

# Material Settings

The material settings contained in this chart are a ballpark estimate to get you started. There are many factors that impact cutting and engraving speeds and power settings, including the expected cut edge/engraving quality. The same material from different manufacturers may cut very differently. The best practice is to perform sample cuts or engravings in scrap pieces of materials.

Woods in particular vary considerably from species to species and in the event of engineered products like plywood, the glue that binds the layers together makes a remarkable difference. Always buy interior grade engineered products if possible as the PVA based glues that are typically used allow for much better edge quality.

Material	Mode	Power	Speed	Scan Gap	Thickness	Notes
Acrylic	Engrave	50	400	0.05	Any	Cast acrylic will engrave white. Extruded will engrave integral color.
Wood	Engrave	50	400	0.05	Any	Depth of engraving will depend on wood species.
Glass	Engrave	35	400	0.05	Any	Multiple passes may create higher quality engraving.
Granite	Engrave	50	400	0.1	Any	Seal the engraved areas to prevent discoloration from oils.
Mirror (Back)	Engrave	65	400	0.1	Any	Too much heat will cause distortion in the mirror backing.
Leather	Engrave	50	400	0.1	Any	Slower speeds will darken engraved area
Anodized Aluminum	Engrave	35	400	0.1	Any	
Powder Coat	Engrave	35	400	0.1	Any	
Cermark	Engrave	50	400	0.1	Any	Do test engravings to determine optimal power level for the exact material you are using. Some metals are better conductors of heat than others which can damage the coating.
Balsa Wood	Cut	60	30	N/A	1/8	Turn down power to increase cut quality.
Birch Wood	Cut	75	10	N/A	1/4	Cutting as fast as possible will make the lightest colored edge.
Birch Plywood	Cut	75	5	N/A	1/4	Cutting as fast as possible will make the lightest colored edge.
Acrylic	Cut	75	5	N/A	1/4	This setting is for a polished looking edge. You can cut faster if a frosted looking edge is OK.
Mirror Acrylic	Cut	70	10	N/A	1/8	If mirror backing bubbles or distorts turn down power.
Leather	Cut	75	10	N/A	1/8	