

SILK CAST INVESTMENT POWDER

JPL SILK CAST IS A HIGH QUALITY GYPSUM BONDED INVESTMENT POWDER FOR CASTING BRASS, SILVER AND UP TO 14KT YELLOW GOLD.

The casting of standard jewelry and costume jewelry in Brass, Silver and low karat Gold form a large percentage of the world production.

Costs need to be minimised in the manufacturing of this range of jewelry and Silk Cast achieves this but at the same time produces superb castings and excellent surfaces.

Silk Cast is specifically formulated using high quality components with optimised particle size distribution and thermal expansion to help casters to compete in the most demanding environments for casting brass, silver and low karat gold.



INVESTING

Target is to use deionised water between 23°C - 25°C together with powder at the same temperature to achieve a slurry temperature around 24°C - 26°C. This will allow the powder to give consistent gel and gloss off times to maximise the correct setting time of the powder. It's important that a flask is left undisturbed after investing for 90 minutes before removing the rubber base and inserting into the furnace to start the burnout cycle. This will allow the flask to gain its full green strength in preparation for the burnout cycle.

BURNOUT CYCLE

1. Steam Dewaxing / Dry Dewaxing

JPL investment powder products can be steam or dry dewaxed in a furnace with excellent results. Wax will melt in the range of 65°C - 75°C and will flow out of the flask. It is recommended to hold the flask at 230°C to drive out all the wax and free moisture out of the flask. This will take approximately 3 hours.

2. Top Temperature

At the top temperature at 730°C all the residual carbon from the wax is converted into carbon dioxide gas which easily leaves the flask leaving a uncontaminated mould for the metal to be cast into.

3. Casting Temperature

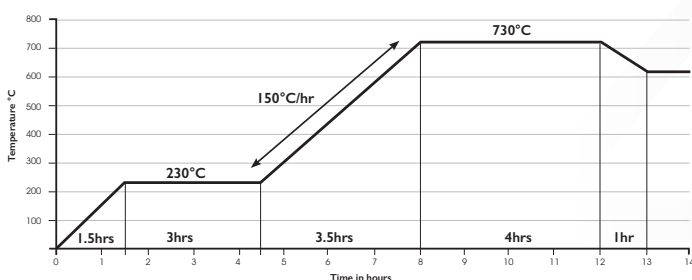
The casting temperature varies considerable depending on the size of wax piece and type of metal to be cast. Please contact JPL for our recommendations if casting defects are found as an adjustment to the flask casting temperature or metal temperature can solve most casting defects.

HAND MIX THEN VACUUM	Min.
Weigh out water and powder	0
Add powder to water	0
Mix by hand	1
Mix with machine	3
Vacuum mixer bowl	1
Pour flasks	1
Vacuum flasks	2
Total time taken	8

MACHINE VACUUM MIXING	Min.
Weigh out water and powder	0
Add powder to water	0
Mix under vacuum	4
Pour flasks	2
Vacuum flasks	2
Total time take	8

POWDER/ WATER RATIO	100/38
WORKING TIME @ 25°C SLURRY TEMP.	8-10 min.
GLOSS OFF TIME @ 25°C SLURRY TEMP.	12-14 min.
THERMAL EXPANSION AT 750°C	0.90%
SETTING EXPANSION AFTER 2 HOURS	1.10%
VOLUME YIELD PER KG. OF POWDER	760 ml.

NEVER INCREASE THE FURNACE TEMPERATURE ABOVE 750°C



JPL SILK CAST IS AVAILABLE IN:

- 22.5 KG Sack
- 45 KG Fibre Drum

