COMPOSITES :

Composites are tooth coloured fillings. They can be used on front teeth or back teeth. They consist of glass particles embedded in a resin matrix. There are many different types and may consist of two pastes mixed together, or a paste in a black syringe which, when exposed to bright light, sets hard.

Composites for front teeth have very small particles, so they can be polished to a shiny finish. Composites for back teeth have larger particles to withstand chewing better. The glass particles are supposed to reflect the colour from the surrounding teeth but the 'light cured' composites we use come in different colours to help match them to the tooth colour.

Compules (enough for 1 small filling) require a gun to push out the composite

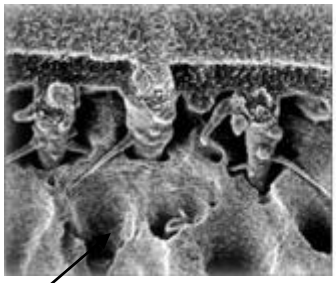
Basic light cured composite. Now replaced by capsules in different shades

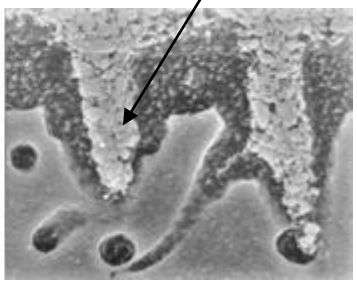
Duo-cure composite sets with or without a light used for cementing crowns or veneers .

ACID ETCH RETENTION : (Remember glasses to be worn to prevent any damage from splashing)

To help keep the filling in the cavity, and to stop leakage round the edge of the filling we use a bonding agent. A little of the 'etching gel' (phosphoric acid) is placed directly onto the tooth or onto a small brush, and this is applied to the tooth for at least 20 seconds.

It is then washed off very thoroughly using the water spray and the aspirator. If bonding only to enamel the enamel is dried very well until the etched surface of the enamel is clearly seen as a 'frosty surface'. The etching liquid has created small holes in the surface of the enamel.





A liquid resin is brushed onto the surface of the enamel and it will flow into these tiny holes.

When bonding to dentine the dentine is only dried a little so that there is no water lying but if dried too much it damages the odontoblasts and results in poor adhesion.

As there are hundreds of different makers of composites there are many different types of bonding resins and each one may be used a different way.

It is important that you read the instructions from the manufacturers so that you know what the dentist will do and need you to do.

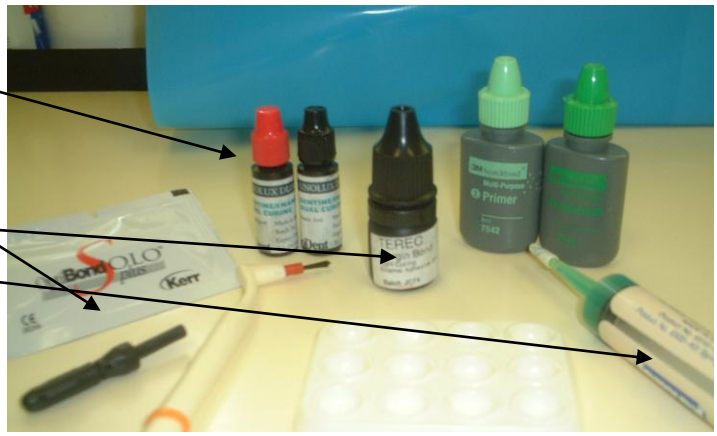
It is important that the tooth is kept dry from saliva which will stop the bond sticking to the tooth.

The best way to isolate a tooth is to use rubber dam – if not, cotton wool rolls or dry guards may be used along with an aspirator during the procedure.

Some resins only bond to enamel and some bond to dentine. Some need more than one application of resin

It may set hard due to a chemical reaction (one bottle of resin and one of catalyst) or due to a bright light being applied to it.

Dentine bonding a drop of each mixed in the tray.
Optident – dentine bonding – break capsule and use fine applicator.
Terec enamel bond only used for veneers
Etching gel (phosphoric acid) placed in cup of tray



If two pastes are being used they are placed on a mixing pad in equal amounts and mixed very thoroughly together. The pad and mixing spatula are passed to the dentist and the filling is placed in the cavity where it will chemically adhere to the resin and set hard within about a minute.

The light cured composite is placed in the cavity and can be shaped as it will not set hard until the bright light is used directly onto it for at least 20 seconds. Only 2mm of composite will set.

In large cavities especially on back teeth a small amount may be placed in the cavity, cured hard with light and then continuing small amounts placed and cured until the cavity is slightly overfilled.

The set filling is trimmed using special fine diamonds and polishing discs.

Flowable composite comes in different shades and thickness, but the ease with which it flows can be varied by the size of needle used. It is often used to line very deep cavities that are to be filled with composite. It may also be used in surface wear cases of front and side teeth or to repair existing fillings.