Casting Materials

As long as there has been mold making, there has been casting. The mold making materials that are avaiable today allow endless possibilities of casting materials ranging from polyurethanes to butter.

II. Polyurethane Plastics (two component, catalytic cure)

Polyurethane is a 2 component resin material that has little or no smell, but is still a toxic material. It is very moisture sensative and typically has a 1:1 mix. It is available in different mixes with color and set-up options.

III. Polyurethane Foam (two component, catalytic cure)

An expandable version of the urethane resins available in three densities. It is also available in rigid or flexible

V. Epoxy (Two component, catalytic cure)

Epoxy is the most durable of the casting resins for outdoor applications. It is also a 2 component system. It is available in a variety of viscosities and strengths. Toxic, yet filterable.

VI. Polyester (Two component, catalytic cure)

Polyester is a 2-component resin compound that can be used for pouring or laminating. It has a lot of versatility due to the variable mixing ratios. It is very smelly and toxic, but can be respired. It is clear-ish.

VII. Gypsums (Mixed with water, catalytic cure)

■ **Industrial palsters** (Mixed with water, catalytic cure)

USG® Moulding and Casting Plasters All USG's Casting and Moulding plasters are similar to Plaster-of-Paris, but may vary by region. These general-purpose plasters produce casts of nominal strength and hardness and faithfully reproduce the most intricate detail. Casts made of Moulding or Casting Plaster are porous and must be carefully sealed before decorating.

■ **Reinforced Gypsums** (Multi component, catalytic cure)

The reinforced gypsum family was designed as a resin replacement material. Significantly less toxic or non-toxic, they yield a durable and workable finished product. They are only available in opaque form.

VIII. Other

■ **Thermo-rubber / plastic** (one component melt to make pliable, then cools to rigid)

Elastack flexible compound can be useda as a molding or casting product. It is a temperature sensitive material that melts at 170C. They also make a breakable glass product that can shatter like glass, but then be remelted and recast.

■ **Reinforced Cement** (mix with water, catalytic cure)

WINTERSTONE Casting 2000 is a dry white powder - a complex multi-component cementitious mixture - which when mixed with a nominal amount of water and cast into a mold sets into a stone hard material with faithful reproduction of detail.

■ **Clay & Wax** (melt then cool)

Most all waxes and some oil based clays can be melted carefully and poured into a mold. This does not yeild a durable finish product because of the nature of the clay or wax.

■ **About Casting Other Products**

Almost any pliable material that can be sculpted and shaped can be molded. You can also use clay-like materials to "push" into a mold.

- People in the food industry cast butter, sugar, chocolate, water (for ice sculptures), jello as well as various other foods.
- Many industries cast all types of metals. This requires a much stronger type of mold than any RTV typically available to the general public.