

SC-PT investment

Properties*

Water:Powder Ratio	Working Time
32–34:100	20–25 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.*

Pattern & Flask Preparation

- Use an absorbent base with a solid steel flask with a tall collar.
- Cut a small hole in the center of the absorbent base to allow wax to flow freely during burnout.

Mixing & Investing

1. Weigh investment.
2. Measure water.
3. Add investment to the water slowly. Blend by hand.
4. Once all the powder is added, mix for 12 minutes, stopping periodically to scrape the sides.
5. Vacuum for 1 minute.
6. Pour into the flask, avoid pouring directly onto the pattern. Apply vibration if possible. Do not fill the flask all the way; just enough to cover the pattern.
7. Vacuum up to 90 seconds.
8. Fill the flask 1.5 inches (3.8 cm) above the top of the flask with vibration if possible.
9. Let the flask sit for 14–16 hours, undisturbed.
10. Discard excess water formed on top of mold. Let mold sit for 1 more hour.
11. Carefully remove any investment material remaining above the flask.

Oven Loading & Burnout Cycle

1. Load into oven.
2. Follow the appropriate burnout cycle.
* Proceed to page 2.

Note: Adjustments may be required for various furnace types, flask sizes, and oven loading.

Tips

- Use demineralized water at 72–75°F (22–24°C)
- Working time is defined as the time from when the powder is added to the water until the investment becomes thick.
- Keep equipment clean of any set investment.
- Maintain a minimum pattern clearance of 1/4 inch (0.5 cm) at the sides and 1 inch (2.54 cm) at the top and bottom of the flask.
- Do not vacuum while mixing.
- To check a vacuum system for leaks, place water in a glass or ceramic container in the vacuum chamber. It should boil vigorously in 20 seconds.
- It is extremely important to leave flasks undisturbed while curing.
- While loading the oven, do not place flasks too close to the heat source.
- Flasks should be elevated at least 1 inch (2.54 cm) above the oven floor to allow for proper air circulation.
- If absorbent base must be removed before burnout, remove very carefully.

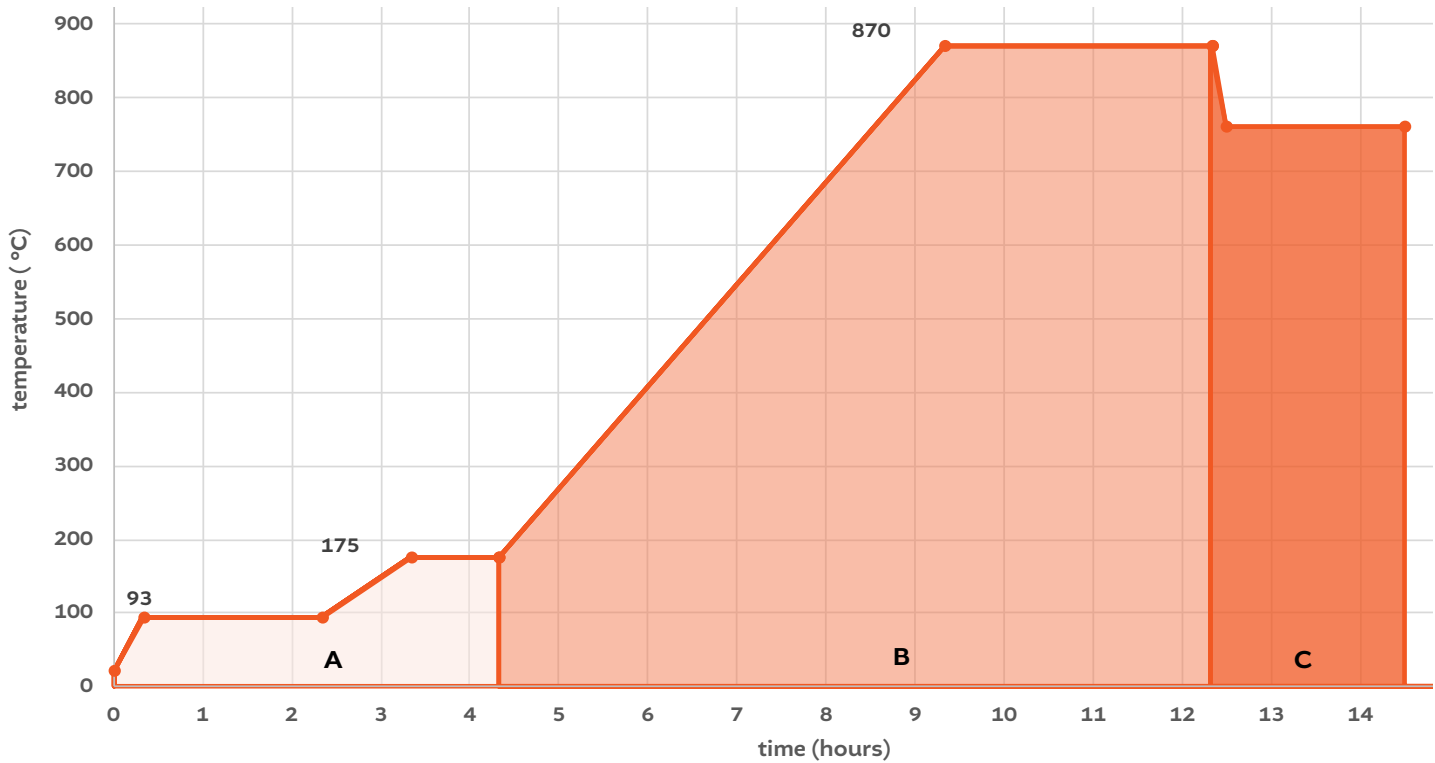
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Flash-Fire burnout



Burnout Schedule		Phase	Time (hours)	Schedule °C	Schedule °F
A	Dry	Ramp	As Fast As Possible		
		Hold	2	93	200
		Ramp	1	1.4 °C/min	2.5 °F/min
		Hold	1	175	350
B	Pattern Removal	Ramp	5	2.3 °C/min	4.2 °F/min
		Hold	3	870	1600
C	Casting	Ramp	As Fast As Possible		
		Hold	2	Alloy Manufacturer's Recommendations	

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Storage

Keep container tightly closed when not in use. Store investment in a dry area at room temperature. Shelf life is 12 months from the date of manufacture found in the first six digits of the lot number on the label in MMDDYY format.

Safety

Danger. Contains crystalline silica. Causes damage to lungs through prolonged or repeated exposure by inhalation. Avoid skin or eye contact. Avoid breathing dust. Wear protective equipment when handling. Wash hands thoroughly after handling. See SDS for more information.

North America: May cause cancer by inhalation.

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