


# Operating Instructions

State 3/2019



1. **General Terms: SOLIBOND N is a beryllium free, Nickel-Chrome Alloy.**  
Optimum Metal-Ceramic bonding is provided due to the special oxide bonding.  
SOLIBOND N is suitable for open flame melting as well as for high frequency casing; one of the remarkable features is its high corrosion resistance. Its composition has been well established for many years.

1.1. Product Description/ Delivery	Art. 963-0250 Art. 963-1000	SOLIBOND N SOLIBOND N	250g 1000g
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- 1.2. **Manufacturer:**  YETI Dentalprodukte GmbH, Industriestrasse 3, D-78234 Engen, Germany  
Tel.: 0049-7733-94100 Fax: 0049-7733-941022 e-mail-adresse: [info@yeti-dental.com](mailto:info@yeti-dental.com) Technical Questions: 0049-7733-9410-20

2. **Determined use:**  
Metal to ceramic Nickel-Chrome Alloy with high corrosion resistance and less oxide film, to be used only by dental technicians or similiary qualified people for dental restorations in the patient's mouth.

### 3. Instructions for use.

#### 3.1. Modelling

In order to reach a good casting of Solibond N , the wall thickness of the modelling units should not be less than 0,45mm. Please ensure that sprues with the right dimensions (thickness & reservoir) are attached to the full cast crown and bridge parts.

#### 3.2. Bedding

SOLIBOND N is compatible with Yetivest Art. 932-0000, Duovest Art. 952-0000 or any other phosphate-bound commercial investments which can be pre-heated up to 1.020°C following the manufactures instructions. A pre-heating temperature of 900° C has proved to be good at the Praxis.

#### 3.3. Casting

SOLIBOND N must be melted in a **ceramic crucible** using ventilation for removing of vapours. **Never use graphite crucibles.** Use always the same alloy with the same crucible and clean after use.

**Flame and High frequency melting:**

The neutral adjusted flame **with Propan/Oxygen** or Azetylen/Oxygen as well as the **non use of the Flux** prevents overheating of the alloy. As soon as the last cast ingots have slumped, the shade disappeared and immediately after opening (tear) of the oxide layer start the casting procedure.

#### 3.4. Cooling

After casting let the muffle **cool slowly down and at room temperature**, (do not rinse with cold water). 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 same grinding instruments.

#### 3.5. Ceramic firing

**Oxide firing** can be done in air at 980° C for 10min., but it is **not necessary or obligatory**.

Next, blast frames with 100 my Aluminium oxide and lean as usual with distilled water, ultrasonic or stream cleaner. **Never use acids for non precious metal to ceramic alloys.** Process wash, opaque and other firings according to ceramic processing instructions and in correspondence with it CTE (i.e. K2 Leucit ceramic/YETI). Long-term cooling is not necessary. The ceramic objects should be removed from the carrier only when the red heat has disappeared.

#### 4.0 Soldering

SOLIBOND N can be soldered with **LOT UNIVERSAL** Art. 960-0000. Don't use Gold or Palladium soldering materials.

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## 5.0 Guarantee

The user is responsible for correct use and processing. All recommendations are based on our own experience. Any claim for compensation we receive can only relate to the value of the goods which have been delivered excluding turnover tax.

## 6. 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's name: **SOLIBOND N**

Description: **Metal to Ceramic NiCr Dental Alloy**

Delivery: **250 gr Art. Nr. 963-0250**  
**1000 gr Art. Nr. 963-1000**

Chemical Composition:

Ni %	Cr %	Mo %	Si %	Fe %
62,7	24,5	10,4	1,4	1,0

## Technical Data:

Density: **8,2g/cm<sup>3</sup>**  
 Melting Point (Solidus): **1.250 – 1.330° C**  
 Casting temperature: **1.390 °C**  
 Coefficient of Expansion 20-600°C (25-500°C) **14,1 (13,9) x 10<sup>-6</sup> K<sup>-1</sup>**  
 Hardness: **180 HV**  
 E-Modul : **200.000 Mpa**  
 Expansion : **25 %**  
 0,2% Expansion limit: **345 MPa**

Norm : **DIN EN ISO 9693**  
**Appendix 5 MP-Directive 93/42/EWG**  
**DIN EN ISO 22674**

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