



# JEWELRY PLASTER LTD.

## INVESTMENT POWDER

# STONECAST BY JPL

### STONECAST

STONECAST is a special application investment powder and has been developed for stone casting or wax setting.

Using STONECAST the jewelry caster can set diamonds in the wax before casting rather than in the metal afterwards thus improving productivity.

Product Packaging:

DRUM: 45.4 kg. (100 lb.) ,PP SACK: 22.7 kg.

### MIXING INSTRUCTIONS

#### CONVENTIONAL MIXING

Add powder to water and mix				Vacuum Mixing Bowl		Pour into Flask	Vacuum Flask		Setting time	Gloss off		
1	2	3	4	5	6	7	8	9	10	11	12	minutes
Add powder to water and mix				Fill into Flasks		Vacuum Flask		Setting time	Gloss off			

#### VACUUM MIXING

DIAMETER OF FLASK	POWDER WATER RATIO	HEIGHT OF FLASK					
		3"	3 1/2"	4"	5"	6"	7"
2 1/2"	POWDER (g.)	311	364	415	519		
	WATER (cc.)	118	138	158	197		
3"	POWDER (g.)	449	524	599	747	897	1,046
	WATER (cc.)	171	199	228	284	341	397
3 1/2"	POWDER (g.)	610	712	814	1,018	1,221	1,425
	WATER (cc.)	232	271	309	387	464	542
4"	POWDER (g.)	797	930	1063	1,329	1,595	1,861
	WATER (cc.)	303	535	404	505	606	707
5"	POWDER (g.)	1,246	1,454	1,662	2,076	2,492	2,907
	WATER (cc.)	473	553	632	789	947	1,105
6"	POWDER (g.)			2,392	2,991	3,588	4,187
	WATER (cc.)			909	1,137	1,363	1,591

**STONECAST**

<b>POWDER / WATER RATIO</b>	<b>100/38</b>
<b>WORKING TIME</b>	<b>8-10 min.</b>
<b>GLOSS OFF TIME</b>	<b>10-12 min.</b>
<b>THERMAL EXPANSION AT 750°C</b>	<b>0.73%</b>
<b>SETTING EXPANSION AFTER 2 HOURS</b>	<b>0.45%</b>
<b>VOLUME YIELD PER KG. OF POWDER</b>	<b>795 ml.</b>

## DEWAX CLCLE

Do not recommend steam dewaxing for stone in wax casting of diamonds or precious stones where a special investment or additive has been used. There is a danger that the steam will wash away the additive protecting the diamonds.

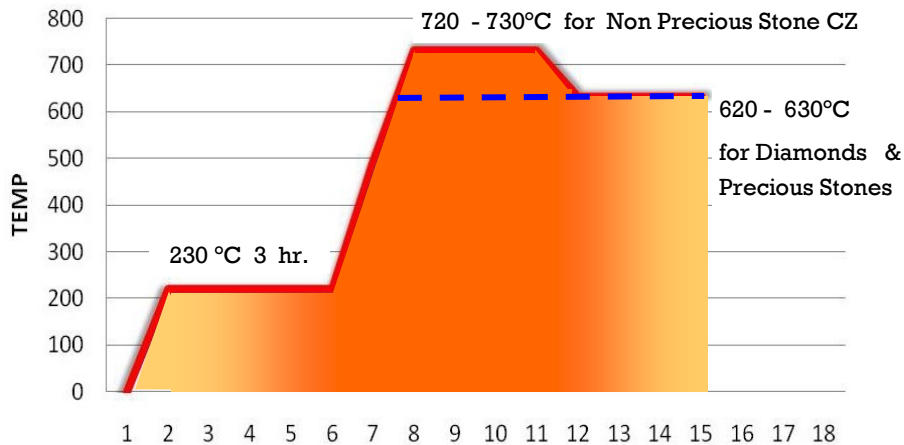
## BURNOUT CYCLE

Burnout cycles will depend very much on the size of the flask. The larger the flask or the waxes therein the longer and more gradual the burnout must be. For 6"x4" mould will only need 7 hours. In addition the furnace must have a good supply of air in order to achieve a clean burnout. Carbon deposits from the wax must combine with oxygen to form CO<sub>2</sub> and thus escape through the pores of the investment. If after Burnout your mould is a gray colour you need to get more air into the furnace- do not increase the temperature, this will only damage the investment.

## CASTING

After completion of burnout, the flask should be cooled to proper casting temperature. The flask can then be cast by either centrifugal or vacuum casting methods.

Temperature of the last 1-2 hours of burnout must be adjusted at correct temperature for casting. If held for less than 1 hour, the core of the flasks will be at a much higher temperature, and may result in metal mould reaction.



## INVESTMENT REMOVAL

Do not quench, wait for the tree to be hand hot then only tap bottom of tree and sides of flask with small hammer.

Never quench the stone-in flask in water while it is still hot as the thermal shock will certainly break the stone!!

### CASTING CONDITIONS:

	Metal casting (°C)	Flask (°C)
Normal casting	990 - 1000	550 - 580
Fine Filigree	1010 - 1020	600 - 630

The above conditions are for guidance only and may need to be optimized for your own experience and knowledge of your casting machine.