

Safe materials for cutting with a laser cutter

Material	Notes	WARNINGS!
Many woods	Avoid oily/resinous woods	Be very careful about cutting oily woods, or very resinous woods as they also may catch fire.
Plywood/Composite woods	These contain glue, and may not laser cut as well as solid wood.	
MDF/Engineered woods	These are okay to use but may experience a higher amount of charring when cut.	
Paper, card stock	Cuts very well on the laser cutter, and also very quickly.	
Cardboard, carton	Cuts well but may catch fire.	Watch for fire.
Cork	Cuts nicely, but the quality of the cut depends on the thickness and quality of the cork. Engineered cork has a lot of glue in it, and may not cut as well.	Avoid thicker cork.
Acrylic/Lucite/Plexiglas/PMMA	Cuts extremely well leaving a beautifully polished edge.	
Thin Polycarbonate Sheeting (<1mm)	Very thin polycarbonate can be cut, but tends to discolor badly. Extremely thin sheets (0.5mm and less) may cut with yellowed/discolored edges. Polycarbonate absorbs IR strongly, and is a poor material to use in the laser cutter.	Watch for smoking/burning
Delrin (POM)	Delrin comes in a number of shore strengths (hardness) and the harder Delrin tends to work better. Great for gears!	
Kapton tape (Polyimide)	Works well, in thin sheets and strips like tape.	
Mylar	Works well if it's thin. Thick mylar has a tendency to warp, bubble, and curl	Gold coated mylar will not work.
Solid Styrene	Smokes a lot when cut, but can be cut.	Keep it thin.
Depron foam	Used a lot for hobby, RC aircraft, architectural models, and toys. 1/4" cuts nicely, with a smooth edge.	Must be constantly monitored.
Gator foam	Foam core gets burned and eaten away compared to the top and bottom hard paper shell.	Not a fantastic thing to cut, but it can be cut if watched.
Cloth/felt/hemp/cotton	They all cut well. Our "advanced" laser training class teaches lace-making.	Not plastic coated or impregnated cloth!
Leather/Suede	Leather is very hard to cut, but can be if it's thinner than a belt (call it 1/8"). Our "Advanced" laser training class covers this.	Real leather only! Not 'pleather' or other imitations!
Magnetic Sheet	Cuts beautifully	
NON-CHLORINE-containing rubber	Fine for cutting.	Beware chlorine-containing rubber!
Teflon (PTFE)	Cuts OK in thin sheets	
Carbon fiber mats/weave that has not had epoxy applied	Can be cut, very slowly.	You must not cut carbon fiber that has been coated!!
Coroplast ('corrugated plastic')	Difficult because of the vertical strips. Three passes at 80% power, 7% speed, and it will be slightly connected still at the bottom from the vertical strips.	