

# CRYSTALCAST

FOR THE CASTING OF GLASS



GRS Crystalcast is a plaster-bonded investment powder specifically designed for casting glass. The refractory content and permeability of Crystalcast enables firing cycles to temperatures as high as 900°C for as long as 10 days depending on the mould size.

To enable the removal of filigree work from the mould without breakage and for ease of use, Crystalcast has been designed to have high strength during firing, yet removal from the cast item when cool is very easily achieved, limiting any chance of damage.

Crystalcast has been formulated with a high-technology particle size distribution ensuring that every detail of the mould is reproduced with an exceptional surface finish. GRS has optimised the strength of this investment powder so that it permits the casting of small to large sculptures.



Glass "Free Set" on Mould

Crystalcast is mixed using the same method as a standard plaster-bonded investment, with a water to powder ratio of 32:100. After the mould has cured for a minimum of three hours, the pattern is then removed by the steam de-wax process. This process can take up to 4 hours but is dependent on mould size. Care must be taken not to steam de-wax the mould for too long as it can cause damage to the mould surface.



Glass in Ceramic Feeder on Mould

The de-waxed mould filled with glass crystals is placed in a cold oven and fired as per graph. The furnace should be ramped up at no greater than 50°C per hour until a temperature of 850°C is achieved, this temperature is to be held for around 30 hours; the length of time is dependant on mould size. When the glass becomes molten it flows under gravity into the voids of the mould completing the casting process.

The mould must be cooled in the furnace at a rate of no greater than 10°C per hour to ambient temperature. At this point the ceramic mould can be gently removed from the casting; never quench glass or crystal castings.

Après l' Amour amber and sea green crystal, oeuvre d'Art signed by Daum and Sylvie Mangaud Lasseigne.



GOODWIN REFRACTORY SERVICES LTD

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[WWW.GRSCASTINGPOWDERS.COM](http://WWW.GRSCASTINGPOWDERS.COM)

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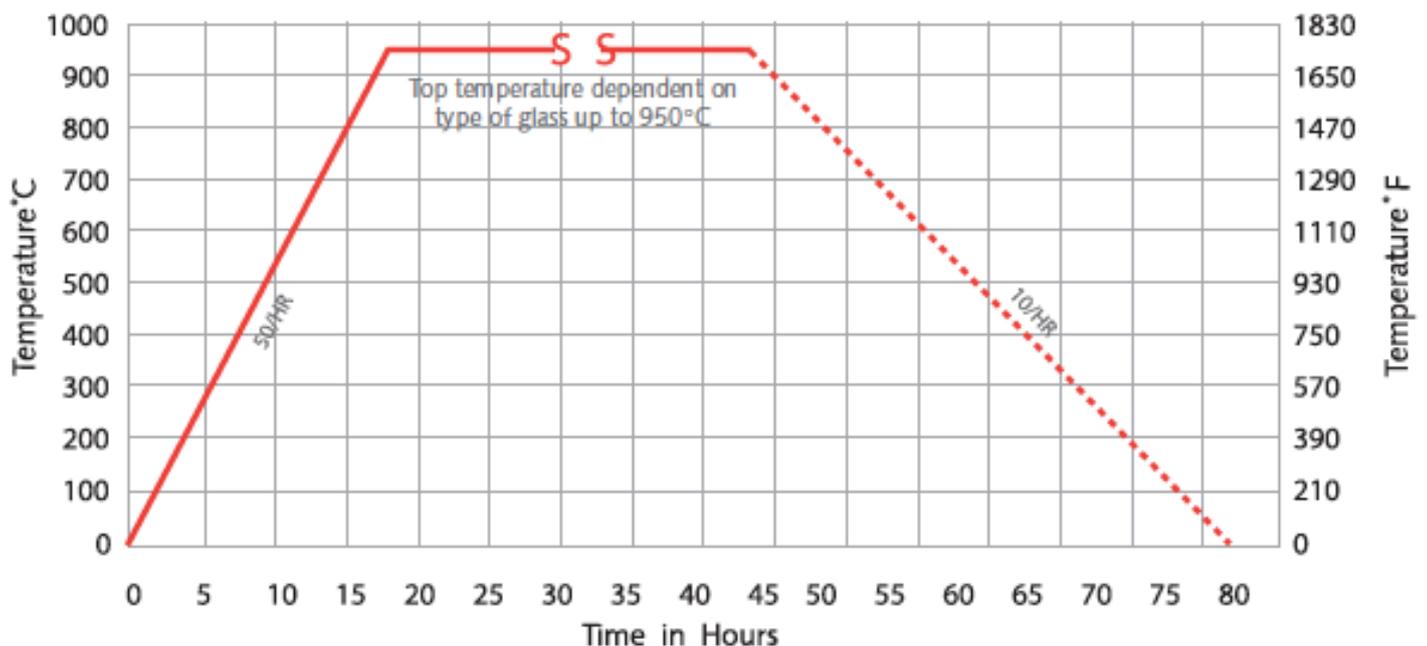
| Water : Powder Ratio | Vacuum Mixing | Conventional Mixing |
|----------------------|---------------|---------------------|
|                      | 32 : 100      | 32 : 100            |

| Machine Vacuum Mixing     | Min.     |
|---------------------------|----------|
| Weight out water & powder | -        |
| Add powder to water       | -        |
| Mix under vacuum          | 5        |
| Pour flasks               | 2        |
| Hold flasks under vacuum  | 1        |
| <b>Total time taken</b>   | <b>8</b> |

| Conventional Mixing             | Min.     |
|---------------------------------|----------|
| Weight out water & powder       | -        |
| Add powder to water & mix       | 4        |
| Vacuum the bowl                 | 1        |
| Pour flasks & vacuum the flasks | 3        |
| <b>Total time taken</b>         | <b>8</b> |

\* Leave for 90 minutes to stand before burnout.

## Recommended Burnout Cycle



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