

# BIOVEST® INVESTMENT



## High-Heat, High-Expanding, Extra-Strength Investment

Biovest investment is a high-heat, high-expanding, extra-strength investment specifically designed for casting printed resin patterns. It supports both standard burnout and flash-fire processes, ensuring smooth castings with a quick setting time. Biovest is suitable for casting precious and nonprecious high-temperature alloys, including crowns & bridges, partial denture frames, and pressable ceramics.

Designed to be used with distilled water alone or with a combination of expansion liquid and distilled water to adjust expansion for precise results, though the use of expansion liquid is not required for use with Biovest investment.

## Typical Material Properties\*

Color	Off White
Water or Diluted Universal Expansion Liquid to Powder Ratio	25 ml + 100 g powder
Working Time	6-8 minutes

\*These results are based on the testing methods, frequency and procedures of Ransom & Randolph or its approved suppliers. The levels referenced herein are only for general guidance and do not constitute a firm specification.

## Mixing & Investing

1. Add 25 ml of water or diluted Universal Expansion liquid to the mixing vessel first, then add 100 g of Biovest investment.  
**Note:**
  - Setting expansion and thermal expansion can be enhanced by using Universal Expansion liquid and more expansion is realized when using a higher concentration.
  - A common dilution ratio is 86 ml Universal Expansion liquid + 14 ml deionized water.
  - If consistently using Universal Expansion liquid, you will need:
    - 2 bottles/box of 100 g pouches
    - 3 bottles/box of 400 g pouches
    - 3 bottles/25 LB box
2. Hand spatulate for approximately 10-20 seconds to wet out the powder. Then mix under vacuum for 60 seconds at 250-350 rpm.
3. Using either a disposable or metal ring, pour the mixed investment into the ring using the normal techniques to avoid trapping air (i.e., vibration, rolling, brushing, etc.). Once the ring is filled, a pressure vessel can be employed for 15 minutes, but may not be necessary.
4. Allow the ring to bench cure for 60 minutes in a vibration free location.

## Burnout

1. After bench cure, place the invested ring into a room temperature oven.  
**Note:** Having the mold supported above the oven floor is very helpful for clean burnouts.
2. At a rate of < 20° F (< 11° C) per minute, ramp the oven temperature to the required temperature for the alloy being used.  
**Note:** Running the oven with some vents open is good to help combust all the pattern materials.
3. Allow the oven to hold at the target temperature for at least 1 hour prior to casting. This time should be extended as the oven load is increased.

## Flash Fire Burnout

1. After a 20 min bench cure, remove the base and the tear-away flask.
2. Place in an oven preheated to 1500-1700° F (816-927° C) or the mold casting temperature recommended by the alloy manufacturer.



## RANSOM & RANDOLPH

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3. Hold for 1 hour and cast metal into the mold.

## Casting

1. Follow the alloy manufacturer's recommended metal and mold temperatures.
2. Allow the mold to air cool naturally instead of quenching in water.
3. When removing the casting from the mold, remember to use the proper personal protective equipment to avoid inhaling the dust particles.

## Storage

Keep container closed when not in use. Store investment in a cool dry area.

## Safety

**North America:** Danger. Contains crystalline silica. May cause cancer by inhalation. Causes damage to lungs through prolonged or repeated exposure by inhalation. See SDS for more information.

**EU:** Danger. Contains respirable crystalline silica. Causes damage to lungs through prolonged or repeated exposure. See SDS for more information.

## Availability

### Biovest investment

Package Size	Item Number
100 gram pouch (quantity of 80)	26421
400 gram pouch (quantity of 30)	26416
25 LB (11.3 KG) box	264151

### Universal Expansion Liquid

Package Size	Item Number
32 ounces (0.95 L)	26410

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