



1. Collect waste acrylic offcuts from within a Maker Space and separate them by colour.



2. Clean or remove any acrylic material that is contaminated with dirt, adhesives or paints.

This step is very important as it can drastically effect the final outcome and make the material unusable.



3. Break down the material into even sized parts. This can be done either by hand or with a shredder.

Experimentation suggests that it is a good idea to break the acrylic into similar sizes as different sizes can require different heating durations.

*Try this method with different sized pieces of material to experience the difference in outcomes.*



4. Turn on the the sheet press and heat it to 200 degrees Celsius.

The melting temperature of acrylic plastic is 160 degrees but some of the heat is lost to the atmosphere and absorbed by the mould.

When being extruding acrylic temperatures of 180 to 250 degrees are often used.



5. Prepare the mould and arrange the pieces of broken/shredded acrylic. Place the pieces with some overlap so that as they are melted and compressed together the gaps between the pieces are filled.

It is possible to achieve a bit of control over the appearance of the final outcome by arranging the different colours into patterns.



6. Place the mould into press between the heated plates and begin to bring the sheet press closed so that the plates are only just touching metal sheets and introducing heat to the acrylic to soften it.

Do not apply pressure to the acrylic before it has become malleable as it is very brittle and it will shatter and 'explode out' of the mould.



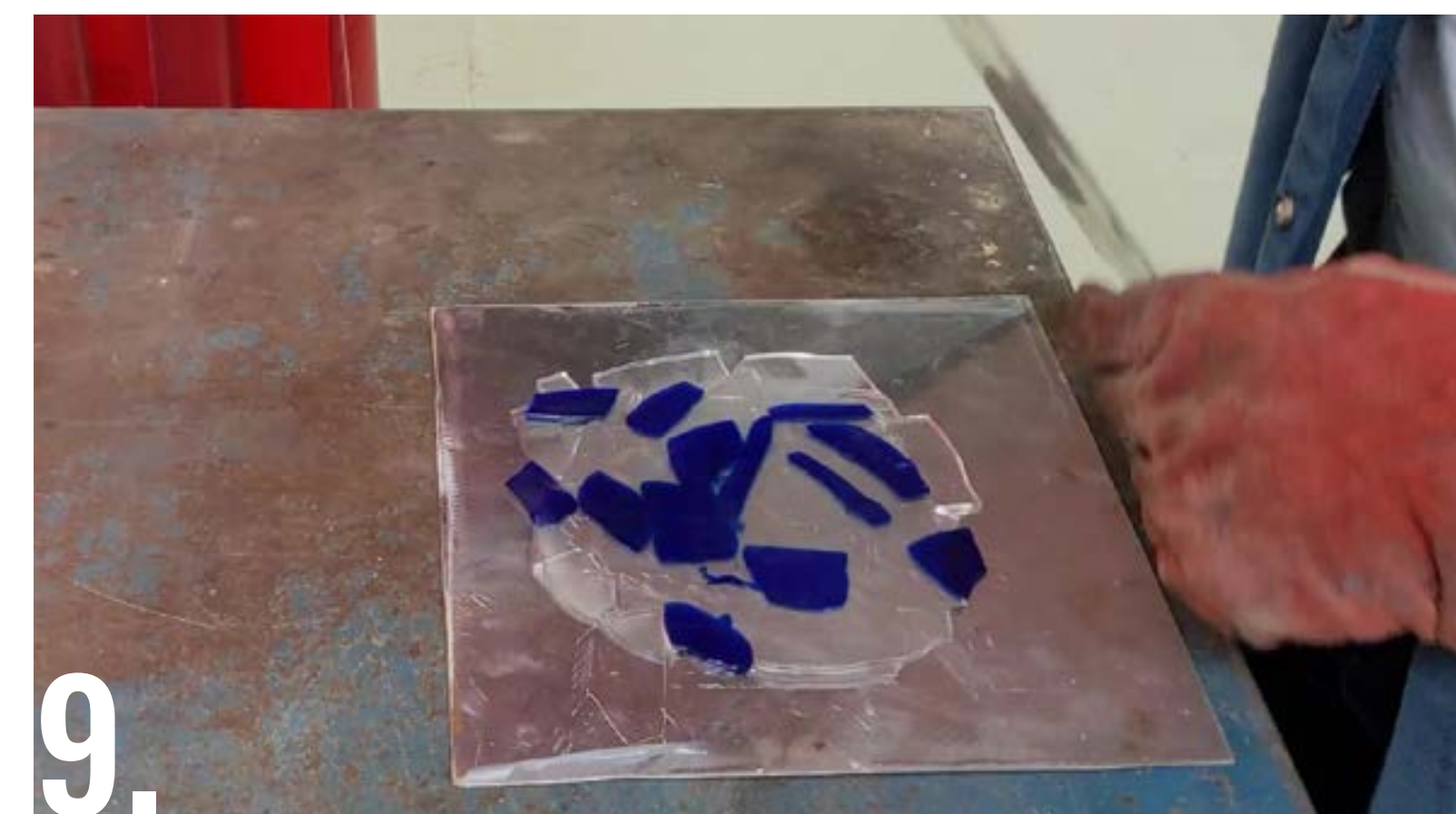
7. After 10 minutes the acrylic should be malleable and it is possible to begin to apply pressure to the mould and press the sheet.

Use the bottle jack to apply 5 bars of pressure. This part of the process is done over 30 minutes. During this time monitor the pressure being applied and continue to maintain 5 bars of pressure as the material softens and squashes into the mould.



8. After the 30 minutes the pressing should be complete and it is possible to turn off the sheet press and let the machine, mould and material cool.

As the temperature drops keep the material under pressure so that it cures and solidifies as a flat consistent sheet.



9. Once bellow 100 degrees Celsius the sheet should no longer be malleable and it is possible to remove the mould and reveal the final result.

Both the acrylic and mould will be still be hot.