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Hinrivest® CoCr Instructions for use

DIN EN ISO 15912, type 2, class 1

Discription:

Hinrivest® CoCr is a phosphate-bound, graphite-free precision investment for use in CrCo and crown and bridge work. It is recommended for non-precious alloys.

Technical specifications

Mixing liquid:	Hinrivest® Liquid
Mixing ratio, Powder : fluid:	100 g : 16 ml
Mixing under vacuum:	30-40 sec.
Working time:	3 - 5 min
Working temperature	approx. 22 °C (Room temperature)
Initial setting time:	6 - 8 minutes
Setting expansion:	approx. 0.75%

Casting models:

Weigh the necessary amount of product and add Hinrivest® Liquid to obtain the required concentration, in compliance with the mixing ratio. First stir by hand with a spatula and then vacuum-stir for 30 - 40 seconds. Fill the surrounding parts using the stirrer at top speed. It is best to use an instrument for this process. Cast the model after mixing. Smear Vaseline over the overlapping point of the duplication band towards the side of the model to prevent cracks from forming. Omit the setting and immersion phases when making models with silicone duplications. When duplicating models with gel, reduce the powder : liquid ratio to 100 g : 13 - 14 ml. The liquid concentration should be approx. 5 % above the liquid table of the described standard recommendation.

Use of pressure:

Investing under pressure is not necessary due to **Hinrivest® CoCr** extremely homogenous grain distribution. If investing under pressure is preferred, the pressure should be released after 6 minutes so that it does not impede the setting expansion.

Investing:

Measure and mix **Hinrivest® CoCr** as described above. For investing use the same liquid concentration as for the casting model. A small reduction of the liquid concentration may improve the connecting of the model and investing. Using the vibrator at minimum speed, pour the product until it spills from the model. Stop the stirrer, fill the muffle and stop mixing. The coating must never harden under pressure. The preheating should be start after 60 minutes.

Application (tape + cuvette technique):

Hinrivest® CoCr can be used to make castings without a cuvette. It is advisable to use silicone rings. Mix the product as described in the instructions and fill the muffle without interruptions using the vibrator at minimum speed. The material can be set under compression. **Hinrivest® CoCr** can also be used to coat stumps for direct ceramic firing processes.



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Recommended preheating method:

Temperature	Rate of increase	Holding time
0 - 270 °C	2 °C / Minute	40 min.
270 - 580 °C	5 °C / Minute	30 min.
580 °C casting temperature*	9 °C / Minute	30 min.

* It is advisable to use a temperature of 920 - 950 °C for mold casting / combined techniques

Concentration of the expansion liquid: 16 ml Liquid / 100 g powder

Framework with clasps: Liquid ratio Hinrivest® Liquid / distilled water : 75 % / 25 %

100 g	180 g	400 g
12 ml / 4 ml	22 ml / 7 ml	48 ml / 16 ml

Fixed / removable work: Liquid ratio Hinrivest® Liquid / distilled water : 85 % / 15 %

100 g	180 g	400 g
14 ml / 2 ml	25 ml / 4 ml	54 ml / 10 ml

Crown & bridge work, precious alloy: Liquid ratio Hinrivest® Liquid / distilled water : 60 % / 40 %

100 g	180 g	400 g
10 ml / 6 ml	17 ml / 12 ml	38 ml / 26 ml

Crown & bridge work, semi precious alloy:

Liquid ratio Hinrivest® Liquid / distilled water : 75 % / 25 %

100 g	180 g	400 g
12 ml / 4 ml	22 ml / 7 ml	48 ml / 16 ml

Crown & bridge work, non precious alloy CrCo:

Liquid ratio Hinrivest® Liquid / distilled water : 100 % / - %

100 g	180 g	400 g
16 ml / - ml	29 ml / - ml	64 ml / - ml

Ceramic firing on Hinrivest® CoCr:

Prepare stump duplication with a duplicating silicone (e.g. Hinrisil® KL), **Hinrivest® CoCr** (at least 50 g.), 75 - 90 % Hinrivest® Liquid (it is absolutely essential to conduct a test with the ceramic material). Bring to a temperature of 650 °C in the ceramic vacuum-furnace, leave it there for 20 minutes, continue to heat to 1050 °C for 4 minutes. Open the furnace. The stumps do not need to be cooled for very long. Enamel firing on the stumps produces a smoother surface. Fire according to the instructions given by the manufacturer of the ceramic product.

Recommendations:

These technical hints are based on practical experience and experiments conducted in our R&D laboratory. The values given are purely indicative. All ERNST HINRICH'S products are subjected to strict quality controls. We reserve the right to make any technical modifications considered necessary.

WARNING: Inhalation of silicate powder is dangerous for the health.

Wear a mask to protect the respiratory tracts.