Combibond®

BST Triumph

Cobalt-chrome bonding alloy (nickel and beryllium free in accordance with EN ISO 22674 and EN ISO 9693)

ONLY FOR DENTAL USE BY QUALIFIED PERSONNEL

Feguramed GmbH
Jahnstr. 2, 74722 Buchen (Odenw.)
Germany
Tel. +49 (0)6281/5227-0 FAX -15
www.feguramed.com

CE 0482

MADE IN GERMANY

Instructions for use

1. Indication

Combibond® BST Triumph is a cobalt-chrome bonding alloy (nickel and beryllium free in accordance with EN ISO 22674 and EN ISO 9693) for the complete crown and bridge technique: ceramic and acrylic veneering techniques, milling technology, combination technology, as well as conical, bar and construction elements

2. Technical data

Co	Cr	W	Nb	V	Mo	Si	Fe, Mn	C
~ 60	25	9.0	2.0	1.0	1.0	1.0	< 1	< 0.1

EN ISO 9693/EN ISO 22674	Type 5
Rp 0.2 [N/mm2]*	510
Tensile strength [N/mm2]*	790
Elongation [A5 %] *	> 5
Vickers hardness HV 10	> 280
Density [g/cm3]	8.4
CTE (20-600°C) [µ/K]	14.2
Melting range [°C]	1285-1380
Oxidation temp. [°C]	960/vac. (2 min.)
Supply form	cylinder

3. Safety instructions

⚠ Inhalation of metal dust and vapour is harmful to health. Alloys must therefore only be processed at workplaces with extraction hoods and using respiratory protection masks of type FFP3-EN149!

4. Modelling / Casting channels

Avoid sharp edges. Modelling should not be carried out below a minimum wall thickness of 0.3 mm. A hollow channel should be produced in the cervical and palatinal regions.

Single crown	Canal	Ø 3 – 3.5 mm
Bridge	Crossbars	Ø 3 – 3.5 mm
	Casting channel	Ø 3 – 3.5 mm
	Pinning to object	Ø 2.5 mm, length 1.5 to 2 mm

5. Investing / Preheating

For investing, we recommend our phosphate-bonded model casting investment materials with a liquid concentration of 90 – 100%. Follow the the instructions for the model casting investment materials! Pre-heating temperature 850 – 900℃.

Speed preheating	Conventional preheating
One-micro-Plus® (REF 3060) Feguravest® S (REF 3050) MC-Vest micro NEW (REF 3025) Feguravest® ultrafein NEW (REF 3117)	 MC-Vest micro (REF 3013) Feguravest® ultrafein (REF 3110)

Note

Combibond® BST Triumph is intended for single use only! Multiple melting can significantly change the composition and therefore also the material properties.

6. Melting / Time of casting / Casting

Only use preheated ceramic crucibles!

1. Vacuum pressure casting and centrifugal casting with induction heating: Melt the casting cylinder until the melt takes on a consistent light colour and the casting crust tears open. Wait 3 to 4 seconds and then pour off.
2. Flame centrifugal casting: Apply the flame over the crucible until the liquidus temperature has been attained, the melt takes on a consistent light colour. Pour off once the melt clearly moves under the pressure of the flame.

7. Devesting

Allow the hot muffle to cool down in the air to lukewarm, carefully remove large pieces of investment material with tongs and fine divestment then follows with the Alumix 120 µm abrasive (REF 7041). Do not quench the hot muffle in cold water!

8.1 Ceramic: Pretreatment of the framework

Detach the casting channels and process the bridge / crown as usual. Only use sintered diamond or cross-cut carbide tools. Blast the prepared framework once again with Alumix 30 µm (REF 7040) - 50 µm (REF 7046) at a blasting pressure of max. 2 – 4 bar.

8.2 Oxide firing

The blasted and steam cleaned framework is annealed at 960℃ for approx. 2 min. in vacuum. Afterwards , blast again with Alumix 30 µm (REF 7040) - 50 µm (REF 7046) and steam clean. Only use compressed air free of oil and condensed water. Only use a blasting unit for blasting crowns and bridges that is free of investment material residues, as phosphate residues can weaken the metal-ceramic bond.

8.3 Ceramic firing

The ceramic manufacturer's instructions must be followed in ceramic firing. Dental ceramics are suitable for veneering, which have the same CTE (14.2) as Combibond® BST Triumph.

9. Acrylic veneering:

The manufacturer's relevant instructions must be followed for acrylic veneers.

10. Laser welding

Laser welding of non-ferrous dental alloys is generally preferable to soldering.
We recommend our Combibond® laser welding wires based on Cobalt-chrome-molybdenum (Ø 0.35 mm, REF 4085 and Ø 0.50 mm, REF 4090).

11. Soldering:

If soldering is unavoidable, we recommend our white solders containing gold:

- Combibond® Lot 2 (1060℃) for soldering before ce ramic firing (REF 1000 011)
- Combibond® Lot 5 (750℃) for soldering after cera mic firing (REF 1000 014)

12. Contraindications

In cases of known hypersensitivity to one of the components of the alloy, the alloy should not be used or the restorations must be replaced by other materials.
Electrochemically induced paraesthesia may occur due to galvanic effects arising from approximal or antagonistic contact to dental prostheses made of different alloys. Also in this case, the restorations have to be replaced

Sales unit

REF 4030	120 g
REF 4035	1000 g

Guarantee

As a result of a certified quality management system, Feguramed guarantees perfect quality for its products. The processing recommendations are based on reference values determined in our test laboratory. These reference values can only be assured if the processing recommendations are precisely followed. The user assumes responsibility for processing the products. Feguramed is not liable for poor results, as Feguramed has no influence on processing. Should claims for damages still arise, these are exclusively related to the value of the products.