



LASER MATERIAL GUIDELINES

NEVER ETCH OR CUT THESE MATERIALS

These materials are not allowed in the laser. **There are no exceptions.**

This is **not an exhaustive list**.

Library Staff may **cancel or disallow any use of equipment or materials** that may be hazardous to the health or safety of staff or patrons or damage Makery equipment.

Bring your materials in their **original packaging with all labels** so Library Staff can verify their contents.

When in doubt, **Library Staff will err on the side of caution.**

Material	Appearance	Consequence
Any Material Containing Halogens (Fluorine, Chlorine, Bromine, Iodine, Astatine)	See SDS or ingredients list.	Ruins the laser's optics and motion control system. Emits toxic fumes.
PVC (Polyvinyl chloride)	Hard Plastic. Used in artificial leather. Used in plumbing and building materials.	
PVB (Polyvinyl Butyral)	Flexible plastic. Clear or translucent.	
Artificial Leather that contains PVC	See SDS or ingredients list.	
Teflon (Polytetrafluoroethylenes)	Reflective appearance. Found in heat resistant or insulated materials.	
Plastics		
Polycarbonate	Clear, rigid, durable plastic.	Does not cut. Heat resistant.
HDPE (High Density Polyethylene)	Hard plastic. Milk bottle plastic. Plastic tubs.	Highly Flammable. Makes a mess.
LDPE (Low Density Polyethylene)	Hard plastic. Milk bottle plastic. Plastic tubs.	
Styrofoam (Polystyrene)	White foam, used in packaging.	
Polypropylene Foam	Airy foam. Packaging. Sound proofing.	
PET (Polyethylene Terephthalate)	Plastic bottles. Water bottles. Soda bottles.	Melts. Does not etch well.
PETG (Polyethylene Terephthalate Glycol)	Plastic bottles. Water bottles. Soda bottles.	Warping when cut.
ABS (Acrylonitrile Butadiene Styrene)	One of the most common plastics. LEGO. Toys. Computer keyboards.	Emits toxic fumes.
Epoxy Resin	Clear plastic coating.	
Phenolic Resin	Heavy, opaque plastic.	
Coated Carbon Fiber	Rigid, durable. Metallic appearance. Recognizable cross-hatch pattern.	Emits toxic fumes.
Fiberglass	Composite material made of tiny glass fibers that can appear clear, slightly opaque, or white in color.	Emits toxic fumes.



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Approved Materials

Material	Notes
Acrylic	Cast acrylic is best for etching. Extruded acrylic is best for cutting.
Anodized Aluminum	Etching only. Other metals will not work.
Cardstock	
Chipboard and Corrugated Cardboard	
Slate	Etching only.
Laserable Rubber	Must be chlorine free.
Powder Coated Drinkware (e.g. Yeti, Stanley)	Etching only.
Polyurethane Foam	Cutting only.
Glass	Etching only. Avoid Crystal.
Laser Safe Leatherette	Etching only. Must bring original packaging. Staff must be able to verify that it does not contain PVC.
Genuine Leather	Real, natural, genuine leather. Must bring original packaging. Staff must be able to verify that it does not contain PVC.
Solid Wood or Board Wood	
Plywood Composite Woods	Contains glue and may not cut as well as solid wood.
MDF (Medium Density Fiberboard)	May not cut well. Produce lots of soot.