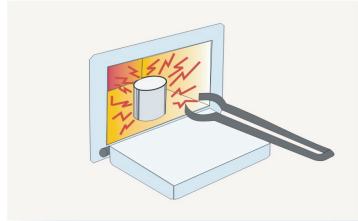


RUTENIUM

Heat-Shock Investment



User's Instructions:

Heat-Shock Investment:

Heat-Shock Investment is suitable for the casting of alloys with a melting point up to 1800°C using the fast fire technique. It can be used too in the casting of low melting point alloys such as copper-aluminum and silver alloys. The binding agent used in this investment is magnesium oxide and mono-ammonium phosphate.

Water-Powder Ratio:

Heat-Shock Investment can be rationed at 25 to 28 ml of a mixture of water and its special liquid to each 100g of powder. For a higher fluidity use more water/liquid, for higher viscosity use less water/liquid. Best results are achieved using the Rutenium measurer.

Burnout:

- * Wait 30 minutes after the beginning of the mix before starting the burnout.
- * Place the flask in a pre-heated furnace at 600-800°C.
- * Adjust the temperature to final temperature.
- * Keep at final temperature for 10 minutes.
- * Cast now.

Package weight:

Heat-Shock Investment is available in two package versions: Kits of 10 and 50 envelopes weighing 100g.

When packing Rutenium, a special care is taken to the weight of each package. Never shall a package with a smaller weight of the indicated be let pass through Q.C. But 100g envelopes are packed under more strict control. In order to offer the end user a perfect and repeated mix each molding, their weight does not vary more than 2g.

Mixing: We frequently find technicians that refuse to weigh or measure both powder, liquid and water. For a precise work always measure the powder, liquid and water.

Technique measuring water and powder:

Simply take a 100g envelope and measure 25-28 ml of liquid-water (use Rutenium water measurer that is sold separately). Pour the full amount of liquid-water in the mixing bowl. Now add part of the powder to the water and use a spatula or spoon to mix. Don't place all the powder at once in the mixing bowl! Slowly add more and more powder till a thorough mix is reached.

Better Precision Castings: One can expect a setting expansion of aprox. 1.2% before burn-out. A combined expansion (setting and thermal) can reach approximately 2.4 % at 750°C. You can opt for the high expansion special red liquid, which can result in a still higher combined expansion up to 3.2 %.

Controlling the expansion:

Dilute the special liquid (coloidal silica) with water to lower expansion. Use full concentration liquid for most expansion. A large nickel-chromium work (ie. full mouth), very demanding in expansion will result in a good fit at 100% concentration of our red liquid. Smaller castings of silver or copper-aluminum result in a good fit using 50% concentration of our white liquid.

Heat-Shock Investment is blent with fine aditives to avoid the excessive development of air bubbles and foam under vaccum, provide good shelf life, smooth castings, and precise setting time.

Before starting the mix, rinse the mixing bowl with clean water, and dry it. Dry mixing bowls can absorb part of your liquid/water during the mix. Use separate bowls for phosphate investments and gypsums. Small amounts of gypsum in the phosphate investment mix can cause the mould to break down during burnout.

Do not open the furnace during the wax elimination. These fumes can ignite in the presence of oxygen!

Composition: Monoammonium phosphate, magnesium oxide, quartz and cristobalite.

Heat-Shock Investment is a product of:

Usina Brasileira de Cristobalita Ltda
Rua F, Lote 5, Quadra 5,
Distrito Industrial de Queimados
Queimados - RJ - Cep 26.362-000
Visit our Web Site:
www.rutenium.com.br

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