

❌ NEVER LASER THESE MATERIALS

These materials should never be used in the laser.

This is not an exhaustive list. If you are not sure, don't use it and find out.



PVC, vinyl, neoprene, pleather, PTFE (Teflon)

When heated, these materials release chlorine or similar gases. This is a respiratory hazard, but also combines with moisture in the air to create acids which will seriously damage the laser through corrosion.

Polypropylene sheet and foam

Highly flammable and likely to catch fire whilst cutting

Coated carbon fibre

The resin coating can give off toxic fumes and is a significant fire risk

Mirror-finish metals

The mirror finish is likely to reflect the laser straight back along the laser path and damage the optics. A CO₂ laser will not cut or mark metals anyway.

ABS plastic

Emits cyanide fumes when lasered and is likely to melt and burn rather than cut cleanly

HDPE plastic (e.g. milk bottles)

Likely to melt and burn rather than cut cleanly

Chromium tanned leather

Releases toxic chromium oxide fumes during laser cutting

Use vegetable tanned leather instead

Fibreglass

Both glass dust and resin fumes will damage the machine and cause respiratory problems

Expanded polystyrene/polystyrene foam

Very high fire risk, with toxic smoke

There are some foams, e.g. EVA, that are laser safe alternatives

Cured epoxy resins

High fire risk, with toxic smoke including cyanide and chlorine

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