# *Aftercast*

Book

Published Version

## OTHER SEPARATORS

**French chalk/talc**

This is a particularly useful parting agent for preparing the surface of a plaster of Paris piece mould from which a clay pressing is to be cast. It forms an efficient release agent between clay and almost any other material,

Dust it over first of all with French chalk or blacklead, to ensure it leaving the mould clearly.

*Polythene Sheet* and other such plastic sheets are very useful materials to cast against. Cellophane or neoprene sheet is useful in the same way. Castings of almost any cold setting material can be made against them. Experiments in the studio will familiarise the sculptor with the possibilities these things offer.

*When casting from polished wood,* it will be found that the model can be used without any treatment, although a coat of wax as with the marble is recommended as a further protection.

**Tallow**

A common release agent, this is used over a sealed porous surface, or directly on an impervious one. It is often used by jobbing plaster casters for separating all manner of surfaces.

Often in the rush of things, doubt may arise as to whether you have or have not soaped a certain piece; in these cases, always soap again — play it safe.

An excellent separator can be made by dissolving styrhic acid wax and a little paraffin wax in paraffin (kerosene) over a gentle heat. As the mix cools, stir it until a creamy wax results. It should be stored in a covered jar, otherwise the paraffin (kerosene) will evaporate.

**Petroleum Jelly.** Carefully heat and blend two parts kerosene to one part of jelly. Again, be careful of the *fire hazard.*

Mold-release agents for rubber include Vaseline, waxes, silicone sprays, soaps, and PVA (polyvinyl alcohol), depending on the material to be cast. All-purpose silicone sprays form a rubbery coating that prevents adhesion between materials, but should not be used on resin surfaces that will be painted. For wax and plaster of Paris castings, brush green soap onto the surface of the rubber mold; for portland cement, epoxy, and polyester resin use wax or Vaseline. Water-soluble release agents like PVA are often applied over a thin film of wax, particularly for polyester and epoxy.

**Stearic acid and kerosene.** This is made by dissolving ¼ lb. of stearic acid, shaved to flakes, in 1 pint of kerosene. The stearic acid is gradually melted by warming, then removed from the heat, and kerosene is gradually stirred in until the desired consistency is obtained. This must be done with precaution because of the *fire hazard.*

Always obey manufacturers' instructions.
**1** Ensure that the mould is thoroughly dry and then seal with the parting agent.

## the best parting compound is soap,

**Another good separating medium is Murphy's Oil Soap.**

*Graphite* This is applied to a plaster and grog mould surface to afford a good release and a good reproduction of the surface of a lead casting.

## Wax

*Oil* This is a simple and effective release agent. It can be used on a variety of moulds that require a water repellant surface. When hot, oil can be mixed with hot meat fat and this is still a favourite mixture of the jobbing plaster casters, being a very cheap and available fresh, whenever meat is cooked.

**Using a plastic bag**

Wax, then PVA

## Shellac.—

A very small quantity of olive oil should now be brushed in thoroughly. This should give a dull lustre to the surface and, as stated before, water dropped on to it should remain on the surface like drops of mercury, and not be absorbed. (More soaping will be necessary if the water is absorbed.)

*Polyvinyl Alcohol* These solutions are manufactured for the plastics industry and are used on moulds of various kinds to make castings of polyester resins. They are best applied over a wax priming. The manufacturer of the particular resin used will recommend a suitable parting agent for use with their resin.

## 5% Vaseline in white spirit solution

## Use soft soap or Vaseline

## Wax or acrylic lacquer

**Automotive Oil, 30 wt.** Paint the oil on with a small brush. This procedure is especially good on porous wood models that have been sealed. The oil may also be used to help soaped boards slide away from wet plaster.

**Rape seed oil**

This oil, which comes from the colewort or coleseed plant, is particularly useful as a release agent for polyester resin from plaster of Paris. Oil is applied to the very dry plaster mould until it is saturated; it is then safe to make a resin lay-up over the mould surface. When the lay-up is complete the mould should be soaked to aid the breaking away of the waste.

## No treatment necessary—melt out of mold

Water is used as a release agent for liquid waxes when using a plaster mold. A thoroughly water-soaked mold will not only keep wax from sticking, but it will also hasten its setting time.

