Instructions for Casting using X-Vest

Once you have your tree ready and placed in to the Flask, in a separate container you will prepare the X-vest investment. The water temperature used to mix with X-vest should be approximately at 21-24°C (70-75 °F). If utilizing an Automatic Vacuum Mixer, the proportion will be 1kg of X-Vest powder to 300 cc of water (30%). If using conventional mixing methods use 320cc of water to 1kg of investment powder (32%).
Please, use only distilled water.

What is the process?

Using a scale, separate quantities of X-Vest powder and water based on mixing method in separate containers.

Mixing Stage:

First put the water into mixer container (do not use suction system, put it manually) and gradually incorporate the investment into the container. For 2 minutes while mixing the contents manually with a silicon spatula.

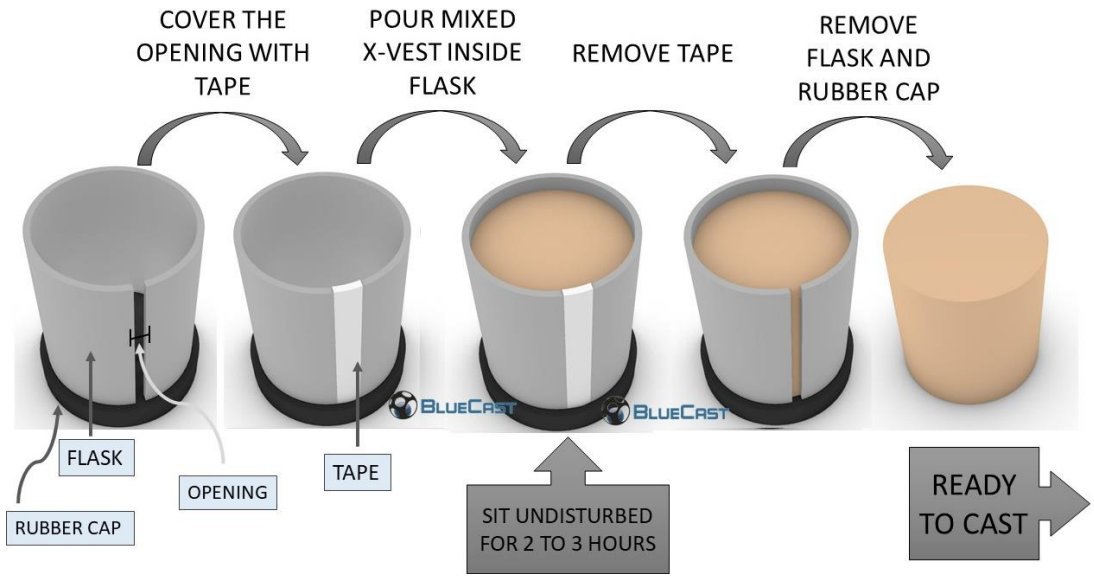
Automatic Vacuum Mixer:

- Once you get a proper pre mix, put on mixer cover
- First, turn on vacuum then turn mixer motor to maximum speed
- When you reach maximum vacuum, turn off vacuum
- Continue mixing
- Start vacuum and pour investment into the flask
- Continue vacuuming and vibration for 1 minute, then allow air to enter the vacuum again (dual vacuum) to let investment enter into the details of your model and flask properly
- Vacuum and vibrate for 2 more minutes
- Allow invested flask to sit undisturbed for 2 to 3 hours (this ensures the reaction between the water and x-vest. (**Skipping this step, you risk the success of your cast**)

Note: For traditional mixers, after a proper pre mix continue to use conventional mixer while vacuuming prior and after flask investment. Ensuring there is no air bubbles or granules.
Don't forget to allow invested flask to sit undisturbed for 2 to 3 hours (this ensures the reaction between the water and x-vest. (**Skipping this step, you risk the success of your cast**)

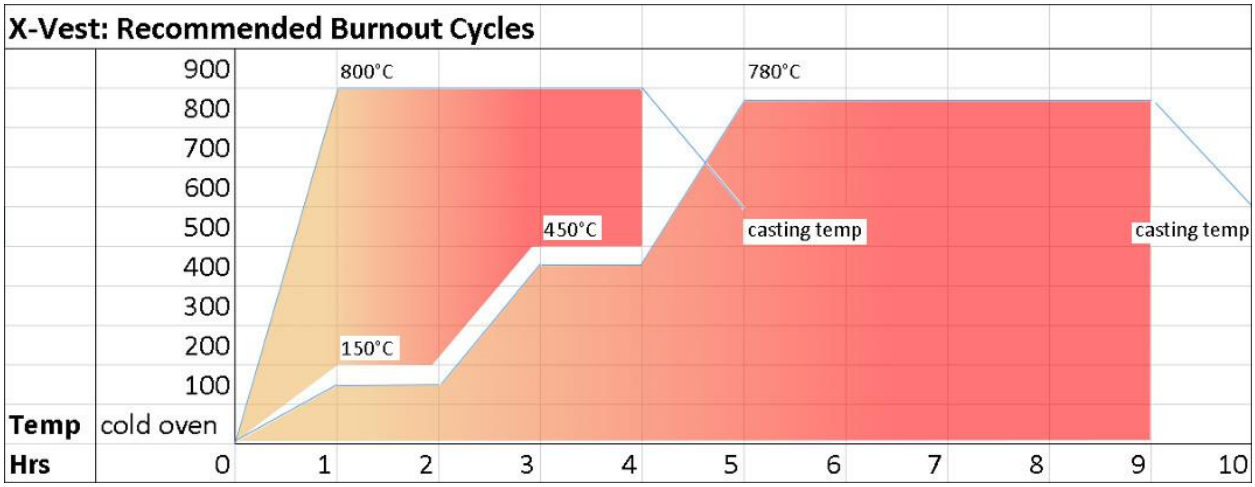
Flask-less Process:

The X-Vest allows for the flask-less casting method (for example 3D printed flask with FDM machines or silicone flask). But X-Vest works on standard metal flasks as well.



Conventional Burnout

FOLLOW BURN-OUT SCHEDULE AND PROCEDURES EXACTLY.



Fast Burnout (BlueCast X-Vest Investment has been designed with speed and quality in mind, the burnout)

- Place flasks inside furnace and raise temperature to 800°C
- Once temperature is achieved, sustain temperature for a period of time based on flask size
  Small Flask (diameter 70 to 80 mm) – minimum 1 hour
  Standard Flask (diameter 90 to 100 mm) – minimum 2 hours to 2 hours and 30 minutes
  Large Flask (diameter 100 mm +) – minimum 3 hours
- After recommended time, bring temperature down to casting temperature

Note: Maximum temperature X-Vest can sustain is 900°C (1652°F) for no more than 1 hour.

De-vesting

It is recommended using a cabinet water jet to remove X-Vest from inside casted metal flask or flask-less. If a cabinet water jet is not available, we suggest you leave the casted flask in water for a longer period of time (about 2 hours) until the X-Vest react with the water and begins to disintegrate, at which point you may physically remove the remaining X-Vest material using mechanical tools.

Observation:

Casting results are directly influenced by proper temperature of melted metal and flask. You may experience porosity in your cast if either temperature is incorrect.