

# INSTRUCTIONS FOR USE

## SHERAFINA-RAPID



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GA20549A

### Suitability

Investment for precision castings of crowns and bridges made of all dental alloys using the conventional slow heating process or rapid burn out.

### Technical data

Mixing ratio: 100 g powder : 26 ml liquid,  
160 g powder : 42 ml liquid,  
60 g powder : 16 ml liquid  
Working time: 6 – 7 minutes  
Working temperature: 20 – 23°C (powder **and** liquid) **In no case below 20°C!**

**As a producer SHERA has matched all of its products. We recommend to not use them in combination with other products as these can influence the casting results in a negative way.**

### Storage

Store powder and liquid at a temperature of approx. 20 – 23°C all year round (ideally in a temperature cabinet at 20 – 23°C).

**Mixing liquids are frost sensitive.**

### Preparation

Sprues 3,0 mm, for solid parts at least 3,5 mm.

Thinly spray or brush tension release agent **SHERAMASTER** onto the wax model and invest immediately.

**Do not let the film dry. Never dry the film with compressed air.**

All SHERA – investments can be used with or without casting ring.

**Do not treat moulds with vaseline under any circumstances.**

### Expansion liquids

**A) SHERALIQUID** = 100% concentrate

**B) SHERALIQUID EXTRA with increased expansion** = 140% concentrate

(to be added to the **SHERALIQUID** for alloys with very high shrinkage, e.g. non-precious metal alloys)

**In order to maintain the investment's suitability for rapid burn out only add 5 – 30% SHERALIQUID EXTRA!**

**Never use SHERALIQUID EXTRA undiluted or diluted with de-ionised water.**

The setting expansion is mainly controlled by the concentration of the liquid. The higher the concentration the higher the expansion (wider casts). The more de-ionised water is added to the concentrate the lower the expansion (tighter casts).

The expansion can also be influenced to a lesser extend by the amount of liquid (up to 2 ml) used:

thicker mix – slightly higher expansion (wider casts)

thinner mix – slightly lower expansion (tighter casts)

Use mixing bowls and spatulas for investments only. Never use them for stones as well. Mixing bowls must be absolutely clean and free of investment residues. Smooth scratched mixing bowls with fine sandpaper. Fill mixing bowls with water when they are not used.

### Mixing ratios for castings with and without casting ring:

	<b>SHERALIQUID</b>	<b>De-ionised water</b>
Gold castings, crowns and bridges	approx. 45%	55%
Inlays, onlays, conic crowns	approx. 50%	50%
Secondary parts	approx. 65%	35%
Non precious metal alloys, crowns and bridges	approx. 90-100%	10-0%

As the shrinkage varies from alloy to alloy the concentration must be adjusted according to the alloy used.

### Processing

- pour the liquid into the mixing bowl
- add the powder
- mix vigorously for 15 sec.
- **mix under vacuum for approx. 60 sec.**, longer mixing can cause smoother surfaces. (revs: approx. 250 revs/min., higher revs. reduce the expansion)
- keep the pulp under vacuum for a further 15 sec. without mixing it.

Fill the mould under the lowest vibration possible. Stop the vibration immediately once the mould is filled.

We recommend investing without pressure.

Avoid using 1X moulds – too low a setting expansion

Do not use moulds larger than 6X – increased expansion.

The larger the amount of investment mixed the higher the setting expansion.

If casting rings are used apply the soft SHERA ring liner (do not soak the ring liner as this increases the setting expansion):

Mould size 3X: 1 layer of ring liner

Mould size 6X: 2 layers of ring liner

If a ringless system is used it has to be rough on the inside (we recommend the SHERA mould system) in order to enable the mould to degas.

For allowing the moulds to degas more easily roughen the surface opposite the sprue.

## Preheating and casting

### a) *conventional heating process*

Once set, place the mould into the cold furnace.

Heating rates:

1. stage up to 290°C, heating rate approx. 3 – 5°C/minute, heat soak for 20 min.

2. stage up to 590°C, heating rate approx. 6 – 7°C/minute, heat soak for 20 min.

3. stage up to final temperature 750-850°C, (non-precious-metal alloys approx. 850-900°C), heating rate approx. 8°C/minute, heat soak for 20 min.

When casting under vacuum/pressure increase the final temperature by approx. 50°C. Increase the final heat soak by 15 min. if there are many moulds in the furnace.

### Model resin

If model resin is used:

a) either leave the build up for 24 hours so the monomer can evaporate or

b) additionally heat soak the mould at 360°C for 30 min. and then continue to heat up to final temperature or place the mould after 30 min. in a furnace at 360°C into a second furnace at final temperature.

### b) *Rapid burn out*

We recommend the use of special SHERA mould formers.

As phosphate bonded investments are hygroscopic it is best to use material in sachets for rapid burn out.

Setting time: **20 minutes starting from the beginning of the mixing process.**

**Once set, place the mould into a furnace no hotter than 800°C and continue to heat if necessary to the final temperature according to the alloy used (non-precious-metal alloys approx. 850-900°C). Heat soak at final temperature for 30 min.**

**Caution: Place the mould with the sprue facing down on a ceramic plate**

**It is best not to open the furnace while heating moulds!**

Lengthen the time in the furnace by 10 minutes for each additional mould in the furnace.

## Devesting

Approx. 30 minutes after casting moulds can be quenched carefully under running water. Best elongation values are obtained by bench cooling the mould.

## Further technical information

Investments contain quartz. If dust is generated during the processing **wear a fine-dust mask and work with an extractor to avoid health risks.**

Avoid all contact of phosphate bonded investments with gypsum containing tools, containers and materials.

Not needed mixing bowls always leaving filled with water.

Do not clean any mixing bowls or tools with detergents, this will cause the investment to set slowly or not at all and stay soft.

## Warranty

SHERA is ISO 9001 certificated and guaratees, due to a thorough quality control system, a flawless quality of its products. All instructions for use are based on the results of our test laboratories. The technical data given can only be guaranteed if the processing is carried out as mentioned. We are not liable for faulty results as SHERA has no influence on the processing. Should any clames arise they are valid for the value of products only.



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