

# KC2000 INVESTMENT



## KC2000

A Precision Jewelry Investment  
for Gold and Silver

Keep covered when not in use. Keep dry. Store at ambient temperature. Prevent dust accumulation.

Made in the USA



RANSOM & RANDOLPH  
Maumee, OH 43537 USA  
Toll Free: 800.253.4502  
Phone: 419.865.9497  
Fax: 419.865.9997  
www.ransom-randolph.com  
Investing with Innovation™

KC2000 investment is a forgiving and dependable jewelry investment casting powder for all of your gold, silver and brass casting needs.

- Economical formula
- Easy break out for large volume production
- Highly consistent with smooth surface finish
- Recommended mixing ratio: 38-40 mL water to 100g powder

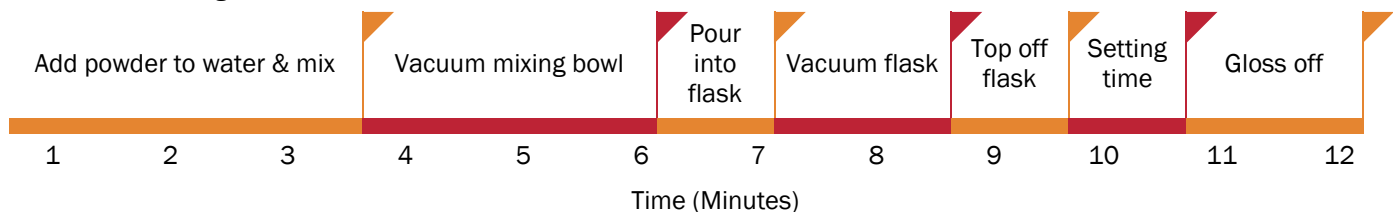
KC2000 investment is used to form lost-wax molds for the casting of jewelry and fine art pieces with gold, silver and other metal alloys. KC2000 investment is composed primarily of powdered silica (quartz), cristobalite (a form of quartz) and a gypsum (calcium sulfate) binder. Water is mixed on-site by user prior to use to form the mold.

## Mixing Instructions

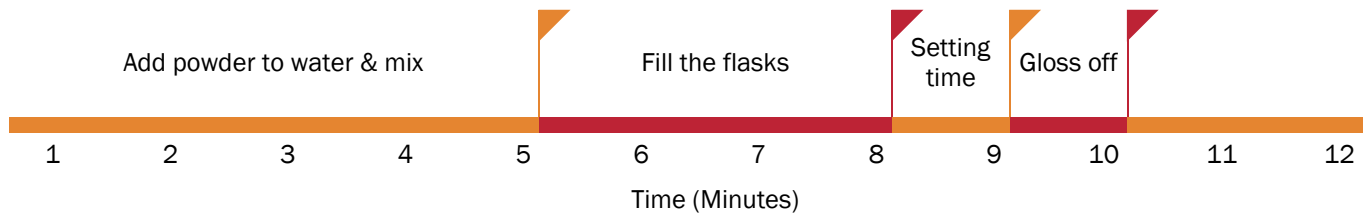
1. Weigh investment.
2. Measure water.
3. Add investment to water.
4. Mix 3-3.5 minutes.
5. Vacuum 20 seconds after boil.
6. Pour into flask.
7. Vacuum up to 90 seconds.
8. Let flask sit still for 2 hours.
9. Preheat furnace 300 °F (149 °C). **Note:** do not preheat for multiple flasks.
10. Remove sprue base.
11. Load into furnace.
12. Follow appropriate burnout cycle.

## Recommended Working Time

### Conventional Mixing



### Vacuum Mixing



Work time: elapsed time between adding powder to the water and thickening of investment.

Water temperature: water should be 70-75 °F (21-24 °C). Colder water = extends work time; Warmer water = shortens work time.

Water quality: deionized (DI) or distilled.



