

R&R® CAST SHOE MOLD INVESTMENT



A high expansion, extra strength shoe mold plaster that produces detailed replications and consistent sizing for aluminum shoe molds.

Typical Material Properties*

Water/Powder Ratio	38/100 (by weight)
Setting Expansion	<0.2%
Compressive Strength (after 1 hour)	approximately 400 psi (2.76 MPa)
Fired Strength	approximately 80 psi (0.55 MPa)
Pour Time	10-10½ minutes
Set Time	< 20 minutes
Permeability (darcy)	0.035

*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.

Application Instructions

1. Mix 100 parts investment powder to 38 parts water (by weight). Mechanically mix for two to three minutes. Vacuum the mix until the investment rises and breaks to eliminate entrapped air.
2. Pour the investment into the framed pattern (silicon rubber), under vacuum; this operation normally takes 3 to 4 minutes. Then vibrate (if possible) the molds for 30 seconds to 1 minute to finish eliminating the last entrapped air bubbles.
3. Stop the vacuum. Take the molds out of the mixing machine and place them on a table; it is important that they do not receive mechanical shocks as this may cause cracking.
4. The molds can be stripped from the rubber pattern after 30-35 minutes.
5. After separating the mold from the pattern, the mold can begin the curing cycle.
Note: If there is a need to store the molds for more than 2 hours prior to curing, then attempts should be made to prevent the mold from partially drying.

Recommended Drying Cycle

1. In 2 hours, raise the temperature from 68°F (20°C) to 356°F (180°C).
2. In 5 hours, raise the temperature from 356°F (180°C) to 572°F (300°C).
3. Hold at 572°F (300°C) for 5 to 7 hours.
4. In 30 minutes decrease temperature to 500°F (260°C).
5. Cast the metal

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.



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

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