



# SILADENT

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*The System*

Model creation  
Duplicating  
Investing  
Casting

## PREMIUM DIN EN ISO 9694

### Description:

Premium is a phosphate-bonded, graphite-free speed cast investment with exceptional properties. It is suitable for casting all types of dental alloy and can be preheated up to 1,100°C. It can be used for crown and bridge work using precious and non-precious alloys, fixed/removable restorations and injection-moulded porcelains (e.g. Empress®, Ivoclar).

### Technical data:

Mixing liquid:	SILADENT type 100 expansion liquid
Mixing ratio	
Powder : liquid:	100 g : 25 ml (Crown and bridge work)
Mixing under vacuum:	60 sec.
Working time:	5-7 min.
Working temperature:	17°C-19°C
Initial setting time:	9-11 min.
Setting expansion:	approx. > 2.00% (100% undiluted type 100 liquid)
Recommended storage:	8°C-12°C in a dry place

### Waxing up:

Optimum fit and surface quality are best achieved using patterns fabricated entirely from wax. Using resins often results in much poorer surface quality and cracks in the mould with the speed cast technique. This applies particularly to waxing up removable sections of attachment and telescopic crown work.

### Crown and bridge work:

Mix Premium according to the instructions and pour it up to the patterns without vibration. Then vibrate gently into the patterns using a small instrument, if necessary. Fill the ring completely without any further vibration. Adhere strictly to the time given in the instructions for the speed technique.

### Use of pressure:

Investing under pressure is not necessary due to Premium's extremely homogenous grain distribution. If investing under pressure is preferred, the pressure should be released after 15 minutes so that it does not impede the setting expansion.

### Attaching sprues:

Follow the instructions in the SILADENT-system when spruing wax wires especially with Perawax sprues. The patterns should never be placed in the heat centre of the mould. Thin sections, e.g. crown margins, should face towards the sides of the mould and be 5 mm from the casting ring. SILADENT silicone sleeves produce a special surface structure of the moulds, which gives the investment a constant stiffness. For anterior tooth bridges we recommend to use our round silicone sleeves size 6 (REF 102610), for back tooth bridges resp. circularly constructions our model form silicone sleeves sizes 0-3.

### Concentration of the expansion liquid:

High-gold-content precious metals	60% - 65%
Semi-precious metals	65% - 70%
Bonding alloys	70% - 80%
Semi-precious bonding alloys	75% - 85%
Non-precious alloys	> 90%

### Speed casting:

Premium is preferably preheated in the speed casting method. Preheat the furnace to 850°C and, exactly 15 minutes after mixing the investment, place the mould in the furnace with the sprue hole facing downwards. (Adhere strictly to the prescribed time, which is measured from the first contact of the powder and liquid.) Moulds should not be placed directly onto the floor of the furnace. We recommend using either a grooved tray for collecting wax or special stilts from a pottery craftshop.

**Caution!** During the first 15 minutes the furnace fan and extractor should remain switched off and the furnace door should not be opened because of the risk of instant combustion. If a preheating temperature other than 850°C is required, the temperature can be adjusted 15 minutes after placing the mould in the furnace. Moulds are ready to cast after heat soaking for 45-60 minutes depending on the size of the ring.

### Conventional preheating:

If a conventional preheating is necessary should allow the mould to set for at least 60 minutes, then place it in a cold furnace and heat to the required temperature at a heat rate of 5°C-7°C per minute. Holding stages are not required when using Premium.

### Injection-moulded porcelains (e.g. Empress®):

Follow normal procedure and select a conventional linear preheating curve without holding stages. In many cases it is also possible to use the speed technique. Use the silicone sleeve Ceram 200 (specially for pressable ceramics, REF 102616).

The following recommendations for liquid concentrations for injection-moulded porcelains have been tried and tested in practice: 50% for inlays with 1 or 2 surfaces, 60% for inlays with 3 surfaces, 70% for the all-porcelain build-up technique and 80% for the all-porcelain staining technique. Carry out some test injections based on the above concentrations to determine the correct ratios for the injection-moulded porcelain used in your laboratory.

### Please note:

Technical recommendations are based on tests and findings from work in our development laboratory and can only be regarded as guidelines. SILADENT products are subjected to strict quality controls.

We reserve the right to make technical changes.

### Caution:

Inhaling silica dust is a health risk. A suitable face mask should be worn.