



965 Investment

for aluminum and copper based alloys

R&R 965 Investment is a calcium sulphate bonded investment containing silica as well as specially selected and graded refractory materials that provide 965 Investment with good core strength and excellent thermal shock properties. 965 is a good general use investment for both large and small casting applications. It can be used with vacuum assist or vacuum chamber casting.

PROPERTIES:

Consistency	W/P = 28/100
Working Time @ 72-74°F	8-9 minutes
Setting Time @ 72-74°F	12-14 minutes
Compressive Strength, 2 Hrs	585 psi
Fired Strength	256 psi
Volume of Mixed Investment	17.75 cu. in. per lb. of powder

DIRECTIONS:

Mix 100 parts investment powder to 28 parts water (by weight). Mechanically mix for two to three minutes. Vacuum the mix until the investment rises and breaks to eliminate entrapped air.

Pour the investment down the side of the flask until the patterns are covered to a depth of approximately one inch (2.5 cm). Vibrate or vacuum the mold to remove air bubbles which may tend to adhere to the patterns. This operation normally takes 1 to 1-1/2 minutes. Top off the flask with investment and allow to set for two hours before starting wax removal and burnout.

Two methods of wax removal are commonly used: dry dewax and steam dewax. For dry dewaxing, place the mold into a furnace at a temperature of 300-350°F (150-177°C) and hold for 3 to 4 hours. For steam dewaxing, place the mold into the steam dewaxer. Steam dewax only for the time required to remove the wax and no longer. The amount of time required to dewax the molds will vary depending on the size of the mold. After steam dewaxing, immediately place the mold into a furnace at a temperature of 300-350°F (150-177°C) and hold for 3 to 4 hours.

After the mold is dewaxed, raise the temperature to 1300-1350°F (704-732°C) at a rate of 150-200°F (65-93°C) per hour. Hold the molds at this temperature until the pattern material is completely eliminated. Burnout will take approximately 5 hours at this temperature, although the time will vary depending upon furnace loading and flask size.

After burnout, the molds should be cooled in the furnace to the desired casting temperature. This is normally 400-550°F (204-288°C) for aluminum and 800-1000°F (427-538°C) for copper based alloys.

Warning: 965 investment contains crystalline silica. Do not breathe dust. May cause delayed lung injury (silicosis, pneumoconiosis). The IARC (International Agency for Research on Cancer) reports there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the forms of quartz or cristobalite from occupational sources. Follow OSHA Safety and Health Standards for crystalline silica. See Material Safety Data Sheet for detailed information.

R&R®

DENTSPLY®

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