en

SHERAUNDER PRESSURE

INSTRUCTIONS FOR USE

1. Indication

Precision investment material for press ceramics for the fabrication of crowns, veneers, onlays and inlays or press on metal.

2. Contra indication

- Not suitable for dental alloys
  Depending on the indication, we recommend SHERA investment materials for the casting technique.
- Not suitable for titanium or titanium alloys
  In this case we recommend SHERATITAN-EASY

Even tiny residues on the working tools, even from plaster or cleaning agents, can have a negative effect on the pressing result.
Please use the respective spatula and mixing bowl exclusively for processing phosphate-bonded investment material and always leave the mixing bowl filled with water after use and cleaning.

3. Safety instructions

Attention! Investment materials contain quartz! Do not inhale dust. Danger of lung diseases (silicosis or cancer). Wear fine dust mask!
Please use a fine dust mask when weighing and mixing the powder and devesting the muffle.

4. Preperatory recommendations

4.1. 3D printing resins

- When sprueing the objects, the distance to the wall of the investment ring and between the individual objects should be at least 1 cm.
- Place the investment ring in the furnace so that the press plunger opening faces to the side.

4.2. Press plunger

- It is recommended to make the press plunger from investment material yourself in order to achieve the same expansion as that of the muffle.
- For this purpose, make a duplicating mould with the original press plunger.
- Fill the silicone mould with the same investment material as the muffle and then warm it up to set.

4.3. Vacuum stiring device

Set a programme with the following parameters:
- Stirring time 60 seconds
- 80% vacuum
- 350 revolutions/minute

To check the vacuum of your stirrer:
- Evacuate for 60 seconds
- 100% vacuum
- Fill beaker half full of cold water.
- Maximum vacuum (100%) without stirring, after 30 seconds at the latest you should see small bubbles in the beaker and on the stirrer, which will bead off over time and form / grow again.
- If this is not the case, the filter may be clogged and the appliance / filter needs to be cleaned. The sealing ring on the cup should also be checked.

Under the following link you will find a SHERA TECH HACK for the vacuum.

4.4. SHERARELAXA

For surface relaxation, e.g., of waxes, resins and for improving the flow properties of investment materials, we recommend the surface tension release agent SHERARELAXA.
Spray a very thin layer of SHERARELAXA onto the model and go on working directly without allowing the film to dry.

5. Mixing ratio powder : liquid

100 g powder : 25 ml liquid
We recommend the use of 200 g of powder to achieve evenly consistent results.
The SHERALIQUID is mixed with distilled water according to the following mixing ratios. SHERALIQUID is an expansion liquid for all SHERA investments.

Mixing tables are available at www.shera.de under each product.

5.1. Table for mixing ratios

	Crowns and bridges		Onlay, Veneers:		Inlays:	
200 g	40 ml SHERALIQUID	80 %	30 ml SHERALIQUID	60 %	26,5 ml SHERALIQUID	53 %
	10 ml dist. water	20 %	20 ml dist. water	40 %	23,5 ml dist. water	47 %
100 g			15 ml SHERALIQUID	60 %	13,3 ml SHERALIQUID	53 %
			10 ml dist. water	40 %	11,7 ml dist. water	47 %

5.2. Recommendations and tips regarding expansion

By adjusting the ratio / proportion of the liquids, the expansion can be changed:
- more SHERALIQUID = more expansion
- less SHERALIQUID = less expansion..

Our recommendations are based on test results from our laboratory and are guidelines. Various factors on site such as room temperature, humidity or the settings of the stirrer can influence the results.

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6. Processing

- Working temperature 20 - 23°C Powder and liquid (ideally in a temperature cabinet)
- Processing time: 5 minutes
- Fill powder into mixing cup and weigh out.
- Add the mixed liquid. (Start timing! After 20 minutes, the muffle must be put on).
- Mix powder with liquid homogeneously by hand for 15 seconds.
- Start stirring programme (parameters see 4.3)
- Fill the investment only at the lowest vibration level.
- Do not continue to vibrate the muffle after filling.

7. Preheating furnace

7.1. General information

- Break edges of the muffle a clean knife before placing, make sure that nothing falls into the press plunger opening. Muffles should not be trimmed (plaster residues / water absorption of the muffle).
- Place the investment ring in the oven with the press plunger opening facing downwards (sideways in the case of plastics) on a perforated or ribbed base plate.

7.2. Speed heating

- After 20 minutes, counting from the beginning of the mixing process, place muffles in a maximum 850°C furnace.
- Continue heating after 20 minutes
- Our recommendation is a final temperature of the muffle of 920°C.
- Hold the final temperature for at least 60 minutes.
- If several muffles are preheated in the furnace, extend the holding time by 10 minutes per muffle.

7.3. Traditional heating process

- After at least 20 minutes, counting from the start of the mixing process, place muffles in the furnace that has cooled down to room temperature.
- Heating rate: up to 20°C/min. without holding stages.
- For resins, possibly one holding stage at approx. 360°C.
- Our recommendation is a final temperature of 920°C for the muffle.
- Hold the final temperature for at least 60 minutes.
- If several muffles are preheated in the furnace, the holding time per muffle must be extended by 10 minutes.

8. Pressing

8.1. Preheating press furnace

- Preheat the press furnace very well with an appropriate preheating programme.
- Alternatively, the press programme can be used for preheating before pressing without a muffle ring.

8.2. Start press programme

- Please press the work with your usual press programme.

9. Cooling

Cool the muffle to room temperature. Do not quench with water.

10. Devesting

Remove the investment material as usual. Vacuum off dust. When sandblasting afterwards, carefully blast the inner surfaces of the crowns. The fit can also be blasted larger by sandblasting.

10.1. Sandblasting

With glass blasting beads, at 2 bar each
- coarse: 110 - 125 µm
- fine: 50 µm

11. Storage

Store powder and liquid in a dry place, the processing temperature is between 20 - 23°C (ideally 21°C in a temperature cabinet).
SHERALIQUID is sensitive to cold. If stored or transported below +5°C, the liquid will be damaged and should no longer be used. It is therefore often not possible to ship the liquid during the winter months. Please build up a winter stock in good time.
Store the investment material and its tools separately from the plaster processing equipment, as they have a negative effect on each other.

12. Information / Feedback:

Further information, mixing tables and safety data sheets are available at www.shera.de under each product.
If you have any questions, please contact our service team at +49 (0) 5443 9933 0.
Please always state the batch number when giving feedback on the product.

13. Warranty

SHERA Werkstoff-Technologie GmbH is certified according to EN ISO 13485 and guarantees for the products, due to a thorough quality control system, a flawless quality of its products. Our user recommendations are based on so-called guideline values determined in 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 SHERA has no influence on the processing. Nevertheless, possibly arising claims for damages relate to the value of the products only.

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