

## PROHIBITED LASER CUTTER MATERIALS

Type	Material	Hazards	Notes
Plastic	PVC/ Any plastic containing chlorine	Produces chlorine gas	Damages the laser cutter and produces harmful gases.
	Polycarbonate, Lexan	Burns	Produces gases that can damage laser cutter.
	ABS	Hydrogen Cyanide (HCN), may catch on fire	Damages the laser cutter and produces harmful gases.
	Vinyl	Produces chlorine gas	Damages the laser cutter and produces harmful gases.
	Polytetrafluoroethylene (PTFE), Teflon	Creates hazardous gases	
	HDPE	Flammable	Melts and can catch on fire.
	Self-adhesive material or material with sticky backing	Creates harmful fumes and gases	May use glue with chlorine-containing adhesive
	Vinyl containing foams	Creates hazardous gases	
	Coated Carbon Fiber	Flammable, can create hazardous fumes	Resin can contain various compounds unsafe for laser cutting.
	Fiberglass	Creates hazardous fumes	Resin can contain various compounds unsafe for laser cutting.
	Polyoxymethylene, Delrin	Creates Formaldehyde (CH <sub>2</sub> O), Hydrogen Fluoride (HF)	We do not have the equipment necessary to cut this safely.
	Polypropylene	Burns and melts	
	Wood	Rubber, Elastomer	Carbonyl Fluoride (COF <sub>2</sub> ), Hydrogen Fluoride (HF)
Styrene, Polystyrene, foamboard, Foam Core, styrofoam, Depron foam, Gator foam		Creates benzene gas	Some foams are laser-safe, but the ones listed are not. Check with TechLab staff for laser-safe options.
Tritan copolymer		Unknown	Not enough manufacturer data to be labelled as safe.
Coniferous and oily woods		Flammable	Oily woods may be flammable.
Formaldehyde containing MDF, HDF, Engineered		Formaldehyde	Extreme charring. Formaldehyde is a carcinogen.
	Adhesive or resin filled	Can create hazardous gases	Adhesives or resins may contain prohibited plastics or adhesives. Always check the materials you are cutting are laser-safe.

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Textiles	Chromium tanned leather	Creates harmful fumes	The coloring process for dyeing leather contains chromium, which is unsafe to lasercut. Most colorful leathers are unsafe to lasercut.
	Pleather or artificial leather	Creates harmful fumes and gases	Artificial leathers are often made from PVC.
Other	Materials marked "flame-retardant"	Creates harmful fumes	Often contains bromine.
	Glued materials	Creates harmful fumes and gases	Many adhesives can create harmful fumes when cut.
	Food	Can burn or melt	This is generally unsafe to do.
Metals	Any unlisted	Damages laser cutter	CO2 Lasers can etch but not cut certain coated metals. Can reflect and damage laser.
	Titanium	Damages laser cutter	Our laser cutter is not equipped to cut titanium.