

Technical Tips for FastFire 15

Rapid burnout investments are sensitive to variations in mixing time, speed and temperature. To improve casting results, review instructions and adjust according to the following guidelines.

Tight Fit

Solution

- Increase liquid concentration. Maximum setting expansion is achieved by using 100% FastFire Liquid.
- If using metal rings, use a double liner.
- If still tight at 100% liquid concentration, reduce total liquid by 1-2 ml.
- Warm the powder and/or liquid. **Note:** A water bath can be used to store liquid bottles at a relatively constant temperature.
- Decrease mixing time to 30 seconds.
- Replace worn mixing bowl.

Rough Casting Surface

Solution

- Avoid overheating the alloy. Refer to the alloy manufacturer's instructions.
- Make sure vacuum mixing unit is pulling 27" Hg or more of vacuum.
- Use water-based debubbler (i.e. Smoothex) and be sure to blow patterns dry.
- Check burnout temperature of oven. Refer to alloy manufacturer's instructions for burnout temperature. Refer to investment manufacturer's instructions for burnout time. **Note:** Holding too long at top temperature can cause investment breakdown.
- Warm liquid slightly; a cool/cold mix temperature can produce a rough surface.
- Increase mixing time by 30 – 60 seconds (this may also decrease expansion). For mixes less than 180g, increase mix time to 120 seconds total. For mixes greater than 180g, increase mix time up to 90 seconds total.
- Hold under vacuum for 30 seconds after mixing.
- Replace worn mixing bowl.
- For metal rings, use a dry liner.

Mold Cracking/ Exploding

Solution

- Let the mold benchset for a minimum of 15 minutes. **Note:** A cool environment requires a longer set time.
- If benchset over 12 hours, place trimmed molds in a bowl of room temperature water for 2-3 minutes.
- Place mold in lower temperature (650°C/1200°F) preheated oven, hold for 5 minutes, then heat to desired burnout temperature.
- If using 100% liquid concentration, reduce mix time to 30 seconds (this may increase expansion).
- When multiple patterns, complex restorations or plastic components are involved, place in oven at lower temperature (650°C/1200°F), hold for 15 minutes, then raise to desired burnout temperature.

