

Perfection through precision

Dear colleagues, with investments from SHERA you have definitely made a good choice. In order to make sure that you easily achieve perfect results, please follow the below indicated working details, times and temperature specifications precisely.

Clean affair

Even tiny little residues on the working equipment – including cleaning agents – might have a negative effect on the casting result. For working with investments please always use a separate spatula and mixing bowl which should be filled up with water after each use. All equipment items should be kept separately from the instruments used for stone and plaster works. Furthermore we recommend to also think of yourself and use a fine dust mask while weighing the powder and devesting the mould.

1. Application

Chrome investment for

- gel and silicone duplication for the traditional heating process
- silicone duplication for rapid burn out
- light cure wax technique for the traditional heating process

2. Technical data

Working time: 4 - 6 minutes

Working temperature: 20 - 23°C powder and liquid (in case of gel duplication 24 - 25°C)

Mixing ratio:

	powder	total liquid:	thereof SHERALIQUID	thereof demineralized water
gel duplication	100 g	19 ml	13.3 ml (70%)	5.7 ml (30%)
silikon duplication	100 g	21 ml	16.8 ml (80%)	4.2 ml (20%)
imbedding	100 g	21 ml	10.5 ml (50%)	10.5 ml (50%)
	400 g	84 ml	42 ml (50%)	42 ml (50%)
light cure wax (see point 6)	100 g	21 ml	16.8 ml (80%)	4.2 ml (20%)
	600 g	126 ml	101 ml (80%)	25 ml (20%)

Deviations of the liquid ratios lead to modification of the expansion:
more **SHERALIQUID** = more expansion; more water = less expansion!

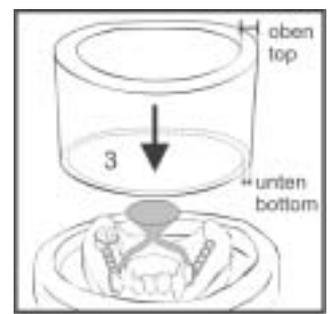
3. Processing

3.1 Processing using silicone duplication

- Silicone of Shore Hardnesses 17 to 22 should be used without stabilization or adhesive sleeve.
- Put the powder into the mixing bowl and weigh. (100 g = 21 ml)
- Add the mixed up total liquid.
- Mix vigorously by hand for 15 seconds.
- Mix under vacuum for 45 seconds; mixing speed 250 rev./min.
- Fill in the investment evenly from one side only at low vibration level.
- The thinnest part of the model should be at least 1 cm thick.
- Demould the model after 20 minutes and afterwards dry it at 140°C for 20 minutes.
- Do the wax up.
- Fix sprues and cone.
- Place the model onto the open whole on the mould bottom of **SHERAMUFFELFORMER MG.** (1)
- Fix the model around the border completely to the mould bottom with wax. (2)
- Place the thinner side of the mould ring on the mould bottom of **SHERAMUFFELFORMER MG.** (3)
- Mix the investment for imbedding, start timing.
- Pour the investment in without vibrating.
- After 20 minutes put the mould into the furnace for rapid burn out.

3.2 Processing using gel duplication

- See that the surface of the duplicating material is dry.
- Put the powder into the mixing bowl and weigh. (100 g = 19 ml)
- Add the mixed up total liquid.
- Mix vigorously by hand for 15 seconds.
- Mix under vacuum for 60 seconds; mixing speed 250 rev./min.
- Fill in the investment evenly from one side only at low vibration level.
- The thinnest part of the model should be at least 1 cm thick.
- Demould the model after 30 minutes and afterwards dry it at 180°C for 25 minutes.
- Dip for 2 seconds into the dipping hardener (SHERAPOR-L or SHERAPORAL).
- Do the wax up.
- Fix sprues and cone.
- Place the model onto the open whole on the mould bottom of **SHERAMUFFELFORMER MG**. (1)
- Fix the model around the border completely to the mould bottom with wax. (2)
- Place the thinner side of the mould ring on the mould bottom of **SHERAMUFFELFORMER MG**. (3)
- Mix the investment for imbedding, start timing.
- Pour the investment in without vibrating.



4. Preheating / Heating up

Place the mould into the preheating furnace with the cone face down onto a punched or a coarse milled plate made of ceramic.

4.1 Traditional heating process

- Place the mould into the cold furnace, soonest after 20 minutes – counting from the beginning of mixing process.
- Heating rate: 9°C/min, (holding time is not necessary).
- End temperature: 850°C (hold for at least 45 minutes)

4.2 Rapid burn out

Place the mould into the furnace after 20 minutes – counting from the beginning of the mixing process – at a maximum temperature of 850°C for at least 45 minutes.

5. Cooling down

Cool down mould slowly to room temperature.

6. Special considerations of the light curing technique

- Humidify the light curing wax surface with the surface tension release agent (**SHERAFLOW**) directly before pouring in the investment.
- Do the imbedding the same way like with silicone duplication (see point 3.1).
- Traditional heating process (see point 4.1).
- Holding time: 30 minutes at 350°C.
- End temperature: 850°C (hold for at least 45 minutes)

Warranty

SHERA Werkstoff-Technologie GmbH & Co. KG is certified according to ISO 9001 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 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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