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| SOP Better Laser Sign.jpg**CNC LASER CUTTER CUTTER**The CO2 laser is housed in a sealed enclosure.However, students and staff are to avoid any accidental direct eye or skin exposure. Hair Protection circle Safety glasses must be worn at all times in work areas. |
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| Dust mask signA mask maybe required when excessive airborne toxic vapours are created. | Foot Protection circleSome materials have the potential to ignite and cause a fire in the machine. Cutting vector or multilayer images can create an open flame. Always monitor when the laser cutter is in use. Appropriate footwear with substantial uppers must be worn. |
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### **PRE-OPERATIONAL SAFETY CHECKS**

Long and loose hair must be contained or restrained.

1. **Do not program the CNC laser cutter without proper training.**
2. **Consult the manufacturers’ SDS to ensure that materials and coating to be cut pose no hazard.**
3. **Safety guarding and magnetic interlock devices must never be removed or adjusted.**
4. **An exhaust extraction system is to be attached to an operational laser cutter.**
5. **Visually check the area to ensure no slip or trip hazards are present in this workspace.**
6. **Ensure the table/bed is free of off cut material and adjust table height suitable for material thickness.**
7. **Check mirror and lens are clean.**

#### OPERATIONAL SAFETY CHECKS

1. **Always monitor the machine when it is operating, don’t leave unattended while running.**
2. **Only a trained and competent person is to set up and operate this equipment.**
3. **Turn on the exhaust on the fume extraction system.**
4. **An appropriate and well-maintained fire extinguisher to be on hand in the same room as the laser machine.**
5. **Be aware of other students and staff that may be in the immediate vicinity**

#### PROHIBITED

Material not to be cut with CNC Laser Cutter / Engraver**:**

◼ **Polyvinyl Chloride (PVC)** ◼ **Carbon fibres** ◼ **Polyvinyl butyral (PVB)** ◼ **Beryllium oxide**

 ◼ **Polytetrafluoroethylenes (PTFE /Teflon)** ◼ **Any materials containing halogens (fluorine, chlorine, bromine, iodine and astatine), epoxy or phenolic resins**

#### HOUSEKEEPING

1. **Turn the CNC laser engraver/cutter and fume extractor off after use.**
2. **Regularly service and check the laser cutter for operational faults.**
3. **Always leave the grid and table tray clean and free of residue and debris.**

## POTENTIAL HAZARDS

◼ **Impact, pinch and crush points** ◼ **CO2 laser beam** ◼ **Electrical components**

◼ **Flammable materials** ◼ **Eye injury** ◼ **Toxic gases and fumes**

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| **Date of last review** | **\_\_\_\_\_\_\_\_\_\_\_\_\_\_** | **Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** |