# Laser Cutter Materials List

| APPROVED MATERIALS | | |
|---|---|---|
| | **Material** | **Conditions and warnings** |
| ✓ | **Plywood** | Not exterior or treated. Max thickness for cutting is 6mm (ideal is 4mm or less). You can cut thicker with approval. See page 22 of the Laser Cutter Guide for more details. |
| ✓ | **Other timbers** (balsa, softwoods, hardwoods) | No treated exterior timber. See plywood advice around thicknesses if cutting. Avoid cutting or engraving if it's been polyurethaned (bad for filters). Research suitability before use, be careful of oily woods. |
| ✓ | **MDF** | Max thickness for cutting is 6mm (ideal is 4mm or less). You can cut thicker with approval. See page 22 of the Laser Cutter Guide for more details.<br>Post in slack if intending to use MDF, it is very harsh on filters so mats might need changing. |
| ✓ | **Acrylic** | |
| ✓ | **Cardboard** | Be careful of fire risk when cutting thick or multilayered corrugated cardboard. |
| ✓ | **Paper / cardstock** | |
| ✓ | **Fabric** | Nothing plastic coated or plastic infused, no pleather, no PVC/vinyl fabrics, no neoprene, nothing with metallic threads. |
| ✓ | **Leather** | Real leather only, NO PLEATHER, no chromium-tanned leather. |
| ✓ | **Trotec brand laser materials** | |
| ✓ | **EVA foam** | Flammable, use with caution. Get an experienced user to help you when starting out. |
| ✓ | **Mylar/PET** | Use thin sheets only. |
| ✓ | **Stone** (including natural stones, ceramic, porcelain) | Engrave only, no cutting. |
| ✓ | **Glass** | Engrave only, no cutting. Normal glass only, no hardened glass. |
| ✓ | **Aluminium** | Engrave only, no cutting. |
| ✓ | **Polypropylene (PP)** | Engrave only, or very thin sheets. Test first as fillers, additives and flame retardants may react unpredictably. |

**Approving new materials:**

If you would like to use that isn't on the approved list you must first research the suitability and safety. Then go on Slack and ask on the **#equip_lasercutter** channel.

| PROHIBITED MATERIALS | |
|---|---|
| ✗ | **PVC, Vinyl, Any unknown material** - you must know what you are cutting |
| ✗ | **More prohibited materials:** Carbon; Berylium oxide; Any material containing halogens: fluorine, chlorine, bromine, iodine & astatine; Carbon fibre; Epoxy- or phenolic resins; Polystyrene / polypropylene foam; Polycarbonate or Lexan; PTFE (Teflon) |