



CLAYMAN
Supplies Limited

Morells Barn • Lower Bognor Road • Park Lane • Lagness • Chichester • West Sussex • PO20 1LR
Telephone: +44 (0) 1243 265845 (2 lines + ansaphone) • Facsimile: +44 (0) 1243 267582

Email: Info@claymansupplies.co.uk • www.claymansupplies.co.uk

PRODUCT INFORMATION

Casting with slips

Casting slip consists of a clay body, water and deflocculants, which help keep the clay in suspension. Good performing casting slips are produced from clay bodies that have little or no plasticity. The best being bone china and some porcelains for instance. Clays that are naturally plastic, such as red clays, will produce the worse performing slips. These characteristics will be shown by the length of casting time required.

If allowed to stand for a prolonged period the slip will thicken. Vigorously stir to return the slip to fluidity. If after stirring the casting slip is not of a pourable consistency check its "balance". All slips will be blunged to a known litre weight. To check a casting slip firstly check what the litre weight should be. If the slip is heavier than it should be add water cautiously until the litre weight is achieved, then stir to blend added water and slip. If the slip is lighter than the recommended litre weight, more clay needs to be added. If the slip is at the correct litre weight, but not of a pourable consistency add sodium dispex very cautiously. For a 5 litre amount dip a pencil into sodium dispex once and then let the dispex run into the slip from the pencil, but only allow a few drops at a time. Vigorous stirring should produce a pourable consistency. Water or deflocculant should never be added without first checking the slips properties and also never in unmeasured amounts.

When poured into moulds made of potter's plaster the slip can produce very intricate and delicate ware. Moulds may range from a simple one piece open bowl to an intricate multi-piece figurine mould.

The casting slip is poured into the mould, left to form a thin layer as the water is drawn into the mould. The excess slip is then poured off and the cast is allowed to set or dry naturally. Once the cast has set or dried sufficiently it can be removed from the mould, dried, fettled, decorated and fired in the usual manner.

Casting Check List

Make sure the prepared slip is thoroughly mixed. Use a glaze stirrer fitted to an electric drill to ensure a smooth mixture. Ensure that no air is drawn into the mixing slip, by keeping the stirrer fully submerged.



Sieve the slip through an 80-mesh sieve.

Place the mould on a stable, level surface.

Pour enough slip to fill the mould into a jug or similar container.

Commence pouring the slip into the mould. The mould must be filled in one smooth operation ensuring an equal distribution of slip to all parts of the mould and preventing casting marks.

Ensure that the mould is filled completely to the top. Check the mould after a few minutes. It may be necessary to top up the head/spare. The absorption that may have occurred results from the moisture within the slip being taken up by the plaster.

Allow enough time for the thickness of slip – approximately 5mm for smaller pieces and thicker for larger – to build up.

This will vary according to the clay used, the age of the mould, the atmospheric temperature and intricacy of the design. Carefully tilt the mould to an angle of between 50-60° to test the skin thickness by cutting into the spare at the top of the plaster mould to see its thickness.

When the cast has reached the desired thickness, the excess slip can be poured out and initially left on an angle while the slip runs out.

The mould can now be turned upside down to finish draining over a bucket. This may take ten to fifteen minutes after which the mould can be stood the right way up.

When the “shine” has disappeared from the surface of the cast it is possible to clean up any drops or spills from the top of the mould.

Set the mould aside to dry sufficiently to shrink and allow easy removal of the cast piece.

Once the cast is leather hard it can be trimmed, fettled and sanded, ready for decorating or glazing. When finishing the surface of the cast it is recommended that a dust mask is worn.

Note:

The litre weight should be sourced from the casting slip supplier.

The litre weight of most casting slips will be 1736g per litre. It can also be referred to as a pint weight. If it is a pint weight required it would be 992g per pint.



The measured weight of a litre of casting slip can be heavier, but this will normally only apply when the clay has a natural plasticity (such as red clays)

As we are dealing with natural materials variations can always occur and personal adjustments or requirements may be needed.