



Heimerle + Meule Group



Cookson Precious Metals Ltd,  
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Cookson Drijthout BV  
Keienbergweg 12 1101 GB Amsterdam

**Device Name:** MATTIDENT BIO R

**Device Type:** Pink/Yellow – Tarnish Resistant  
Casting Alloy – Palladium Free

**Indications:** TYPE 4: For appliances with thin sections that are subject to very high forces, e.g. removable partial dentures, clasps, thin veneered single crowns, full arch fixed dental prostheses or those with small cross-sections, bars, attachments, implant retained superstructures.

**Free from Be, Cd, Ni, and Si.**

**Intended Use:** Fabrication of custom-made dental restorations

**Intended Patients:** Any (no restriction on patient characteristics)

**Intended Users:** Dental laboratory technicians.

**There are no specific contraindications, warnings, or precautions for patients, though see composition if patient allergies are known or suspected.**

There are no special storage requirements for this material.



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**REF**

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## Technical Data

<b>Density</b>	15.5 g/cm <sup>3</sup>	
<b>Composition</b>	Au	72.0%
	Cu	12.0%
	Ag	10.9%
	Pt	4.0%
	Zn	1.0%
	Others <1.0%	Ir
<b>Melting Range</b>	880 - 925°C	
<b>Elongation</b>	45%	As-cast condition
<b>0.2% Proof Stress</b>	420MPa*	
<b>Casting Temperature</b>	1055°C	
<b>Casting Ring Pre-Heat</b>	700°C for 40 minutes	
<b>Solders: Pre-Bonding</b>	Mattiflo 765Y	
<b>Flux: Post-Bonding</b>	Tenacity 125	
<b>Typical Applications</b>	Single and multiple units. 3/4 crowns. Inlays and denture work	

## Additional Information

<b>Disposal / Re-Use Considerations:</b>	Clean scrap can be reused to make further restorations, however alloys that have been used on patients should not be reused to minimize contamination risk. Once appropriately cleaned, precious metal alloys may be sent for recycling.
<b>In the event of a defective device</b>	Contact Cooksongold on +441212338170. If the defect has only become apparent after the alloy has been used on a patient, then also contact the competent authority of the Member State in which the patient is established (refer to <a href="https://ec.europa.eu/health/md_sector/contact_en">https://ec.europa.eu/health/md_sector/contact_en</a> )
<b>Summary of Safety and Clinical Performance (SSCP)</b>	The Summary of Safety and Clinical Performance (SSCP) is available on request and can also be found at <a href="https://ec.europa.eu/tools/eudamed">https://ec.europa.eu/tools/eudamed</a> by searching for the Basic UDI-DI 5057531 ALLOYTL (when the website is operational).

## DIRECTIONS FOR USE

### WAXING

**MATTIDENT BIO R** is suitable for casting in thin section.

A minimum wax thickness of 0.2mm for single crowns and 0.4 mm for multiple units is recommended. The connection area of abutments must be greater than 3 mm x 3 mm. Sprue each unit individually with 2.5 mm wax rods. If using reservoir bars, sprue diameter can be reduced to 1.5 mm. Vent rods should be 1 mm if used. Avoid sharp joints and ensure all shoulders and edges are well rounded. Stress relieve the wax pattern in water at 32 °C for 5 - 10 minutes.

### INVESTMENT

Most investments suitable for gold casting alloys will give excellent results., this includes graphite based powders. Pouring the investment under vacuum and using a debubbleiser will assist in producing a smooth surface finish.

### BURN OUT AND PRE - HEAT

Follow normal procedures for wax burn out and heat the investment according to the manufacturer's instructions. Heat soak the casting ring for a minimum of 40 minutes at 700°C. Time necessary to successfully heat soak the casting ring increases with size.

### CASTING Graphite crucible

All surplus/scrap metal can be successfully re-melted provided all traces of investment have been removed and the metal is clean. It is strongly advised to add approximately 1/3rd new metal to each melt.

A little Tenacity 125 flux added to the melt immediately before casting will improve overall cleanliness and will help to prevent oxidation. This is especially important when adding scrap metal. Ensure the alloy is fully liquid and spinning before casting. The time taken to reach both melting and casting temperature must be kept to a minimum and the alloy cast promptly if over heating is to be prevented.

As well as miscasts and porosity, over heating can result in the crown "blackening" once fitted., To avoid this, oxy - propane torches must be correctly adjusted and Induction furnaces calibrated regularly.

### CLEANING

Break out the metal and clean by brushing or by sand blasting with non-recycling aluminium oxide after which an acid pickle will ensure total cleanliness of the casting. Finally prepare the surface of the metal with a proprietary stone kept solely for use on **MATTIDENT BIO R** and polish to a high lustre using brushes and rouge.

### INDICATIONS

The alloy is strongly recommended where patients are on sulphur based drugs or where a high sulphur diet is suspected.

**MATTIDENT BIO R** is also indicated where heavy stress will be encountered and cannot be compensated for by increased metal thickness ie 3/4 crowns and thin inlays.

**SOLDERING**

Good results can be achieved by using Mattiflo 765Y and a freshly prepared paste of Tenacity 125

**Caution:** *Suitable protective clothing and the wearing of safety glasses is recommended when melting this product.*

No special storage requirements