

HYDRACAST 79/60AL



Metal Casting / Industrial Casting

PRODUCT DESCRIPTION

Hydracast 79/60Al is a ready-to-use refractory investment for lost wax casting industrial moulds with high dimensional accuracy and excellent surface finish. This product which is widely used in the automotive, aerospace and military industries is suited for aluminium and zinc alloys using the Lost Wax Process process and is adapted for small to medium sized parts

PRODUCT BENEFIT

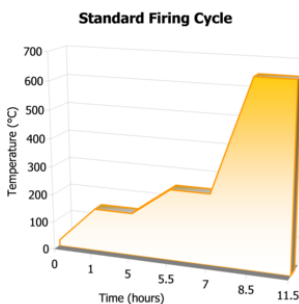
- + Designed for industrial parts for lost wax process
- + Designed for aluminium and zinc alloys
- + Small/medium pieces

TECHNICAL INFORMATION

Refractory	
% water used	30
Liquid density	1.85
Mixing time minutes	3
Working / Casting time minutes	7
Initial setting time (minutes)	12
Linear expansion 2 hours after setting %	<= 0,5

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

INSTRUCTION FOR USE



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 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.

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.

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 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.

The firing cycle to use depends on the size of the parts and the mould. For example, the typical cycle for moulds weighing more than 5 kg is as follows:

- increase temperature from 20°C to 150°C as quickly as possible
- maintain at 150°C for 4 hours for dewaxing
- increase from 150°C to 250°C at a rate of 200°C/hr
- maintain at 250°C for 1 hr 30 min
- increase temperature from 250°C to 650°C at a rate of 350°C/hr

- maintain at 650°C for 3 hours

- cool down and maintain at the desired temperature for the metal casting

For the Knocking out, the mould is left to cool down, then shattered by immersion in water and/or by using a high pressure cleaning system.

The part can then be recovered to undergo finishing steps.

PACKAGING AND SHELF LIFE

	Packaging Available	Shelf Life (month)
Bag	25 kg	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. Shelflife 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 contain crystalline silicate. 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 such this booklet or its validity.

CONTACT

For more information, please visit our website

www.grscastingpowders.com



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DOCUMENTATION



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