

LATEX.

The properties of Latex Rubber make it extremely versatile for prop making purposes.

The Rubber particles coagulate to form a plastic film that is impermeable to water and air once fully cured.

Although there are specialist mixes of latex and new synthetic latex, the types normally used in Prop making tend to be of the natural varieties from the Rubber tree.

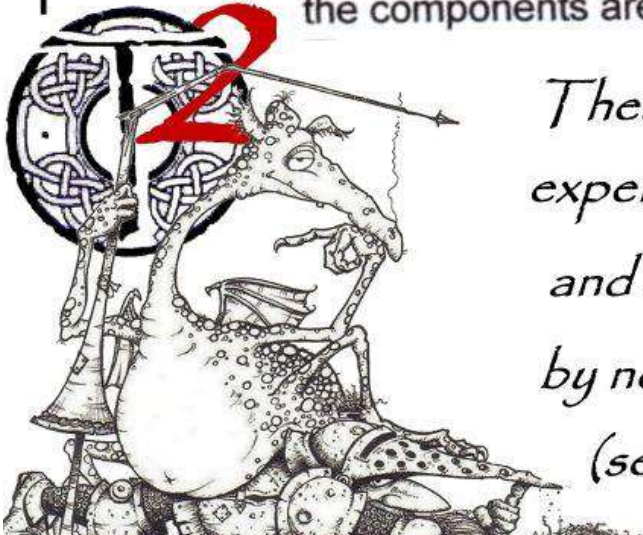
There are two branches of the Latex family.

Vulcanised Pre-vulcanised

The first type (Vulcanised) comes as a two or three component kit.

- **Part A - Latex base.**
- **Part B - Activator that allows heating, necessary to cure this type of Latex.**
- **Part C - is normally used when the latex needs to be a foam consistency.**

The problems with this type of Latex are that it needs to be baked in order to cure and it has a very short shelf life - even if the components are not mixed.



*These are very temperamental
expensive if you make mistakes
and are being superceded
by new silicone developments
(see Skintight, slacker and Platsil gel)*

The second type (Pre-vulcanised) has already been pre-treated and doesn't need heat in order to cure.

These Latexes have only one component and ready to use from the tin. They also have a long shelf life so long as the container is closed. It is for these reasons that this type is commonly used.

Key Point.

Vulcanised - needs heat, comes in two or three components and will not keep.

Pre-Vulcanised - is ready to use from the tin, doesn't need heat to cure and the excess can be stored.

Moulds can be made using Latex and this is usually done in one of two ways;

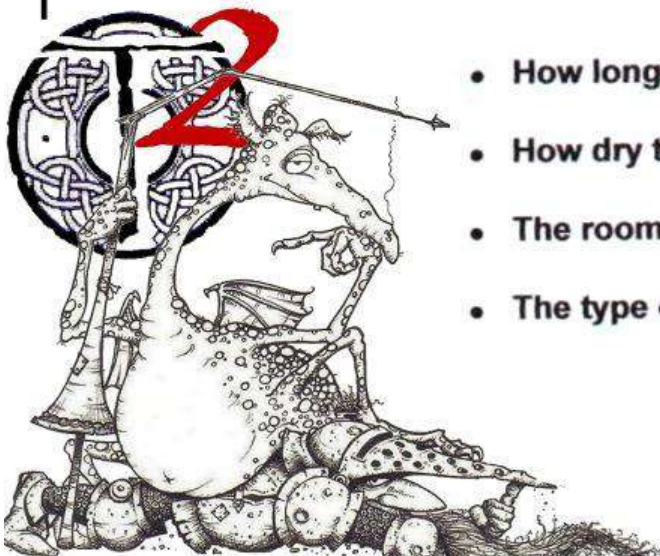
Dip process; plaster formers or models are dipped into Latex several times as if making wax candles. Layers build up and once cured can be peeled off and used as moulds for resins and plasters. This is a very cheap method of making reproductions but attention must be paid to making some sort of outer casing to prevent mould distortion.

Painting process; whereby latex is painted onto the former in layers and built up in this way. This is easier if there is only set amounts of Latex available.

Latex can also be used for casting duplicate models from a plaster mould and this is the method normally used. The main factor here is that the mould must be plaster and therefore porous. Latex is classed as an Aqueous solution which basically means a suspension in water.

Other controlling factors also come into play and all will effect the resultant skin thickness of the cast.

- How long the Latex is left in the mould.
- How dry the mould is.
- The room temperature or that of the surrounding area.
- The type of plaster that the original mould is made from.



As a rule of thumb a new mould will normally take about 1 - 2 hours to form a decent skin.

Plaster characteristics are covered in detail in (Plaster information sheet) but it is enough to mention that the more Beta Gypsum content (soft) the more porous the plaster and therefore more absorbent to water.

All Latex will rapidly age and decompose if it comes into contact with copper, manganese or cobalt. Direct sunlight will also start to age the Latex due to the UV rays so this should be prevented wherever possible.

