

# Jewelry Casting Resin Casting Process

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## Preparation before casting

- After removing the jewelry resin model from the work surface, place the model in isopropyl alcohol and shake it for about 1 minute to clean the remaining resin liquid attached to the model.
- The overall light intensity of the resin model is insufficient during the printing process of the printer. After cleaning, it needs to be placed in the curing box and cured for 30 minutes to meet the hardness requirements of the post-production model.

## Wax Tree Building

- The resin model needs to be cleaned up to remove the excess supporting objects and cleaned again. ?
- After cleaning the resin, you can install the wax and start to put on the tree. When planting trees, follow the principle of light and thin pieces on top, heavy and thick pieces on the bottom.



Put into the invested flask

- Wrap the invested flask with tape, the height of the tape should be 2-3 cm higher than flask. ☐
- Put the wax tree in the invested flask and keep the wax tree from crooked. The distance between the wax tree and the flask wall should be at least 5mm.



Blending gypsum powder

- Mixing ratio of 1kg gypsum powder and 350-400ml water (purified direct drinking water at 20~28°C ). ☐

- Pour half of the water into the vacuum mixer first, second pour the gypsum powder, then pour the remaining water in, and finally vacuum and mix it completely.

Note: The gypsum powder is the resin special gypsum powder.



### Grouting to be set

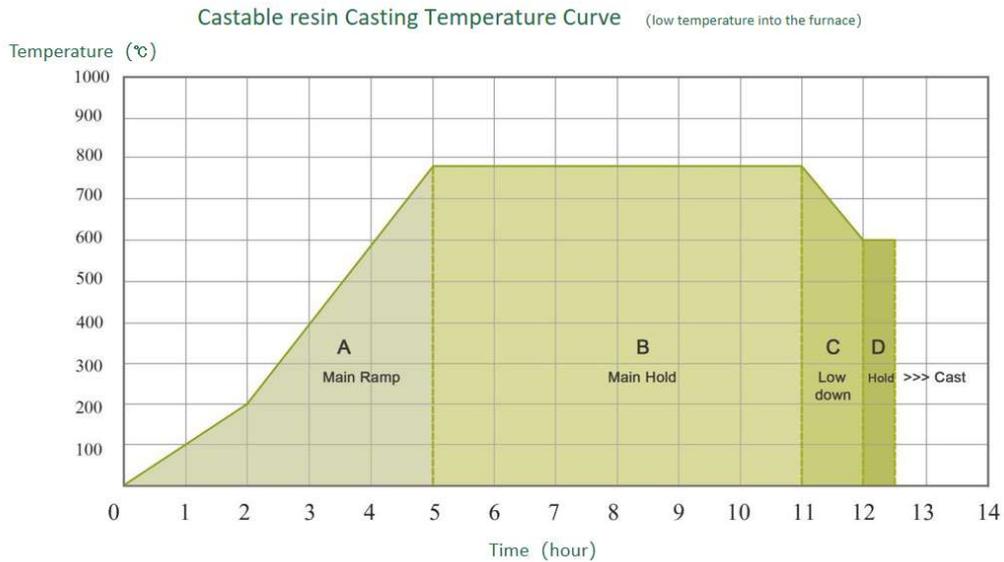
- The grouting time needs to be strictly controlled within 9 minutes. Use a vacuum mixer to pour the gypsum powder into the invested flask and leave it for 20-30 minutes to solidify. ☒
- Take it out and wait at room temperature for 3 hours, then the tape on the outer wall of the invested flask can be removed and the rubber bottom can be taken out and then baking until the wax has drained.



### Roasting into the furnace roasting - Mode 1

A: The wax model begins to fall off, preheated temperature is from 0 °C to 200 °C for two hours and hold the temperature from 200 °C to 780 °C for 3 hours. According to the ring of different sizes and thicknesses, the temperature will be lowered. The rate of heating should be based on the size and quantity of the flask. The thickness and volume of the model are adjusted.

B: The resin gasification will be completed within 6 hours of keeping at 780 °C, and the holding time should be adjusted according to the size and quantity of the flask, the thickness and volume of the model.



## Roasting into the furnace - Mode 2

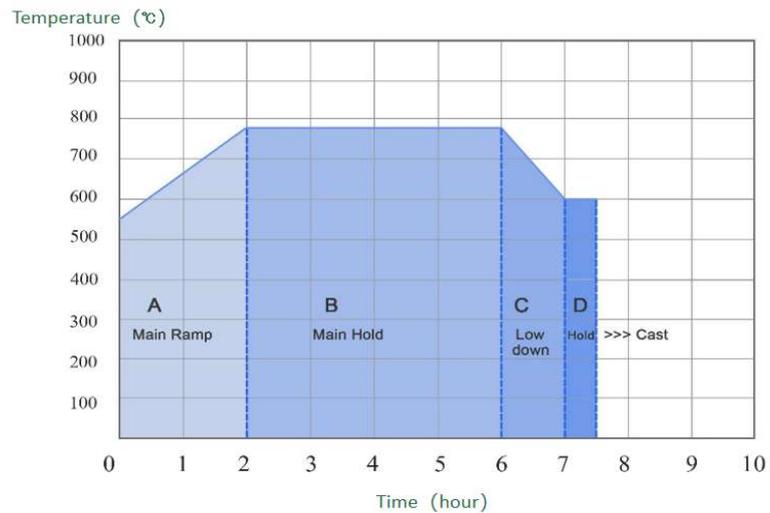
A: Raise the temperature from 500 °C to reach 780 °C in two hours after entering the furnace. Full continuous casting improves production efficiency. [?]

B: Holding the temperature at 780 °C for 4 hours, the resin gasification will be completed and the holding time should be adjusted according to the size and quantity of the flask, the thickness and volume of the model.

Note: High-temperature gypsum powder must be used.



Castable resin Casting Temperature Curve (high temperature into the furnace)



## Casting [?](#)

- The temperature of stage C is the mold casting temperature, select the required inverted mold temperature for half an hour (stage D).
- Use an intermediate frequency inverting machine to perform molten metal vacuum and pressure inverted mold casting. Take it out later

and let it cool naturally after being filled with molten metal. The cooling time is 5-10 minutes.

### Clean up

Take out the casting after water cooling invested flask gypsum, high pressure washing and other steps