

APPROVED LASER CUTTER MATERIALS- EMORY TECHLAB

Type	Material	Engrave	Cut	Notes
Plastic	Acrylic/Lucite/Plexiglas/PMMA	yes	yes	Cuts well leaving a polished edge.
	Coroplast ('corrugated plastic')	no	yes	Difficult because of the vertical strips.
	Kapton tape (Polyimide)	no	yes	Works well, in thin sheets and strips.
	Magnetic Sheet	no	yes	Cuts well at 1/16" to 1/8" thickness.
	Mylar	no	yes	Great for making stencils. Can warp, bubble, and curl, which is why 1/8" or below is the optimal cutting thickness. Gold coated Mylar will not work.
	Non-chlorine containing rubber	yes	yes	Great for making stamps. Requires multiple passes to cut. Produces a large amount of dust. Check MSDS of your material before cutting.
	Nylon	yes	yes	Cuts easily but may be messy
Foam	EVA foam	no	yes	Ensure your foam is EVA foam and from a reputable source.
Wood	Balsa	yes	yes	
	Aspen	yes	yes	Similar to balsa wood.
	Baltic Birch	yes	yes	Low feed rate and roughly 65% power work best to avoid charring.
	Basswood	yes	yes	Cuts cleanly without scorching
	Poplar (Yellow)	yes	yes	Cuts well, good for signs.
	Silver Birch Plywood	yes	yes	1/8" to 1/4" are optimal cutting thicknesses.
	Cork	yes	yes	Engineered cork may not cut well. Avoid thicker cork.
	Other woods	Check first	Check first	Avoid oily, resinous woods, woods with glue-lam composition, such as oriented strand board (OSB, CDX) and pressure-treated wood. Be very careful about cutting oily woods, or very resinous woods as they also may catch fire.
	Plywood/Composite woods	Check first	Check first	These contain glue, and may not laser cut as well as solid wood. Oriented strand board and similar glue-lam materials may melt or emit an undesirable odor. CDX cuts rather nicely with minimal edge dross.
		MDF/ Engineered Woods	yes	yes

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Paper	Cardboard	no	yes	Cuts well but may catch fire. Watch closely. Use low power and fast speed.
	Cardstock	no	yes	Cuts very well on the laser cutter, and also very quickly
Textiles	Leather	yes	yes	Leather is very hard to cut, but can be if it's thinner than a belt (call it 1/8"). Real leather only. Not 'pleather' or other imitations. Only certain tanning processes can be used. Maintain your receipt so staff can check your material is safe to cut.
	Cotton and Hemp Cloth	no	yes	They all typically cut easily. Not plastic/wax coated or impregnated!
	Acrylic felt	yes	yes	Cuts well and quickly. Some edges may melt together but will come apart easily.
	Wool felt	yes	yes	Cuts well. Ensure fiber content before cutting. Smells horrible.
Ceramic, stone, and glass	Ceramic	generally yes	no	Must cut at low speeds due to potential striation, loss of flatness and dross. Reduction of in-cut times may reduce most post-cut problems such as micro-cracks. Depending on color, may setoff fumes or leave edges with discoloration.
	Glass	yes	no	Leaves sandblasted effect. Green works best. Amber glass easily fractures.
	Marble, Stone, Soap stone, Granite, Onyx.	no	yes	Etching produces a white "textured" appearance.
Metals	Anodized aluminum	yes	no	Vaporizes the anodization away, yet is extremely easy to engrave. The thinner the material, the higher the cutting rate per second.
	Painted/ coated metals	yes	no	Vaporizes the paint away.
	Stainless steel with cermark coating	yes	no	

If using non TechLab supplied materials, retain receipt or product listing so staff can check material is safe to cut.