Key Point

Do not leave Latex in a mould overnight as the skin formed will be very thick, take a great deal of time to fully cure and be prone to cracking.

The exception to this rule is where the cast being made is small and the final piece would benefit from being solid.

The plaster moulds should be thought about very carefully before the model is cast. Although the Latex is flexible when cured there are still limitations - a deep undercut may still get trapped or damage the mould when being pulled and the latex must be dry before any attempt is made to remove it from the mould otherwise it may tear.

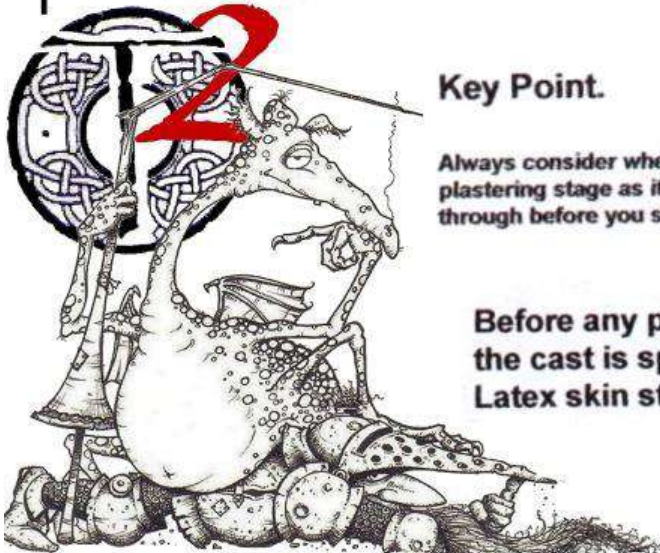
The secret of good casting is preparation as a good mould will save a great deal of clean up time on the final piece.

The Latices dealt with here are Dunlop products but different brands will bear the same properties, if in doubt always ask the supplier.

Key Point.

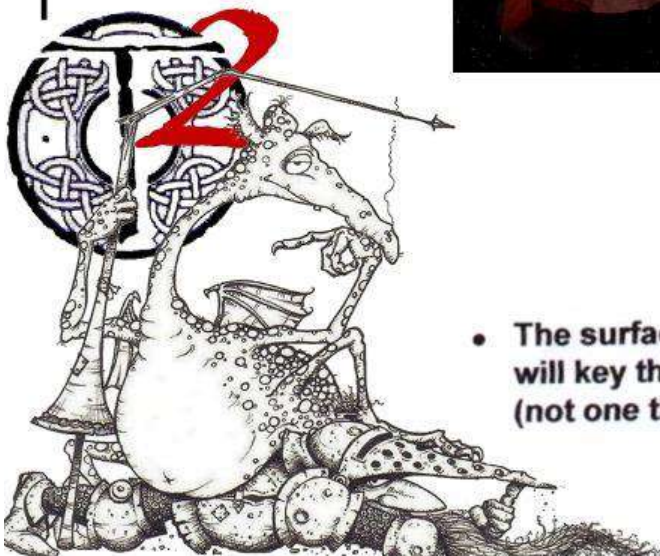
Always consider whether a plaster mould needs to be in one, two or multiple pieces at the plastering stage as it is very difficult to remedy this once it is cast - Spend time to think this through before you start.

Before any pull is removed from a mould it is advised that the cast is sprinkled with Talc to stop any chance of the Latex skin sticking to itself.

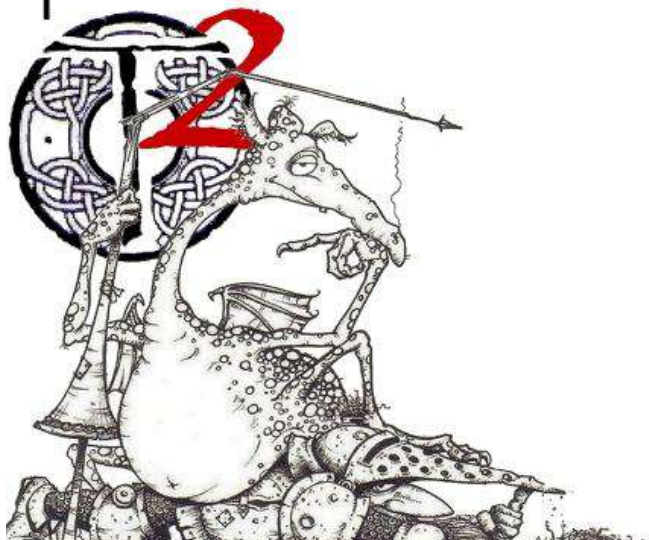
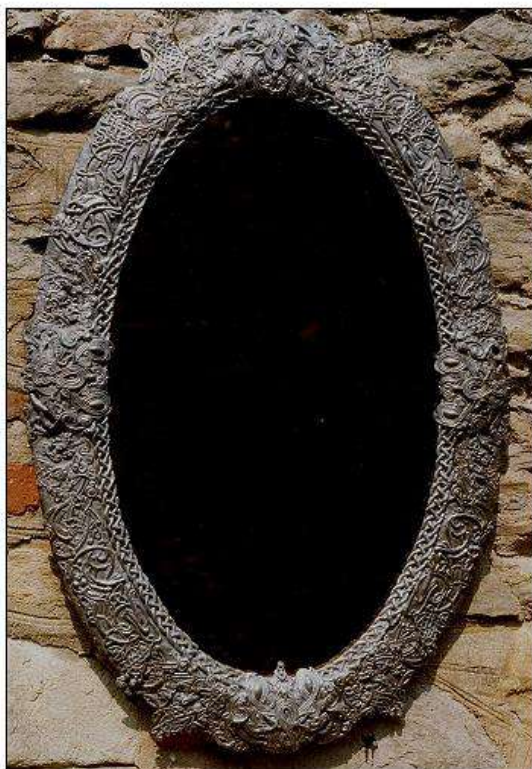


