

Plastic Oven

How to melt plastics with the plastic oven.

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What plastic oven do we have in the workshop?

In the workshop we have a CR Clarke Fan Circulated Oven FD specialist oven for plastics, used for heating up thermoplastics before Dome Blowing, Press Forming and bending by hand. It can reach a maximum temperature of 350 C°.

Internal dimensions of 508 x 355 x 304mm



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Do I need to book the plastic oven?

You do not need to book the oven in advance.

All students must complete the 3D Workshop Induction before using any machinery.



The oven is a yellow machine. This means students can use the equipment but must get staff approval before each use. A member of staff will also supervise.

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What materials can I use with the plastic oven?

The plastic oven should only be used with thermoplastics such as

- [Acrylic](#)
- [Styrene](#)
- [HDPE](#)

Some plastics can release highly toxic fumes when heated. Do not heat other types of plastics in the plastics oven.

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How does the plastic oven work?

The thermoforming oven is a fan circulated oven and works in a similar way to standard home ovens. Air is heated to the desired temperature and that hot air is then moved around the oven.

Never heat plastic in your oven at home. If you do small plastic particles can be left in your oven. These particles could easily be ingested when food is then cooked in the oven. Home ovens also do not have suitable extraction. This means fumes will be released into your house and inhaled.

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How do I use the plastic oven?

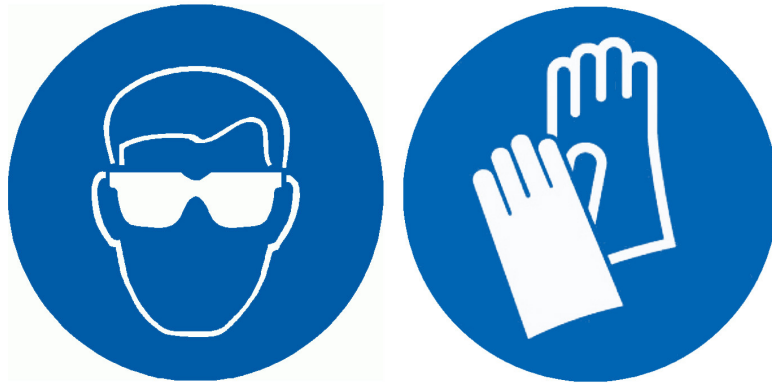
To use the oven:

1. Ensure you are wearing correct [PPE](#).
2. Ensure the extraction hood is open and positioned above the machine.
3. Preheat the oven until the desired temperature is reached. For 3mm acrylic to be ready this is 165 C°.
4. Place your piece of plastic on the center shelf of the oven.
5. Set a timer. For 3mm [acrylic](#) this should be 10 minutes. For other materials consult a technician.
6. After the allotted time you can remove the plastic sheet wearing thermal gloves.
7. The sheet will now be soft and ready to be formed. This can be done in the [dome blower](#), by hand or by pushing in onto a mould.
8. When finished turn off machine and leave area clean and tidy.

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What Personal Protective Equipment (PPE) do I need to use the plastic oven?



You must wear safety glasses and heat resistant gloves when using this machine. Tie back any long hair and tuck in loose clothing.

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