

# CERACAST NNB

Non-Precious Dental Casting Ceramic Alloy - Nickel and Beryllium Free

Code: MMI-CERACAST-NNB

## Instruction & Technical Information

Technical Data:	
Melting Range	1308°C – 1391°C
Yield Strength	432 MPa
Tensile Strength	518 MPa
Elongation	2.0%
Density	8.89 (g/cc)
Vickers Hardness	382 HV

  

Composition:	
Cobalt	63.0%
Chromium	29.0%
Molybdenum	6.0%
Silicon	1.0%
Manganese	1.0%
Tungsten, Carbon, Iron, Others	<1%

### WAXING:

Waxing procedure is very similar to the application of precious and semi-precious alloys. However, waxing could be as thin as 0.3 mm to 0.35 mm.

### SPRUEING:

A- Direct for single units. Sprueing should be ¼ (6 mm) in length. Based on the size and the thickness of crowns use 6-8 gauge sprues.

B- Indirect, for multiple units. Use straight 8 gauge sprue, about 1/8" (3 or 4 mm) in length, and connect it to the unit.

For long spanned bridges use an additional sprue connected to the last unit.

### INVESTING:

Use high heat investments; follow the manufacturer's instructions carefully. Use debubbler. Use one-two ring liner.

After investment has set, scrape the top of the investment to allow gases to escape.

### BURNOUT:

Place the ring in the furnace at room temperature (or as high as 600°F = 315°C if needed) increase the temperature to 1800°F (982°C) with one hour holding time. Add 10/15 extra minutes for each additional ring.

### MELTING & CASTING:

Use induction melting equipment or gas/oxygen torch.

A- Torch casting: Use multiple orifice torch tips. Do not use crucible used for other alloys. Preheat the crucible. Move the torch allowing even distribution of heat. The individual ingots will not form together to form a single mass. Release the casting arm as soon as the alloy starts to slump or sag. Bench cool the cast for about 5 minutes.

B- Induction Casting: Set the temperature to 2700°F (1480°C). Set the casting arm speed between 425 and 450 rpm.

### METAL FINISHING:

Sandblast the investing with pure non-recycled aluminum oxide. Do not smooth the surface of the frame bearing porcelain.

Use carbides, discs, diamonds and stones for metal finishing.

### METAL PREPERATION:

Sandblast the area bearing porcelain, and do not touch the area accepting porcelain; clean with ultrasonic cleaner.

To degas the metal, place the metal work in a furnace at 1200°F (650°C); create a vacuum and increase the temperature 100°F (38°C) per minute to 1800°F (980°C). Release the vacuum and bench cool.

### OPAQUE & PORCELAIN APPLICATION:

Follow manufacturers instructions.

**Note:** For best results use at least 50% new metal with 50% sandblasted and cleaned buttons.



**Mountain Medico, Inc**

600 North Mountain Ave #D204 • Upland, CA 91786

P: 909-931-0688 • F: 909-931-0908

Email: [info@mountainmedico.com](mailto:info@mountainmedico.com)