

Kiero Vest-Speed – Instruction of use

Universal Precision Shock Heat Investment for C&B, precious and non-precious alloys

Kiero Vest Speed is the latest development and is a silica-phosphate bounded, carbon-free investment and can be used in both the shock heat technique and the conventional cold furnace technique. Kiero Vest Speed is suitable for all dental alloys. Due to the very fine grain structure, it gives clean, bright castings which are precise and easy to deinvest and offers high thermal stability and problem-free castings meeting the variety of requirements facing a dental technicians.

- Mixing ratios:** 13-14 ml **Kiero Vest-Liquid:** 60 g Powder **Kiero Vest-Speed**
 22-24 ml **Kiero Vest-Liquid:** 100 g Powder **Kiero Vest-Speed**
 36-38 ml **Kiero Vest-Liquid:** 160 g Powder **Kiero Vest-Speed**
- Preparation:** Add powder to liquid and mix it first by means of a spatula and then under vacuum for at least **75-90 seconds!!!**
- Cold furnace:** Place the investment ring into either a cold furnace or one that is at max. 150-200°C and raise to 270-280°C to burnout wax for 20 minutes, then up to 570-580°C and hold for 20-30 minutes after which increase to final end temperature and hold for 30-45 min. according ring size before casting.
- Hot furnace:** 12-15 min after mixing (**the first contact powder & liquid is 0 min.!!!**) put the muffle in the hot furnace (**by use without metal-ring – 820°C**) or **using a metal-ring at max. 850°C**, hold at this temp. for 15 min. before going up to the final temperature and holding for 45-60 min. according ring size before casting. With this method you can save a lot of time, especially in the case of small casting pieces. In case of more complex constructions it is preferable to apply the nocturnal method. If the cylinder is already cold (after 20 minutes to a maximum of 25 minutes after preparing the mixture), place the cylinder in an oven with a temperature of approx. 500 °C. Maintain this temperature for 15-20 minutes and then raise the temperature until reaching the final temperature. According to the cylinder, keep 30-60 minutes.
- Recommended Casting temperature:** Precious and Semi-Precious alloys: 700 - 850°C
 Palladium based, Non-Precious alloys: 860 - 950°C
Please follow the instructions of the manufacturer of the alloy!
- De-Vesting:** Allow the ring to cool slowly, do not quench as this can result that the oxide layer adheres to the alloy. Carefully remove the bulk of the investment with deinvesting scissors, then sandblast it with fine blasting material.
- Safety Information:** Investments contain quartz. Wear adequate protection. Do not breathe investments dust!!!
 If the Kiero Vest Liquid comes into contact with skin wash off with soap and water. If Kiero Vest liquid comes into contact with eyes wash out immediately and seek medical attention!!! Kiero Vest Liquid is alkaline. Consult Kiero Vest-Speed safety data sheet for further information.

Expansion properties (at 18°C - 22°C)

Liquid	Setting-Expansion	Thermal- Expansion (750°C)	Total- Expansion (750°C)
100 %	1,6 – 1,8 %	1,2 %	2,8 – 3,0 %
75 %	0,7 - 1 %	1,2 %	1,9 – 2,2 %
50 %	0,5 – 0,6 %	1,1 %	1,6 – 1,7 %

Suggested Liquid Concentrations for Kiero Vest-Liquid

Precious Alloys Inlay, Crowns, Bridges	65% - 85%
Palladium based, gold -reduced alloys	80% - 90%
Non-Precious alloys Crowns, Bridges, Telescopic works	95% - 100%

The above are given as a guide only and may be varied according to individual technique All figures are approximate. When diluting **Liquid**, than use only distilled water. For diluting you find a dosing bottle as part of the scope of delivery.

- Important observation:** **Avoid that Kiero Vest-Speed gets into contact with plaster containing materials.**
- Storage stability:** The minimum storage time of Kiero Vest-Speed is 8 month in dry areas. Maximum is 24 month.

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