Esteticor New Start®

Instructions for use

Palladium-based metal alloy for metal-ceramic dental restorative systems

Mixing of different alloys or alloys of similar types is not allowed!
Wear darkened eye protection and protective gloves when melting.
Protect eyes, hands and breathing during pickling.
Protect eyes and breathing during processing with rotating instruments with an aspirator device.

With the publication of these instructions of use all previous editions are no longer valid.

The manufacturer refuses any liability for damages due to disregard of the instructions for use below.

General instructions for use

Modelling
Usual modelling technique for ceramic fused to metal works. Minimal wall thickness 0.4 mm. With bridgework the connections must have a minimum section of 6–9 mm^2. Modelling of garlands or inlay shaped reinforcements in the palatinal region will give added stability. The application of air and cooling vents improves casting results.

Investing
The following investments are recommended for this type of alloys:
CM Ceramicor (phosphate based, containing graphite).
CM-20 (based on quartz and cristobalite without graphite for the rapid preheating technique).
Plaster-based investments are not suitable for this type of alloy.

Re use of alloy
Only use perfectly cleaned (by sandblasting with aluminium oxide) buttons and sprues and add **at least ⅓ of new alloy.**

Traceability of lot numbers
If different lots of an alloy are being used for the realisation of a restoration, all lot numbers concerned must be noted in order to assure traceability.

Surface quality of cast objects
In order to prevent corrosion the cast object must have a surface free of shrink holes and porosities after trimming and polishing.

Cooling of castings
Do not quench the casting cylinder after casting, but bench cool to room temperature. Removal of oxide layers Oxides due to firing or soldering can be removed by sandblasting. Gilding of frameworks Gilding is carried out at the users own risk.

Polishing
After the last firing free metal surfaces must be polished to a high shine in order to completely remove the oxide layer. Disinfection Each prosthetic restoration must be cleaned and disinfected before try in or definite insertion in the mouth of the patient.

Further information
On processing precious metal alloys, soldering and casting-on are included in the Dental documentation of Cendres+Métaux and in the website www.cmsa.ch/dental.

Allergies
With patients having an existing allergy to one or several elements contained in any one alloy, this particular alloy must not be used. With patients suspected of having an allergy to one or several elements contained in any one alloy, this alloy can only be used after preliminary allergological testing and proof of a non existing allergy.

Rx only

The products carry the CE sign.
See packaging for details.

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Physical and mechanical properties

Alloy	Indications a	b	c	d	e	f	Colour	Composition in weight % Au- + Pt-Met.	Pd	Ag	Sn	In	Zn	Ru	B	Solder ① Before firing	Solders ① After firing
Esteticor New Start®		✓	✓	✓	✓		White	58.30	58.00	29.99	6.00	4.00	1.70	0.30	0.01	S.W 1100	S.G 810 / S.G 750

ISO 22674 / ISO 9693

Indications a  Inlays, onlays b  Single crowns c  Short-span bridgework d  Long-span bridgework e  Milled work f  Clasps, lingual bars, palatinal plates

① The use of solders not mentioned in the table is subject to the user's risk. In case of uncertainties, consult the instructions of the manufacturer involved.

Alloy	Density g/cm³	Melting range °C	Casting temp. °C	Crucible	Hardness as cast HV5*	anne-aled HV5*	after firing HV5*	harde-ned HV5*	Young's Modulus GPa*	0.2 % proof stress, Rp 0.2 % as cast MPa*	anne-aled MPa*	after firing MPa*	harde-ned MPa*	Elongation A5 as cast %*	anne-aled %*	after firing %*	harde-ned %*	Linear coefficient of thermal expansion CTE (25–500 °C) $10^{-6}K^{-1}$	(25–600 °C) $10^{-6}K^{-1}$
Esteticor New Start®	11.2	1180–1270	1400–1450	❷ ❸	265		220		125	625		525		22		32		14.5	14.8

❷ Universal ceramic crucible ❸ Vitrified carbon crucible
* The values indicated result from measurements obtained under exactly defined conditions. Individual deviations of ± 10 % are possible and to be considered as normal.

Particular instructions for use

Alloy	Preheating temperature	Recommended casting systems (not compulsory) Propane-oxygen flame	Vacuum-pressure casting with electric resistance furnace	Centrifugal casting with electric resistance furnace	High frequency induction in atmosphere	High frequency induction in protective gas atmosphere	Trimming of the framework surface with ceramically bonded grinding stones	Sandblasting with non-recycled aluminium oxide (Al_2O_3) 50 μm
Esteticor New Start®	**850 °C**	✓			✓	✓	✓	✓

Alloy	Cleaning with steam jet	Oxide firing with vacuum	Sandblasting **after oxide firing** with non-recycled aluminium oxide (Al_2O_3) 50 μm	Cleaning with steam jet
Esteticor New Start®	✓	**960 °C / 5 min**	✓	✓

Alloy	Special indications for veneering with ceramic compounds Slow cooling	Normal cooling	Rapid cooling	Heating rate max.	Compatible tested ceramics	**Other ceramic compounds**
Esteticor New Start®	✓				**VITA VMK 95** (Vita Zahnfabrik)	The alloy is compatible with the usual ceramic compounds **with a medium CTE.** In case of doubt, consult the instructions of the ceramic manufacturer concerned.
Not recommendable for ceramic compounds with sensible reaction on silver oxides						