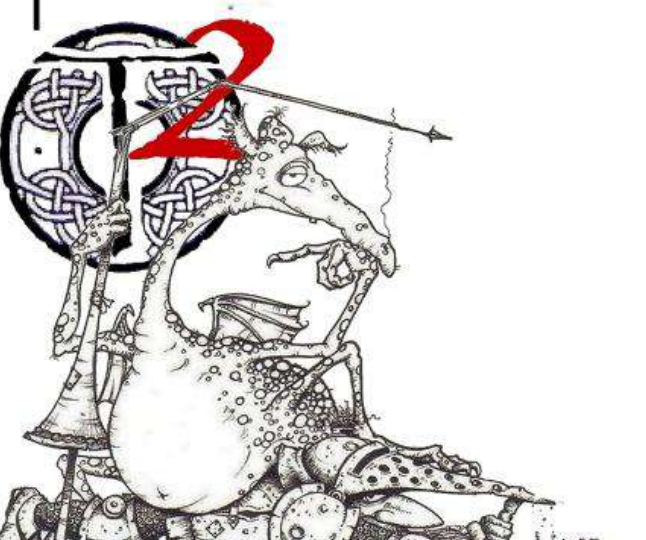
Often people have problems painting the final cast and this goes back to a point made earlier - Latex once cured is impermeable, which means that paint will sit on the surface and if not keyed in some way will simply crack and fall off. This may seem a major problem but it isn't, the answer lies in the keying and there are ways that this can be done;

- A 50 / 50 mixture of Evostick glue (Red label) and Evostick thinners is painted on the surface. This works because the Evostick is a Latex based emulsion and the solvent in the thinners actually attacks the surface of the latex cast. This method is extremely effective but must come with a caution - be careful not to use this method on thin sections of Latex skin as the solvent will pickle the surface and once done cannot be undone.



- The surface can be sprayed with Spray mount Glue - this will key the surface but can give a slight bobbly texture (not one that is obvious).







AL.1674 BRUSHABLE MOULDING COMPOUND

DESCRIPTION

AL.1674 is based on a pre-vulcanised latex, specially thickened to a brushable viscosity.

APPLICATIONS

This product has been developed for use in the production of latex rubber moulding from a variety of substrates including plaster of paris, concrete, wood etc. Use of this product stops the need for coagulants on non-porous substrates.

METHOD OF USE

1. Ensure that the former is dry, free from dust, grease and any foreign matter.
2. Brush the AL.1674 onto the mould and allow to dry for 10-15 mins. Repeat step 2 until the desired thickness is attained.
3. Allow the mould to dry either at room temperature or in a convection oven at 70°C. The mould is dry when the white colour of the latex has changed to light brown.
4. When dry the mould can be stripped from the former by coating the mould in a 5% soap solution. The flexibility of Dunlop latex AL.1674 enables the mould to be stripped from formers without fear of tearing providing the moulds have been correctly dried.

PHYSICAL AND CHEMICAL PROPERTIES

Total Solids	greater than 60%
Viscosity	9,000-12,000 cps
Typical Specific Gravity	1.0

STORAGE AND SHELF LIFE

Stored in well sealed lacquered containers, Dunlop AL.1674 pre-vulcanised latex will keep satisfactorily for at least six months. The latex must be protected from frost and should preferably be stored at a temperature above 5°C but not above normal ambient temperatures. This latex must never be contaminated with copper or any other heavy metal ions. Latex contaminated in this way will age rapidly and the compounds usable life will be seriously impaired. Copper or copper-alloy machine components should be chromed or exchanged for non-cuprous replacements.

HEALTH AND SAFETY

This product is not subject to classification under the Packaging and Labelling of Dangerous Substances Regulations 1984. See Product Label and Health and Safety Data Sheet for further information.