

WHAT ARE FILLERS AND HOW ARE THEY USED IN RESINS.

Fillers are used in resins to give many different effects. Among these are:

- (1) To reduce the cost of the finished product.
- (2) To increase or decrease the weight.
- (3) To give the finished product a desirable texture.
- (4) To increase the strength or toughness.
- (5) To simulate the appearance of some other material.

Fillers in Casting Resins.

Calcium Carbonate. Also sold as Marble Dust and Whiting.

This is probably the most commonly used and inexpensive filler. It is primarily used to produce synthetic marble effects. Used with polyester resin you make "Cultured Marble" This has a white stone like appearance which can be coloured with opaque pigments for a base colour and then given streaks of colour, applied with a feather, to simulate the look and feel of many types of marble. This technique is the basis of the kitchen and bathroom synthetic marble industry.

Test out the appearance of a 50/50 by volume mixture and adjust for your own requirements. You can also mix the filler with the resin and catalyst and then add a base colour and **do not** mix thoroughly but allow streaks of colour to show rather than an smooth overall colour. Additional small streaks of another colour can be added with a feather for additional effects.

Talc.

This is a low cost, softer filler and is used to produce parts that can be easily sanded.

Glass Microspheres for Lightweight Castings

These produce white light weight castings and can be used in conjunction with other fillers. The microspheres are very small glass bubbles that contain air, resulting in an extremely light weight finished product. This appears to be expensive when looked at on a per kilo basis however their extremely low density results in mixtures that are very economical.

Aluminium Trihydrate

Although this is mainly used for its fire-retardant properties, it can also be used with Polyester Clear Casting Resin to achieve a translucent onyx look. This translucent effect can also be use in the marble mixes to great effect. Make certain you use a white Aluminium Trihydrate not a grey sample.

Sand and Silica Sand. Use as much clean sand as you can with the resin and still have a pourable mixture to simulate rock. Silica Sand gives a finer texture to the finished product.

Another Tech Tip by Stan Alderson Aldax Moulds www.aldax.com.au copyright 2009