



Heimerle + Meule Group



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

Device Name: MATTICRAFT BIO T

Device Type: High Gold – Extra Hard
Ceramic Bonding Alloy – Rich Yellow

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, Si and C.

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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| ZCT 000 |
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Technical Data

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| Density | 18.4 g/cm ³ | |
| Composition | Au 85.2% Pt 11.1% Cu 1.8% In 1.3% Others <1.0% Fe | |
| Melting Range | 1045 - 1130°C | |
| Elongation | 25% | After simulated porcelain firing |
| 0.2% Proof Stress | 410MPa | |
| Coefficient of Thermal Expansion | 14.3 x 10 ⁻⁶ K ⁻¹ (25 - 600°C) 14.4 x 10 ⁻⁶ K ⁻¹ (25 - 600°C) | |
| Casting Temperature | 1280°C | |
| Casting Ring Pre-Heat | 850°C for 40 minutes. | |
| Solders: Pre-Bonding | Mattiflo 1025Y | |
| Flux: Post-Bonding | Mattiflo 715Y | |
| Typical Applications | Single units, Multiple units, Long spans up to 16 units | |
| Typical Porcelains | Vita VMK, Doric Universal | |

Additional Information

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| Disposal / Re-Use Considerations: | 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. |
| In the event of a defective device | 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 https://ec.europa.eu/health/md_sector/contact_en) |
| Summary of Safety and Clinical Performance (SSCP) | The Summary of Safety and Clinical Performance (SSCP) is available on request and can also be found at https://ec.europa.eu/tools/eudamed by searching for the Basic UDI-DI 5057531 ALLOYTL (when the website is operational). |

DIRECTIONS FOR USE

WAXING

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| A minimum wax thickness | 0.3 mm for single crowns 0.5 mm for multiple units |
| Abutment connection area | 3mm x 3 mm minimum |
| Direct sprueing each unit | 3mm diameter wax rods. |
| Indirect sprues reservoir bars | 4mm diameter (min) |
| Vent rods (if used) | 1mm diameter. |
| Round all shoulders and edges | |
| Stress relieve wax patterns in water at 32 °C for 5 - 10 minutes. | |

INVESTMENT

Graphite or carbon free investment recommended,
Follow the investment working instructions.

BURN OUT AND PRE - HEAT

Burn out and heat according to investment working instructions.
Heat soak the casting ring for a minimum of 40 minutes at a recommended temperature of 800°C. This should be increased to 850°C for small castings. Increase soak time with casting ring size.

CASTING

We recommend the use of ceramic crucibles when casting **MATTICRAFT T**, but with care graphite can be used.

Only reuse clean scrap, keeping a minimum of 50% new metal in each charge. Tenacity 125 flux added to the melt immediately before casting may improve cleanliness but should be avoided if possible.

If heating with oxy-propane, the torch should be free of carbon deposits and adjusted correctly. Heat the alloy as rapidly as possible and cast as soon as the metal is fully liquid and spinning. Slow heating or holding the metal in its liquid state WILL lead to miscasts, porosity or contamination.

If casting by induction furnace, regular calibration is recommended and extra care should be taken to avoid alloy overheating.

DO NOT quench the metal as this may cause castings to distort at a later stage. Bench or slow cooling is highly recommended.

CLEANING

Break out the metal and clean by brushing or by sand blasting with non-recycling aluminium oxide. Prepare the surface of the metal with pink or brown stones kept solely for use on **MATTICRAFT T** Use of worn diamond stones or those used for other alloys causes bonding problems due to contamination.

The alloy is suitable for attachment work and can be milled.

Finally clean the castings in steam, acetone or by ultrasonic cleaner The use of strong acids such as HF is not advised.

DEGASSING AND OXIDATION

All metals absorb gas when liquid. This should be removed by heating the castings in vacuum to 960 °C for three minutes.

Oxidation is carried out by further heating at 960 °C for six minutes in air and correctly oxidised, **MATTICRAFT T** should have a uniform grey colour.

Opaque washes can either be applied directly to the oxide surface or for lighter colours, the oxide can be removed by blasting with 125µm non recycling aluminium oxide powder.

Clean all castings in hot water or by ultrasonic cleaner prior to the porcelain being applied.

PORCELAIN APPLICATION

Good results can only be achieved by following the instructions of the opaque / porcelain manufacturers.

We recommend that porcelain furnaces be subject to regular calibration and a routine purging cycle. It is important to ensure suitable support for long bridges if heat sag is to be avoided.

MATTICRAFT T requires a short cooling cycle after porcelain firing.

SOLDERING

Where possible, work should be planned to avoid the use of solder. However, if this is not possible, use Mattiflo 1025Y for soldering prior to applying the porcelain and Mattiflo 715Y for post soldering.

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