

### PRODUCT DESCRIPTION

Hydracast Crist is a refractory investment plaster designed for manufacturing crystal or pâte de verre parts using the "plaster" lost wax process. This product is suited to medium to massive sized parts. Its surface finish characteristics and knocking out properties make it the preferred refractory investment with producers of pâte de verre items

### PRODUCT BENEFIT

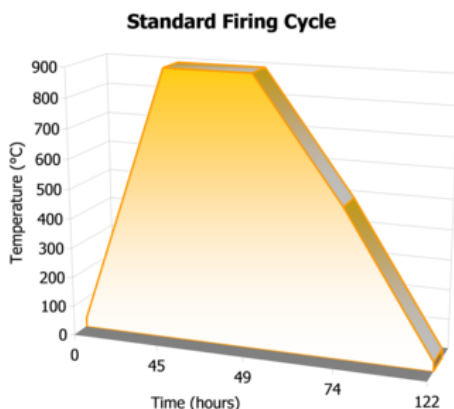
- + Designed for Crystal and "Pâte de verre" lost wax process
- + Preferred product for premium "Pâte de Verre" items

### TECHNICAL INFORMATION

% water used	32
Liquid density	1.9
Mixing time minutes	4
Working / Casting time minutes	14
Initial setting time (minutes)	17
Linear expansion 2 hours after setting %	< = 0,45

The technical data outlined represents typical figures only. For further details, please contact Goodwin Refractory Services directly.

### INSTRUCTION FOR USE



#### Lost Wax Process

The recommended plaster to water ratio can be adjusted to precisely fit process and application. It is important to measure precisely Plaster and Water weights.

#### Mixing

Mixing plaster in water is the most important step in making a mould and could heavily impact resistance, hardness and permeability properties if performed incorrectly.

For optimum quality, vacuum mixing and casting is recommended. Always ensure that all equipment is clean.

#### Casting

Pour the mix immediately after finishing mixing. Make sure that the mixture does not become too thick or too hard. Always pour the mixture so that it slowly covers the surface of the part to be reproduced, without trapping or creating air bubbles. Vacuum casting avoids forming air bubbles.

#### Plaster Setting

After the casting, do not handle the plaster mould containing the wax model until it has reached its setting time to avoid any defects in the finished part. Wait at least a minimum of 2 hours before starting dewaxing.

All water must be removed before pouring metal to obtain proper mechanical resistance and limit defects.

Note: drying time is heavily dependent on the size and number of cylinders in the oven.

#### Dewaxing

Dewaxing is performed under moist conditions between 100/100°C, or dry conditions between 150/160°C, for 6 to 8 hours. Dewaxing at temperatures higher than 400°C produces a perfect interior surface by eliminating the last traces of wax.

#### Standard Firing Cycle

Standard firing cycle for Pâte de verre:

- Fill the cavity and refractory pot (potentially made of Hydracast) placed on top of the mould with pieces of crystal. Increase to 850/900°C at a rate of 15/20°C/hr
- maintain at 850/900°C for 4 hours
- reduce from 850/900°C to 500°C at a rate of 20°C/hr
- temperature can be maintained at 500°C for several hours to heat soak the mould

- reduce from 500 to 20°C at a rate of 10°C/hr in order to reduce as much as possible residual glass strength.

#### Knocking Out

For the Knocking out, the mould is left to cool down, then gently demoulded by hand using hand tools and then by using a high pressure cleaning system.

The part can then be recovered to undergo finishing and polishing steps.

## PACKAGING AND SHELF LIFE

	Packaging Available	Shelf Life (months)
Paper Sack	25 kg	12
Bulk Bag	1 T	12

When stored under dry conditions and in its original packaging, the product will have a specified shelf life that commences from the date of manufacture that is displayed on each sack. Shelf life depends on the packaging type. For those products where a defined 'best before' date is applicable, BBE (Best Before End) followed by the date will be displayed on each sack.

## STORAGE

Plaster based products are not recommended for conditions where they are likely to be located externally or in any way subjected to weathering or excessive dampness.

Absorption of moisture can result in changes to physical properties, including a reduction in the set strength of plasters and also a lengthening of setting time.

Gypsum minerals can be affected by absorption of moisture and may change physical properties.

To help protect the product during use, open or part used bags should be carefully folded and closed. Each bag is date stamped and stocks should be rotated so that the oldest material is used first.

## CERTIFICATION



This Product may generate dust and does contain crystalline silica, please refer to Material Safety Data Sheet for further information. We therefore recommend that a mask be always worn whilst working with this refractory product and to ensure that the workplace is well ventilated.

## ENVIRONMENT, HEALTH AND SAFETY

Material Safety Data Sheets of Goodwin Refractory Services plasters and gypsum minerals are available for all products and may be obtained directly on our website.

No liability is accepted by Goodwin Refractory Services for injury to any person or loss or damage to property by improper use of the product.

## NOTIFICATION

The plaster to water ratios quoted are those used in Goodwin Refractory Services standard test methods and are not necessarily those used in practice. The precise consistency to use will need to be adjusted to suit the individual application. Changes to plaster to water ratio will influence product performance, particularly setting time and strength.

Unless otherwise stated, Goodwin Refractory Services standard test methods apply. To obtain a copy of the test method, please contact Goodwin Refractory Services directly. This booklet cancels and replaces any previous document. All information given is composed on good faith and may be subject to change. It's advisable to contact Goodwin Refractory Services in case of any doubt arising from the content of this document or its validity.

## CONTACT

For more information, please visit our website  
[www.grscastingpowders.com](http://www.grscastingpowders.com)



**SALES  
CONTACT**



**DOCUMENTATION**



**TECHNICAL  
INFO**



**GLOBAL  
INFO**