

MDF Panels for Laser Cutting

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Materials & Stock

MDF (medium-density fibreboard) is a smooth, stable engineered wood panel that laser cuts and engraves cleanly, making it the default prototyping material for school laser work. Standard 3 mm and 6 mm MDF cut fast with crisp edges.

Key Features

- Smooth faces for engraving detail
- Thicknesses 3, 6, 9, 12, 18 mm
- Dense, consistent cutting
- Laser-friendly with good extraction
- Cheap enough for iteration

Typical Uses in the Workshop

- Laser cut prototypes, jigs and models
- Engrave text and graphics on panels
- Build architectural models and packaging
- Cut test pieces before using better materials

Safe Operation

1. Keep the sheets flat and clean
2. Set laser settings for MDF thickness
3. Vector cut with air assist at the right speed
4. Lower power for engraving detail
5. Remove and brush the charred edges

SAFETY NOTES

- MDF dust is a health hazard - use extraction and a mask
- Laser smoke needs the extractor running
- Do not pile offcuts in the laser path
- Keep the bed clean of ash
- Wear eye protection when cutting by hand

Maintenance & Consumables

- Store sheets flat and dry
- Keep the laser bed clean after MDF cuts
- Replace filters sooner when cutting MDF frequently
- Wipe engraved parts to remove soot
- Keep offcuts sorted by size

Specification & Buying Notes

Stock 3 mm and 6 mm MDF in standard sheet sizes that fit the laser. Buy laser-grade MDF that cuts without voids. Confirm the maker's maximum sheet thickness before buying big stock.