



# **Laser Cutter / Engraver Materials and Settings (trotec Speedy 300)**

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# Laser Cutter / Engraver Materials and Settings (trotec Speedy 300)

## Where to get materials

We encourage users to make use of the materials that The Edge has tested and keep in stock for [purchase](#) on our [laserlaser cutters](#).

We also recognize users will want to experiment with new exotic materials. Here at The Edge we love seeing people experiment. But we need to check that new materials are safe to cut. There are many materials which produce extremely harmful (potentially deadly) fumes when cut, and for that reason we are very cautious about the materials that can be used in our laser cutters.

## Our Shop

We sell a supply of safe materials for laser through our [shop](#) which includes sheets of plywood, acrylic, polypropylene, cardboard, paper, veneer, rubber stamp, etc which are from known safe suppliers.

## Buying known safe suppliers/ranges

You can also purchase materials but they must come from known safe product ranges/suppliers. Not all acrylic and plywood is created equal! Some known safe products/suppliers are listed below. If you wish to use these items in our laser cutter you will need to bring along your invoice for these so we can compare the item to this list.

- **Wood**
  - A/C Grade Hoop Pine Plywood from [Plywood and Panel](#)
  - Various woods/veneers/plys from [trotec](#)
  - Balsa sheets from [Balsacentral](#)
- **Acrylic sheets:**
  - The sheets must be acrylic or petg and not contain mirror/metal flakes. If in doubt, please [contact us](#).
  - [Acrylics online](#)
  - [trotec](#)
- 100% **silk** fabrics
- Natural, vegetable-tanned, **leathers/suedes**
- **Other** materials are available through [trotec](#), though not all of their materials are suitable to our specific laser cutters, so please [contact us](#) if you wish to use any from there.
- PVA wood glue (Parafix or Selleys Indoor)

## Bringing in new materials

Should you wish to cut something from outside these ranges you will need to get a MSDS for the product and [submit it to us](#), along with a sample of the product so we can [test](#) it, in a process which is destructive to that sample. This process takes some time, and provides no guarantee that your item will be approved as safe for use. Please [contact us](#) if you would like to use materials that aren't purchased through us or from the list above.

## Forbidden Materials

Some examples of forbidden materials (in our laser cutters) include:

- ABS (produces canide gas)
- PVC (produces chlorine gas)
- MDF (the glues used to make these produce various toxic gasses)

## Settings

Below you will find a table of approved materials and their settings for trotec Speedy 300 Laser Cutter/Engraver

## Core Range

This is our core range of materials, we sell these onsite through our [shop](#).



Material	Thickness	Process	Power	Speed	PPI/Hz	Passes	Z-Offset	Supplier/Link/Notes
Plastic, Acrylic	1.5mm	Cut	100	2	2000	1	-	
Plastic, Acrylic	1.5mm	Engrave	80	70	500	1	4mm	
Plastic, Acrylic	3mm	Cut	100	1	5000	1	-	
Plastic, Acrylic	3mm	Engrave	80	70	500	1	4mm	

Material	Thickness	Process	Power	Speed	PPI/Hz	Passes	Z-Offset	Supplier/Link/Notes
Plastic, Acrylic	6mm	Cut	100	0.3	5000	1	-	
Plastic, Acrylic	6mm	Engrave	80	70	500	1	4mm	
Wood, Ply	4mm	Cut	100	1.2	1000	1	-	<a href="#">Plywood and Panel, A/C Grade Hoop Pine</a>
Wood, Ply	4mm	Engrave	90	90	500	1	4mm	<a href="#">Plywood and Panel, A/C Grade Hoop Pine</a>
Wood, Ply	6.9mm	Cut	100	0.4	1000	1	-	<a href="#">Plywood and Panel, A/C Grade Hoop Pine</a>
Wood, Ply	6.9mm	Engrave & Greyscale	90	90	500	1	4mm	<a href="#">Plywood and Panel, A/C Grade Hoop Pine</a>
Wood, Ply	6.9mm	Deep Engrave	70	40	1000	3	4mm	<a href="#">Plywood and Panel, A/C Grade Hoop Pine</a>
Wood, Ply	6.9mm	Score Line	10	1	1000	1	4	<a href="#">Plywood and Panel, A/C Grade Hoop Pine</a>

## Exotics

These are materials we don't normally stock, but we may have a bit of, or you can purchase and bring in (please talk to us first as there is an approval process)

Material	Thickness	Process	Power	Speed	PPI/Hz	Passes	Z-Offset	Supplier/Link/Notes
Wood, Balsa	3mm	Cut	60	2	1000	1	-	
Wood, Balsa	3mm	Engrave	30	90	500	1	4mm	
Plastic, PETG	0.7mm	Cut	50	1.7	1000	1	-	
Plastic, PETG	0.7mm	Score Line	50	2	1000	1	-	
Plastic, Acrylic	4.5mm	Cut	100	0.8	5000	1	-	
Plastic, Acrylic	4.5mm	Engrave	80	70	500	1	4mm	
Plastic, Polypropylene	0.6mm	Cut	50	2	1000	1	-	
Plastic, Polypropylene	0.6mm	Engrave	10	10	500	1	4mm	
Paper	200-250gsm	Cut	7	1	1000	1	-	
Paper	200-250gsm	Engrave	30	60	500	1	4mm	
Cardboard, Corrugated	single ply 4mm	Cut	60	2	1000	1	-	
Cardboard, Corrugated	single ply 4mm	Engrave	50	60	500	1	4mm	
Rubber Stamp		Cut	95	0.4	5000	1	-	Trotech
Rubber Stamp		Engrave	95	14	500	1	4mm	Trotech

## Downloads

Extensions > Text > Hershey Text > Hershey Sans 1 stroke  
for speedy engraving using 'score' settings. More info:  
<https://www.evilmadscientist.com/2019/hershey-text-v30/>

Example that has already been conveyed



	CUENGRAVE	SCORE	DEEPSCALE	
POWER:	POWER:	POWER:	POWER:	POWER:
SPEED:	SPEED:	SPEED:	SPEED:	SPEED:
PPI/HZ:	PPI/HZ:	PPI/HZ:	PPI/HZ:	PPI/HZ:
PASSES:	PASSES:	PASSES:	PASSES:	PASSES:
Z-OFFSET:	Z-OFFSET:	Z-OFFSET:	Z-OFFSET:	Z-OFFSET:

PLYWOOD 6.9mm

A2  
\$16

A3  
\$9

SUPPLIER:  
Plywood + Panel

PRODUCT:  
de Hoop Pine

This template and all our material settings  
can be found on our wiki. Head to:  
[wiki.slq.gov.au](http://wiki.slq.gov.au)

and search for:  
**Laser Cutter Materials and Settings**

- Import Settings For Trotech Speedy 300