 3 mm.

## 7.0 Warranty

For alloys Solibond C plus, Solibond C-plus there ist the warranty of one year on manufacturing faults due to faulty materials. The warranty voids in case of:

- improper use because of non-observance of this instructions
- non-conform use, negligence while processing or mistakes in design and cosntruction
- force majeure or transit damage on delivered shipmen, where this damage can not be covered by transport company insurance.

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In warranty case Yeti Dentalprodukte GmbH makes free of charge replacement of the unprocessed material. Condition is the sending to Yeti defective parts for analyse. Further compensation for damages is excluded.

## 7.1 Customer service:

In case of possible problems during processing or for improvement suggestions we advice you to note the lot number and to contact Yeti Dentalprodukte GmbH.










## 7.2 Disposal:

After the placement in the patient mouth the product should be disposed as hazardous medical waste. Please adhere to national and regional regulations.

## 8. For your attention

All regulatory requirements and local regulations for ordering, processing and disposal should be taken in account and fulfilled.

## 9. Symbols

	Producer
	CE sign with number of notified body
	Consult operating instructions
	FOR DENTAL PROFESSIONALS ONLY (USA)
	Non-sterile product
	Order number
	Lot number
	Production date
	Shelf life till

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# Certificate

Product name:

**SOLIBOND C plus**

Description:

**Metal to ceramic Co Cr Dental Alloy**

Delivery:

**Art. 969-0250**

**SOLIBOND Cplus**

**250 g**

**Art. 969-1000**

**SOLIBOND C plus**

**1000 g**

Chemical Composition according to: **EN 10204 – 2.2**

<b>Co %</b>	<b>Cr %</b>	<b>W %</b>	<b>Mo %</b>	<b>Nb %</b>	<b>Si %</b>	
63	24	8,1	2,9	0,9	1,1	

## **Technical Data:**

Density: **8,3 g/cm<sup>3</sup>**  
Melting point (Solidus/Liquidus): **1.310 – 1.370°C**  
Casting temperature **1.430 °C**  
Coefficient of Expansion (20-600° C): **14,0 x 10<sup>-6</sup> K<sup>-1</sup>**  
Hardness: **280 HV**  
Modul of Elasticity: **210.000 MPa**  
Expansion : **10,1 %**  
0,2% Expansion limit: **550 MPa**

Norm:

**DIN EN ISO 9693**  
**DIN EN ISO 22674**  
**Alloys Typ 2-4**

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