CS
High Speed Investment
Pressceramic

feguramed

Phosphate-bound investment material for pressable ceramics. Suitable for quick preheating technique (speed technique).

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ONLY FOR DENTAL USE BY QUALIFIED PERSONNE

MADE IN GERMANY

Instructions for use

1. Indication

CS High Speed Investment (REF 3070) is a phosphate-bound, speed investment material, for pressable ceramics. **CS High Speed Investment** is mixed with **CS High Speed Investment Liquid** (REF 3075) .

2. Technical parameters

Processing parameter	Recommendation
Temperature of powder and liquid	**21 - 23°C**
Mixing ratio	**100 g : 24 ml**
Mixing time under vacuum	**180 sec.**
Mixing speed *)	**320 – 450 rpm**
Working time	**6 – 8 min.**

*) We recommend mixing units, which comply with the above parameters

3. Important notes

Always use separate mixing bowls and spatulas to mix **CS High Speed Investment**. Strictly avoid a contact of **CS High Speed Investment** with gypsum or gypsum products, because this can damage the press ceramic.
Protect **CS High Speed Investment Liquid** from frost!
In order to achieve best and consistent results, store powder and liquid at a temperature of 21 – 23 °C.

4. Recommendations for expansion control

CS High Speed Investment is mixed with **CS High Speed Investment Liquid**.
To achieve an optimal fit, the expansion can be controlled by diluting the liquid with demineralized water.
The following concentrations are recommended:

Presskeramic approx. 950 °C (IPS e.max Press®, Finesse®)		Powder	Concentrate	Demin. water
Crowns 3-sided Inlays	50-[55]%	100 g	12 [13] ml	12 [11] ml
		200 g	24 [26] ml	24 [22] ml
1-and 2-sided Inlays	55-[60]%	100 g	13 [14] ml	11 [10] ml
		200 g	26 [28] ml	22 [20] ml

Presskeramic approx. 1050 °C (IPS Empress® Esthetic, HeraCeram)		Powder	Concentrate	Demin. water
Crowns 3-sided Inlays	65-[70]%	100 g	16 [17] ml	8 [7] ml
		200 g	32 [34] ml	16 [14] ml
1-and 2-sided Inlays	70-[75]%	100 g	17 [18] ml	7 [6] ml
		200 g	34 [36] ml	14 [12] ml

Please note:

Processing parameters, e.g. temperature, modelling material, have influence on the fit and deviations from the above recommendations are therefore possible.

5. Mixing of the investment material

Put liquid (concentrate + demin. water) and powder into the mixing bowl and premix by hand with a clean spatula. Finally mix under vacuum for 180 sec. in a mixing unit.

Please observe when mixing the investment material:
In order to achieve consistent results, it is very important to comply with the mixing ratio and the mixing time provided.

6. Investing

Pour the mixed investment material into the ring under light vibration and carefully avoid the formation of bubbles. Let the investment set for 30 min. and avoid vibrations and deformations during this time.

Deburr the muffle. The upper and lower sides of the muffle have to be completely parallel.

7. Preheating

CS High Speed Investment is suitable for the quick preheating technique (speed technique).
In order to achieve consistent results, please observe the parameters in the table:

Setting time	30 min.
Preheating temperature	850°C
Preheating time	50 min.(100 g), 60 – 90 min. for of larger muffles

After the setting time of 30 min. (measured from the moment the powder and liquid are mixed together), the muffle must be placed immediately into the furnace preheated to 850 °C.

8. Pressing

Please follow the instructions of the press ceramic manufacturer.

9. Divesting

After pressing, let the muffle cool to room temperature and divest.
Please follow the instructions of the press ceramic manufacturer.

We recommend abrasive materials from Feguramed:

- **Alumix** - high-quality corundum (30 µm, 50 µm, 120 µm, 150 µm, 250 µm – REF 7040-7049)
- **Perla-Glas** - glass beads (1-50 µm, 40-70 µm, 70-110 µm, REF 7010-7015).

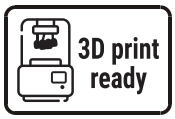
Additional important notes:

- Investment materials contain quartz. Do not inhale dust! Risk of damage to lungs (silicosis, lung cancer). Recommendation: Use gas mask type FFP 2.
- Never bring phosphate-bound investment materials into contact with gypsum or gypsum containing materials or mixing bowls.
- Fill mixing bowls, which are not in use, completely with water.
- Clean mixing bowls, spatulas etc. only with water. Don't use detergents or cleaning agents: This influences the expansion of the investment material.
- Risk of injury by speed preheating technique: Place all moulds quickly in the furnace (10 sec). Do not open the furnace door during the next 15 min!

Guarantee

Because of a certified quality management system Feguramed guarantees properly functioning products. The aforementioned recommendations are based on benchmarks that were determined in our test laboratory. These benchmarks can only be assured, if the user proceeds exactly according to the instructions of use. The user himself is responsible for the processing of the products. For any poor results Feguramed is not liable, because Feguramed has no influence on the processing of the products. If there are any claims for damages, they refer only to the value of the products.

Annex: 3D Print



CS High Speed Investment is suitable for investing printed objects and subsequent fabrication of pressable ceramics. For example crowns, inlays, onlays, veneers and 3-unit bridges made of IPS e.max Press®.

With **CS High Speed Investment** the printed objects deliver restorations with smooth surfaces.

Print resin and print parameters

Please only use print resins (castable print resins), which are indicated for casting non-precious (cobalt chrome) and precious dental alloys.

Recommended print resolution:	50 µm
Cleaning the printed objects:	• Pre-clean 1 min. in Isopropanol (IPA), maybe with the help of a soft brush • Rinse 1 min. with clean Isopropanol • Carefully dry with compressed air
Post-curing of printed objects:	See instructions of print resin

Important information
Please start investing the printed objects immediately after completion. The accuracy of fit decreases with increasing storage time due to shrinkage of the printed objects.

Spruing, positioning and investing

The way of working is analogous to classical wax crowns and bridges.

For spruing the printed crowns and bridges standard wax sprues are suitable.

Position with a sufficient distance between the printed objects and the borders of the muffle. Additionally the distance between the printed objects themselves has to be larger compared to the positioning of classical wax crown and bridges. This minimizes the risk of flaws in the cast objects or of investment ring fractures during preheating.

It is preferable to divide the printed objects between more muffle rings instead of placing too many objects in one large muffle ring.

Preheating

See "**7. Preheating**"

Tips

- The use of surface tension reducing agents (debubblizer) is not recommended.
- In order to improve the surface quality of the cast objects the printed objects can be sprayed with a white oil (paraffin) aerosol. Wait for a short time and remove the excess white oil (paraffin) with compressed air. Afterwards start investing as usual.