

The Glasshouse Information Sheet



What is glass made of?

When the raw materials for glass are added together, the mixture is called 'Batch'. This is made up of Quartz 55%, Potassium Carbonate 16%, Sodium Carbonate 17%, Barium Carbonate 6%, Borax 3%, Zinc Oxide 2% and Antimony Trioxide 1%.



What is the Pot Furnace?

The pot furnace is where batch is melted into molten glass. The melting temperature of glass is 1260°C. The pot furnace contains 150kg of molten glass, this is kept in a clay pot within the furnace.

Where does colour come from?

The colours used in glassmaking are made from powdered, chipped or crushed glass that has been coloured with chemicals.



Why are the irons warmed?

The glassmakers use two types of irons, these are both made of stainless steel, one type is hollow and is used for glass blowing, the other type is solid. The irons need to be warmed to collect the molten glass from the pot furnace. If they are cold the molten glass will not adhere to the iron.



What is the glory hole used for?

The purpose of the glory hole is to melt colour, or reheat glass to aid the reworking of the piece.

How do you get the initial shape?

The initial shape of the glass is created by rolling molten glass across a steel table, this process is called Marvering.



What happens once the piece is finished?

Once the piece is finished it is placed in a kiln. This kiln allows the whole piece to slowly cool at the same rate preventing it from shattering or cracking. The temperature is 500°C. This process is called Annealing.



**ANY QUESTIONS?
PLEASE ASK THE
GLASSMAKER**

The Glasshouse Tools



Wet Newspaper

Wet newspaper is known as padding. More experienced glassmakers use these for shaping glass instead of pre-formed moulds.

Shears

The glassmakers shears are used to cut the glass.



Priscillas

These are cutting down tools which cut glass away from the iron.



Tweezers

These are used to shape and mold the glass.



Saw

The saw is used to score around the base of the glass, then water is added. This creates a weak point to aid removal from the iron.

Finishing



Flat Bed

The flat bed diamond wheel is used to smooth the bottom of the finished piece.

Linisher

This puts a bevel around the glass where it has been smoothed on the flat bed wheel.



Polisher

To polish the glass a fibre wheel and wet pumice are used to bring the piece to a perfect shine.

Frequently Asked Questions

How long does it take to become a Glassmaker?

It takes between 5 and 8 years training to become a Glassmaker and 20 years or more to become a Master Glassmaker.

How do you get air bubbles into the glass?

Nails are used to indent the glass, before more molten glass is added this creates bubbles.

How long is the furnace on?

The furnace is on 24 hours a day, 7 days a week and is only switched off for servicing once a year.

What is the working temperature of glass?

It is 1100°C.

What are moulds made from?

Traditionally pear or apple wood, today they are more commonly made from carbon fibre.

Do you recycle unused glass?

We only recycle clear glass, this is done by putting the clear glass back into the batch ready for the pot furnace.