## Use water saturated or seal with G4 varnish

*Clay* A film of clay left in the mould is a most efficient parting agent for cement and concrete from a plaster of Paris mould. The clay film remains on the mould when the clay is removed. This mould should not be washed clean and any large particles of clay can be picked off the mould surface, using a dabber of soft clay. What remains is the very fine film, which helps a good release but does not blur the modelled detail of the form and texture.

CLAY WATER: Water mixed with a little clay to a milky consistency; sometimes used instead of soft soap to prevent the joint of one mold piece sticking to the next.

## "parting agent"

*Release or Parting Agents*

## *Release Agents*

## SEPARATORS

## Separators.

**RELEASE AGENTS**

MOLDS—SEALERS

RIGID AND FLEXIBLE MOLDS—SEALERS

RELEASE AGENTS FOR MOLDS

**RELEASE/PARTING AGENTS**

These are solutions applied to a surface to prevent other substances from sticking to it.

**Separators and sealers**

**The method described so far for treating a mould is either to make a lather with liquid detergent, soft soap or soap flakes or use a clay wash.**

PARTING AGENT: Material painted to surfaces which are to be parted.

*Parting Medium or Separator.* **A coating or thin film of material, such as soap or oil, which separates the mold from its model or cast. This coating keeps the cast or model from adhering to the mold, and so makes possible its eventual removal.**

These are solutions applied to the mould surface to permit the mould and cast to separate easily. They vary in nature according to the chemical properties of the filler.

**Separator** A substance applied to the interior of a mould to prevent the adhesion of a casting material.

**Porous Materials.** Porous materials, such as plaster of Paris, cement, etc., must be treated to prevent trapped air from escaping and marring the mould by forming bubbles. Surface coats of ordinary lacquers or shellac are useless, for three reasons.

The basic requirements of a waterproofing substance are:

1. That it fill or seal the surface pores of a cast.
2. That it form an impervious film or coating on the exposed plaster surface that will prove resistant to the effects of moisture.

When casting plaster over models made of any material that absorbs moisture, be sure to soap the model. If a model is encountered that is exceedingly porous, such as a model made of wood, it should be sealed with thinned brushing lacquer or with shellac thinned with alcohol before the separator is applied.

**Release agent** A substance applied to the interior or seams of a mould to prevent the adhesion of two surfaces.

Release agents

Most rigid moulds must be treated with a release agent before they are filled to make a cast. There are many different types of release agents (also referred to as *separators* and *parting agents*) but their function is always the same. They are applied to the mould surface in order to seal the pores and therefore prevent the cast from adhering to the mould. The following are the most common.

Having made the mould with the cast in mind, and having given careful consideration to the casting material, the mould must then be prepared to receive the filling media. This preparation usually entails the application of a release agent, and soaking or drying out according to the filler.

***Separators and Release Agents***

**These are barriers applied to the surface of a mould which seal the porosity and prevent the cast from sticking to the mould. We have already mentioned detergent soap or soda**

Separators. Unless the hardened plaster surface is treated in some way, it is impossible to apply a second layer of plaster without having it stick.

SEPARATING MEDIUMS FOR PLASTER

**Since one batch of plaster normally tends to bond to another, making a plaster cast in a plaster mold might create problems. Fortunately, using a separating medium between the two can prevent such bonding.**

**Parting Agents**
The chief function of the parting agent is to prevent the concrete (or any other filling materials) from sticking to the mould as it hardens; thus it is first painted or sprayed on to the inner surface of the mould; but parting agents serve other purposes also—they may be employed to leave a film of colour on the cast, or to stop chemical reactions on the surface.

The *release agent* is the substance spread on the interior surface of the mold to prevent the casting medium from adhering to it and to ensure easy mold removal. The release agent is often called the *separator* or *parting agent.* Release agents vary depending upon the mold material and the casting material. They should not affect the casting detail or casting medium.

Prepare the mould with a release agent, according to the material to be cast. (See the list of release (parting) agents.)

*Plaster adheres to plaster.* There are times when one wishes this were not true but, generally speaking, we make this property work for us when necessary, as in patching and repairing.

**Mold surfaces can be porous, semiporous, nonporous, and possess natural release properties, such as silicone rubber, polyethylene, or vinyl. Each requires a different release material.**

When using plaster for mould-making or casting, it is necessary to use a separating agent between the parts of a mould, between the mould and the material from which it is being taken, or even between a plaster mould and the material being cast from the mould.

Release agents should be applied in thin films, since excess buildup may eliminate fine detail, affect surface qualities, and complicate cleaning of the casting.