Ceravety Press & Cast®

Universal Speed Investment for Pressable Ceramics and Cast Alloys

Directions for Use

FEATURES

Ceravety Press & Cast is a universal speed investment for pressing / press-over and casting procedures, but also suitable for conventional overnight heating. It provides a long working time of 5-6 minutes. Thanks to its excellent expansion control, Ceravety Press & Cast optimally compensates the shrinkage of non-precious and precious alloys and makes the surfaces of pressed and casted objects very smooth. Ceravety Press & Cast features easy divestment, minimizing the stress for pressed objects with low wall thicknesses. When using the press-over technique, metal or ceramic objects can also be invested.

This product has been specifically optimized for the use of IPS e.max Press lithium disilicate ceramic (Ivoclar AG); it produces only very thin reaction layers.

The recommended **Powder : Liquid mixing ratio is 100 g : 20 ml**. The expansion of the investment can be precisely controlled by changing the Liquid concentration with distilled water.

INDICATIONS

- Suitable for all commercially available pressing pellets (high and low melting)
- IPS e.max Press lithium disilicate ceramic (Ivoclar AG)
- Non-precious and precious alloys

NOTES FOR DENTAL PERSONNEL

- This product contains free silica; long-term inhalation of free silica may cause lung damage. Use local dust extractor, dust protection mask etc. to avoid harmful influence of the dust on the human body.
- Use this product only in well-ventilated rooms, equipped with a suitable ventilation system or a fan, to avoid inhalation of the gas produced by heating the material.
- When grinding this product, use protective equipment, such as protective glasses.
- Avoid contact with eyes. In case of contact with eyes, immediately flush eyes with plenty of water and seek medical assistance.
- Use protective gloves to avoid direct contact with this product, because both the Liquid and the Powder are alkaline materials.
- This product is intended for use by dental professionals only.

SPEED TECHNIQUE / PRESSABLE CERAMICS

- Wax-mount the wax pattern on the base of the pressing cylinder (muffle) in the usual way and add a paper or silicone ring.
- When using the press-over technique, metal or ceramic objects can also be invested.
- Mix the Powder and the Liquid in the correct ratio, as described below.
- Carefully fill the muffle with this mixture, using the lowest vibration setting.

Working time:	5-6 min (at 23°C room temperature)
Mixing time:	Hand mixing for 30 sec, then vacuum mixing for 60 sec. Pressure investment is not necessary.
Setting time:	20 to max. 25 min, including the mixing procedure. Remove the base and the muffle former 15 min after mixing and allow the muffle to dry. Then place it in a furnace preheated to the final temperature.
Preheating temperature:	850°C

Pressable ceramics	Indications	Liquid : distilled water 100 g muffle	Liquid : distilled water 200 g muffle
Mixing ratio	Inlays / Onlays	5 ml : 15 ml	10 ml : 30 ml
	Crowns / press-over technique	8 ml : 12 ml	16 ml : 24 ml
	Bridges	8 ml : 12 ml	16 ml : 24 ml
Holding time at final temperature		**45 min**	**60 min**

Divesting: After cooling, remove the investment from the pressed object, using a cutting disk or glass beads (50 µm at approx. 4 bar), without exposing the objects. Then reduce the pressure to 1-2 bar and carefully expose the objects.

Note: When pressing lithium disilicate, a thin reaction layer may form, depending on the furnace used. This layer must be removed by sandblasting with aluminum oxide (50-100 µm at approx. 1-2 bar); please observe the manufacturer's instructions!

CONVENTIONAL PREHEATING / PRESSABLE CERAMICS

Preheating times: After setting, place the muffle in a cold furnace. The heating rate should be approx. 3-5°C per minute in a furnace with linear control.

Note: When preheating overnight, the investment must be wrapped in cellophane to prevent it from drying out.

Preheating times	100 g muffle	200 g muffle	300 g - 480 g muffle
Holding time at 260°C	30 min	45 min	70 min
Holding time at 580°C	20 min	30 min	60 min
Holding time at final temperature	**40 min**	**45 min**	**70 min**

SPEED TECHNIQUE / CAST ALLOYS

- Wax-mount the wax pattern on the muffle base former in the usual way and add the muffle ring.
- Mix the Powder and the Liquid in the correct ratio, as described below.
- Carefully fill the muffle with this mixture, using the lowest vibration setting.

Working time: 5-6 min (at 23°C room temperature)

Mixing time: Hand mixing for 30 sec, then vacuum mixing for 60 sec. Pressure investment is not necessary.

Setting time: 20 to max. 25 min, including the mixing procedure. Then place the muffle in a furnace preheated to the final temperature.

Preheating temperature: 850°C to max. 900°C (according to the alloy manufacturer's instructions)

Note: These values apply to a **Powder : Liquid mixing ratio of 100 g : 20 ml**.

Alloys	Indications	Liquid : distilled water 1 x muffle	Liquid : distilled water 3 x muffle
Non-precious alloy	Crowns	16 ml : 4 ml	32 ml : 8 ml
	Bridges	18 ml : 2 ml	36 ml : 4 ml
Precious alloy	Crowns	10 ml : 10 ml	20 ml : 20 ml
	Bridges	12 ml : 8 ml	24 ml : 16 ml
Holding time at final temperature		**45 min**	**60 min**

CONVENTIONAL PREHEATING / CAST ALLOYS

Preheating times: After setting, place the muffle in a cold furnace. The heating rate should be approx. 3-5°C per minute in a furnace with linear control.

Note: When preheating overnight, the investment must be wrapped in cellophane to prevent it from drying out.

Preheating times	1 x muffle	3 x muffle	6 x - 9 x muffle
Holding time at 260°C	30 min	45 min	70 min
Holding time at 580°C	20 min	30 min	60 min
Holding time at final temperature	**40 min**	**45 min**	**70 min**

PHYSICAL PROPERTIES

Basic Data

Powder : Liquid mixing ratio	100 g : 20 ml
Working time	6 min
Setting time	9 min
Thermal expansion / 850°C	0.9 %
Compressive strength after 2 hours	10.0 MPa

Adjustment of thermal expansion by means of Liquid concentration

Liquid concentration (%)	Setting expansion	Thermal expansion	Total expansion
0			
20	0.40 %	0.60 %	1.00 %
40	0.50 %	0.75 %	1.25 %
60	0.60 %	0.80 %	1.40 %
80	0.70 %	0.85 %	1.55 %
100	1.00 %	0.90 %	1.90 %

COMPOSITION

POWDER: Silica, quartz, cristobalite powder and others

LIQUID: Colloidal silica and water

STORAGE

Ceravety Press & Cast should be stored in a dry place at room temperature. Do not store the Powder at high humidity and the Liquid in direct sunlight. The Liquid is frost-sensitive and must not be stored at temperatures below 0°C!

PACKAGING

Ceravety Press & Cast Powder (PN 6966): 120 x 100 g

Ceravety Press & Cast Powder (PN 6968): 30 x 100 g

Ceravety Press & Cast Liquid (PN 6967): 2 liters

Ceravety Press & Cast Liquid (PN 6969): 300 ml

SHOFU®

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