INSTRUCTIONS FOR USE
SHERAFRIXION

en

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Application:
Phosphate-bonded precision investment for
- double-crown as well as implant technique with all dental alloys
- crowns and bridges with non-precious alloys
- conventional heating process or rapid burn out
- modellations made out of wax, auto-polymerizing or light-curing modelling resin (e.g. SHERAPLAST)
- in wax or acrylics milled objects
- not suitable for pressable ceramic

Detailed information, overviews of the mixing ratio as well as safety data sheets are available on our homepage www.shera.de.
In case of further questions please contact our support-team, by calling +49 (0) 5443 9933-0.

1. Storage

Store the powder and the liquid in a dry condition at temperatures of between 20 and 23°C (ideally 21°C in the temperature cabinet). Stock the investment and its working equipment separate from the ones for stone and plaster, as they influence each other negatively.
SHERALIQUID is sensitive to low temperatures. While storing and transporting the product at temperatures below +5°C, it is affected and should not be used anymore. Therefore, the dispatch during wintertime is often not possible. Please build up a winter stock on time.

2. Hints

Even tiny residues on the working equipment – including cleaning agents – might have a negative effect on the casting result. Please use the relative spatula and the mixing bowl exclusively for the processing of phosphate-bonded investments and leave the mixing bowl filled with water after each use.

3. Tips

3.1. SHERAMUFFELFORMER

We recommend using our mould former to ensure an open-porousness of the investment. SHERAMUFFELFORMER are made of thermoelastic and heat insulating materials. This characteristic supports the chemical reaction of the investment, as the „thermos flask – effect“ contributes to a better temperature profile including a smooth and undisturbed expansion.

3.2. SHERARELAXA

For a surface tension release of waxes and for an improvement of the flow characteristic of the investment we recommend SHERARELAXA. If necessary, inject the modellations thin with SHERARELAXA and invest directly without let it dry.

4. Mixing ratio - powder : liquid

180 g powder: 40 ml liquid
100 g powder: 22 ml liquid

4.1. Mixing ratio of the liquid with 180 g powder

SHERALIQUID is an expansion liquid for all SHERA-investments. It is mixed with distilled water as mentioned in the following mixing ratio.

Alloy	Crowns and bridges modeled in wax		Crowns and bridges milled in wax		Telescopes and secondary constructions modeled in acrylic	
Alloy with a high gold content 70 % - 80 % Au	18 ml SHERALIQUID 22 ml distilled water	45 % 55 %	14 ml SHERALIQUID 26 ml distilled water	35 % 65 %	24 ml SHERALIQUID 16 ml distilled water	60 % 40 %
Gold reduced alloy 55 % - 65 % Au	20 ml SHERALIQUID 20 ml distilled water	50 % 50 %	16 ml SHERALIQUID 24 ml distilled water	40 % 60 %	26 ml SHERALIQUID 14 ml distilled water	65 % 35 %
Silver based or palladium based alloy	26 ml SHERALIQUID 14 ml distilled water	65 % 35 %	24 ml SHERALIQUID 16 ml distilled water	60 % 40 %	30 ml SHERALIQUID 10 ml distilled water	75 % 25 %
Non precious alloy	30 ml SHERALIQUID 10 ml distilled water	75 % 25 %	24 ml SHERALIQUID 16 ml distilled water	60 % 40 %	34 ml SHERALIQUID 6 ml distilled water	85 % 15 %

4.2. Recommendations and hints to the expansion

A change in the ration of the liquid influences the expansion:
- more SHERALIQUID = higher expansion
- more distilled water = lower expansion.

Our recommendations are guidelines and based on test results, which have been made in our laboratory. Several on-site factors like for example the room temperature, the humidity or settings of the vacuum mixer can have an influence on the results.

4.3. Tips for large restorations (in non-precious alloys):

mould former size 6 and 9 (Please use a casting ring liner)

a) milled wax bridges, also as secondary constructions

Embedding	Powder	Total liquid	Percentage of SHERALIQUID		Percentage of distilled water	
Mould former size 6	300 g	66 ml	43 ml	65 %	23 ml	35 %
Mould former size 9	540 g (3x180)	120 ml	72 ml	60 %	48 ml	35 %

b) telescopic bridges, in acrylic modelled secondary constructions (also bridge elements of wax)

Embedding	Powder	Total liquid	Percentage of SHERALIQUID		Percentage of distilled water	
Sectional investment of the secondary elements	100 g	22 ml	19 ml	85 %	3 ml	15 %
Total embedding (mould former size 6)	300 g	66 ml	46 ml	70 %	20 ml	30 %
Total embedding (mould former size 9)	540 g (3x180)	120 ml	81 ml	67 %	39 ml	33 %

5. Processing

- working time: 5 - 6 minutes
- Use a small bowl while working with a little amount of powder.
- Fill the powder in the mixing bowl and weigh it.
- Add the mixed up total liquid (Start measuring the time! After 15 minutes, the mould former can be placed).
- Mix vigorously by hand for 15 seconds.
- Mix under vacuum for 45 seconds, mixing speed approx. 250 rev. /min.
- Fill in the investment only at lowest vibration level.
- Stop vibrating after having filled up the mould.

6. Heating process / preheating

6.1. General information

- Place the mould into the furnace with the cone face down onto a punched or a coarse milled plate made of ceramic.
- After 15 minutes at the earliest – counted from the beginning of the mixing process - place the mould into the furnace.
- If several moulds are preheated in the furnace, the holding time has to be extended by 10 minutes for each mould.
- Keep the end temperature (according to the alloy guidelines) at least for 60 minutes.
- For SHERA-alloys, the end temperature of 850°C is sufficient.

6.2. Mould size 9

– After 15 minutes – counted from the beginning of the mixing process – place the mould size 9 into the furnace at a maximum temperature of 360°C and heat up higher to the requested end temperature without holding steps.
– heating rate: up to 20°C/min.
– Keep the end temperature (according to the alloy guidelines) at least for 60 minutes.

6.3. Conventional heating process

- After 15 minutes – counted from the beginning of the mixing process – place the mould into the cold furnace and heat up higher to the requested end temperature without holding steps.
- heating rate: up to 20°C/min.
- Keep the end temperature (according to the alloy guidelines) at least for 60 minutes.

6.4. Rapid burn out

- After 15 minutes – counted from the beginning of the mixing process – place the mould for at least 60 minutes into the furnace at a maximum temperature of 850°C.
- If needed, you can heat up higher to the requested end temperature (according to the alloy guidelines).

7. Casting

After a holding time of at least 60 minutes at end temperature, the casting can be started according to the instructions for use of the alloy manufacturer.

8. Cooling down

Cool mould down slowly to room temperature.

9. Health warning

Warning! Investments contain quartz! Do not breathe in dust. Danger of lung diseases (silicosis or cancer). Use a dust mask!
Use a fine dust mask while weighing the powder and deflasking the mould.

Warranty

SHERA Werkstoff-Technologie GmbH & Co. KG is certified according to DIN EN ISO13485 and guarantees for the products, due to a thorough quality control system, a flawless quality of its products. Our instructions for use are based on the results of our test laboratory. The technical data given can only be guaranteed if the processing is carried out as mentioned. The user is self-responsible for processing of the products. We are not liable for faulty results as SHREA has no influence on the processing. Nevertheless possibly arising claims for damages relate to the value of the products only.

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