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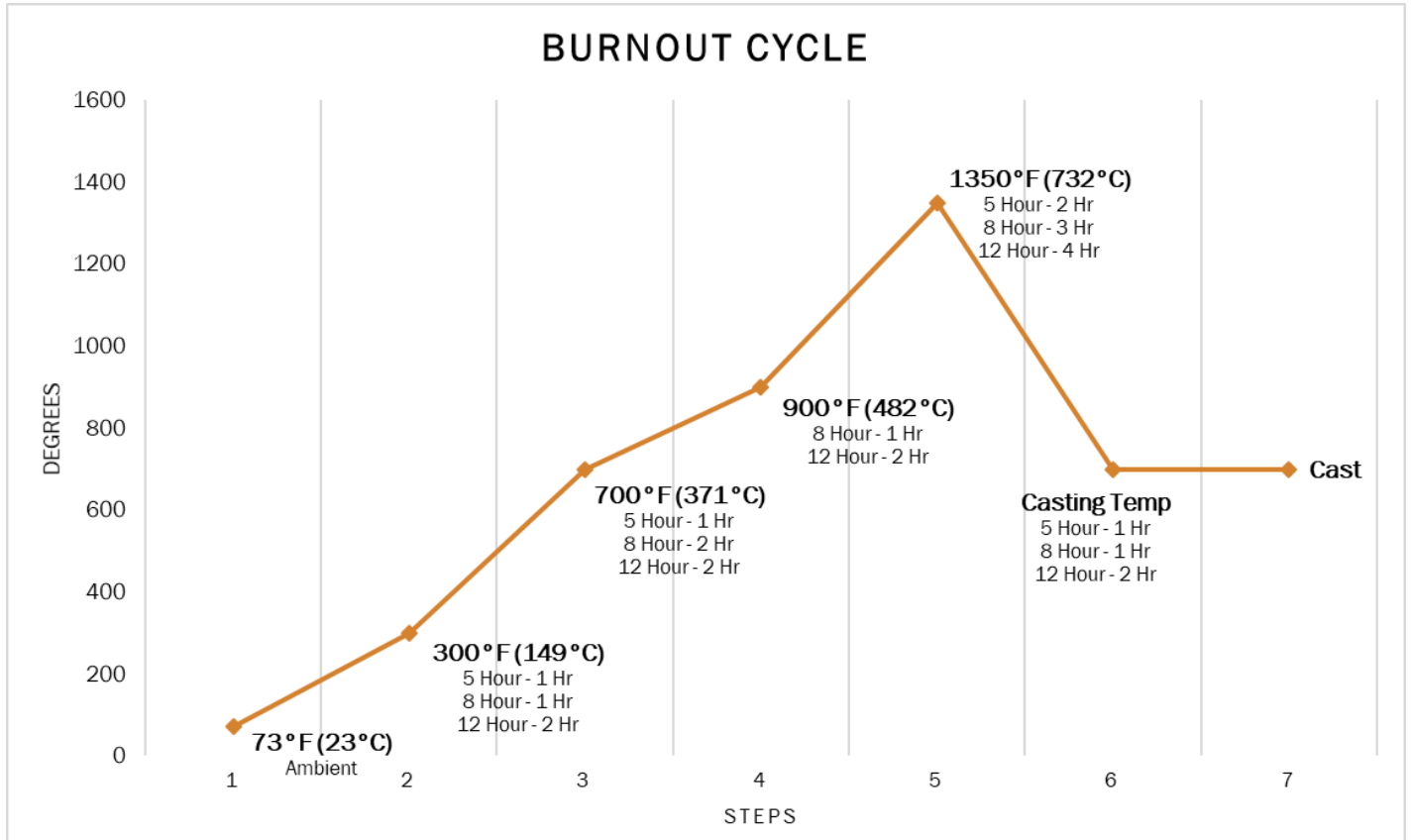
3535 Briarfield Boulevard, PO Box 1570 | Maumee, OH 43537 USA  
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## Burnout Cycle



## Casting Temperatures

Type of Ring	Temperature Range
Women's rings (intricate designs)	900-1000 °F (482-538 °C)
Men's rings (heavier designs)	700-900 °F (371-482 °C)

**Note:** During final 1-2 hours of burnout, adjust temperature so flasks are at correct casting temperature.

## Hold Time

Cycle Length	Size
5 hour	2.5 in x 2.5 in (63 mm x 66 mm)
8 hour	3.5 in x 4 in (89 mm x 100 mm)
12 hour	4 in x 8 in (100 mm x 200 mm)

**Note:** Graph is meant as a guide only. Adjustments should be made as necessary. 5, 8, and 12 Hour Cycles represent hold times only and do not include ramp time. Recommended ramp time of approximately 9 °F (5 °C) per minute.

## Typical Material Properties\*

Silica (SiO <sub>2</sub> ) (Quartz & Cristobalite)	Calcium Sulfate (Gypsum)
60-80%	20-40%

\*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.



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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.

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