

Manufactured Boards

Manufactured or Man-Made boards use parts of timber and reassemble them to create large flat sheets of wood. The main reason manufactured boards are used are:

- ⇒ They are **Stable**, that is, they stay flat, don't warp or twist.
- ⇒ They come in **large sheets**, for example in wide sheets, wider than natural timber.
- ⇒ They **don't have faults** in them, such as knots.
- ⇒ They are more **sustainable**, because they use almost all of the tree to make them, including smaller branches, so there is less waste.
- ⇒ They are a lot **cheaper** than natural timbers.

A quick introduction can be seen here:

https://www.youtube.com/watch?v=SDF5_1KjWzE (watch from 5:45)



Plywood—made by gluing thin layers of wood together. Each layer has the **grain** going at **right angles** to the layer above and below. This makes it very **strong**. Depending on the type of glue used, plywood can be **waterproof** (often called marine ply). Plywood has a good strength to weight ratio. As it is glued in layers, it doesn't twist or warp.

Chipboard—this is made by gluing chips of wood together. As it doesn't have any grain, it is not as strong as other manufactured boards. However, it is a **cheap** wood as it uses poor quality timber and off-cuts. Chipboard is often used for kitchen worktops, but it needs a harder covering, such as a veneer or formica. Chipboard doesn't do well in wet



conditions,



MDF—made by mixing a plastic resin with wood fibres or wood flour. It stands for **medium density fibreboard**. The board is very stable and has a good surface that is easy to paint. The dust from mdf, due to the resin, can cause health issues.

Hardboard—a very cheap manufactured board. It is only supplied in thin sheets (for example 3mm thick). It is not as strong as other man-made boards. Hardboard is often used for drawer bottoms and the backs of cupboards. It is a **very cheap** material. Hardboard is usually smooth on one side and rough on the other.



There are other manufactured boards available, but they are less commonly used and do not need to be learned for National 5 Design & Manufacture. They are:

Laminboard, Blockboard, Sterling Board (Oriented Strand Board) and Battenboard.