

# Heat Press

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# What is the heat press used for?

The heat press is one of the ways you can recycle plastics in the 3D workshop. The press uses heat and pressure to turn granulated plastics into a usable form. It can create a 3mm thick sheet up to 457 x 305mm. There is also the option to form the plastic into the shape of a Frisbee.

You can cut the newly formed sheet using the bandsaw or the CNC router. It can also be used on the vacuum former, strip heater and dome blower, although results may be messier than other materials like acrylic.



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# How do I book the heat press?

All students must book a workbench to be in 3D workshop. Booking a workbench for a 3 hour slot gives you a space to work and access to all necessary tools, sundries and equipment with technical supervision and guidance.

We will only be accepting booked appointments to comply with social distancing guidelines. No walk ins will be accepted.

You can book a workbench via the [Online Resource Booking \(ORB\)](#).

You must complete an online Health and Safety induction before booking a workbench.



The heat press 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 heat press?

We currently only recycle one type of plastic in the heat press. This is:

- **HDPE** - Milk bottles, shampoo and conditioner bottles and yogurt tubs. Look for the number 2 in the recycling symbol at the bottom



Some plastics can release highly toxic fumes when heated. Do not use any other plastics in the heat press.

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# How does the heat press work?

All material should be clean, dry and granulated in the shredder before use in the heat press.

The shredded plastic granules are loaded into the holder. Two hotplates heat the holder. The upper hotplate is fixed in place. The lower hotplate can be raised and lowered using a hand pump. The heat and pressure causes the granules to soften and fuse into a 3mm thick sheet of plastic.

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# How do I use the heat press?

To use the heat press:

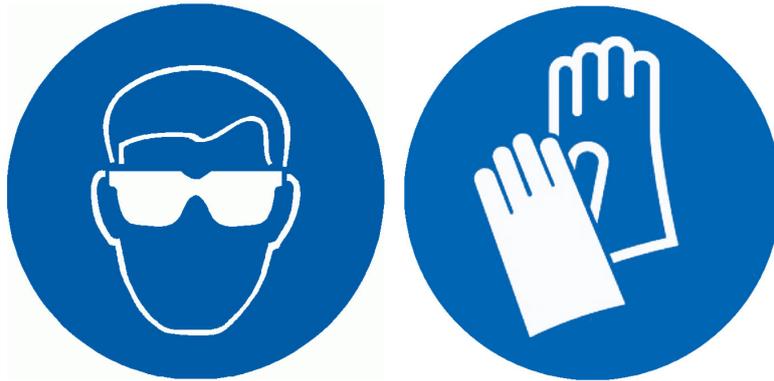
1. Ensure you are wearing correct [PPE](#).
2. Ensure the extraction hood is open and positioned above the machine.
3. Turn on machine and allow to heat for 5-10 minutes before use. The temperature needed depends on the material.
4. Heat [HPDE](#) at 180 degrees Celsius.
5. Load your plastic granules into the holder. The granules should be spread in an even layer of approximately 4mm thickness, up to the raised lip at the edge.
6. Secure the latches at the front of the material holder so that it is closed.
7. Once the machine is heated load the material holder into the machine.
8. Turn the release knob on the front of the machine fully clockwise to lock the pump.
9. The action of pumping the clamp lever will automatically start the timer.
10. Every few minutes, give the clamp lever another pump. This ensures the granules are still under pressure as they soften and fuse.
11. At the end of the pressing cycle, a short buzzer will indicate that the pressed material is ready to be released.
12. Remove the holder from the machine and place in cooling rack below the machine.
13. Once fully cooled release the latches and remove the pressed sheet of material.
14. When finished turn off the machine and leave clean and tidy.

Different colours will not blend into a new colour. For example if you use a mixture of white and red granules you will not end up with a pink sheet. Your sheet will be red and white speckle effect.

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# What personal protective equipment (PPE) do I need to use with heat press?



You must wear heat resistant gloves and goggles when using the heat press. Tie back any long hair and tuck in loose clothing. Aprons are available to cover clothes.

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