

3D printer Safety precautions

.General Safety Caution

A 3D Printers is a production tool. As such they needs to be dealt with caution mainly by adults with no mental handicap.

The end user must have a general knowledge of the machine before using it and a special training might be needed in order to use a production tool.



Kids must be assisted by an adult in order to prevent any accident with the machine.

Information on this page have been obtained via sources that we feel are reliable, but might be subject to some later updates / changes.

The way to use, store or build the machine is up to the end user. As such we cannot control the use/build and storage conditions of the machine. We are not responsible for any damages, accident or any other storage / handling related issues, as well as recycling means of the machine.

.Health consideration

3D printers are using different kind of materials from different origin and composition.

Depending on the material,additives, and colorants, the toxicity of the filament may vary.

PLA; Recognized to be safe and non toxic in it's natural form, some precautions are to be taken when adding additives or lubricants inside the filament.

ABS: Recognized as toxic, based on the micro particles it's emits during the print process. The amount of Styrens and other products generated by the carbonization or certain chemical products, can even form cyanides and other toxic materials. More over a strong smell is created when printing ABS.



Always use your printer inside a well ventilated room, or with a proper air filtration system. Not all carbon active filters are working. Please refer to a proper Gaz filter, as Carbon filters from extractor hoods are not fit to filter ABS micro particles.



Never burn 3D printer filament as it can quickly decompose into toxic material when exposed to flame.

. CE:

Scalar 3D printers are DIY kits provided with no additional protections. As a kit, it cannot be considered as a finished consumer product. CE marking depends on the way the machine was built . As such the following notes must be taken into consideration.

. Electric safety

The machine include Power supply units with CE markings.

They are protected against short circuits and overloads. They must be left untouched of any modifications

3D printers are using 12VDC (very low voltage). This voltage range is outside the scope of the low voltage directive.



Always unplug the power supply from your power outlet before doing any maintenance on your machine.

.ElectroMagnetic Compatibility (EMC)

Electromagnetic radiations in conduit mode for distributors is not an issue as it is mainly linked to the Power supply.

The electromagnetic compatibility depends on the quality of the assembly, and might need some additional shielding but cannot in any cases be predicted.

.Mechanical Safety

3D printers contains a lot of moving mechanical parts, and the torque of the stepper motors is relatively low and should not cause too serious injuries.

However, it is advised to add any protections identified necessary by the user

The easiest and fastest way to secure your machine is to place it inside a closed and well ventilated room with and air extraction system, or to use a box that cover your whole printer with some security access doors.

In order to improve the electric safety of the machine, you might need to add a power switch that cuts off the power when the printer door is opened.

The safety measures for the machine is up to the end user.



Always unplug the main power supply from the grid when doing any maintenance or intervention on the machine.

• Burn issues

The machine has several heating elements that can reach 140°C for the heat bed and more than 300°C for the hot end. Burn threat is real and have to be taken into serious consideration.

Some hot ends are provided with silicone insulators, that will lower the burn issues. However it might be required to add additional security measures depending of the use cases.



Always make sure the heating elements are cold before starting any maintenance or modifications on your machine

If you get burnt, you can use **Organic silicium G5** Immediately after the burn. This gel is very effective when applied immediately after the burn. More over it's hydration capabilities makes it great to repair and protect your skin.