



3DLPrinter
3DLPrinter-HD
3DLPrinter-HD 2.0
3DLPrinter-HD 2.0+



Technical Note 05/14

Safety Rules

Rev-4.03 February 2016

Safety

As we pointed out in the manual "**Instructions for installation, use and maintenance**", both of **3DLPrinter**, **3DLPrinter-HD**, **3DLPrinter-HD 2.0** that of **3DLPrinter-HD 2.0+**, the use of the printer should be done by experienced staff, which has understood operation and can use it in safety. It is not permitted to use the printer in disagree with the guidelines provided in the manual, penalty invalidation of the **guarantee**.

Like any **professional equipment**, you should treat the printer, materials and accessories with respect and care to ensure a safe working environment and long life to the printer.

Change part of the printer without the explicit approval, and the manufacturer's instructions, voids your warranty and can potentially ruin your printer, and, more importantly, it can cause **injuries to the operator** or any other person present in the **workplace**.

It is the **responsibility** of the owner of the printer to make sure that the staff, designated for the use and maintenance of the printer, takes **SAFETY** precautions and prescriptions necessary to the operations that lends itself to perform.

In particular, we emphasize that the operator must be equipped with the following **personal protective equipment**:

- Protective gloves for chemicals conform to EN 374 (1).
- Protective goggles for chemical splash conform to EN 166 (V3).
- Safety shoes according to EN 20345 (S3)

well as to wear clothing suitable for the work.

Sharp Tools

The accessory kit that came with the printer includes a pair of tweezers, a scraper, and other instruments that may be sharp. We recommend caution in the use of these tools, especially it is recommended to avoid placing these instruments on slippery surfaces, as these could fall and **cause personal injuries**.

Isopropyl alcohol (IPA)

Isopropyl alcohol (**IPA**), as well as the **Cleaner CL-01**, are very good for rinsing and cleaning of the printed piece, the resin vat and the tools used to manipulate the piece.

Isopropyl alcohol (referred in chemistry as **isopropanol** or **2-propanol**) may be known by different names depending on the country in which you are located. It can be purchased at drugstores, hardware specialized in chemicals, or even online.

It is advisable to buy a solution of isopropyl alcohol at 90%, because higher concentrations are much more dangerous to handle, while the isopropyl alcohol 90% is safe also for the domestic use. **Isopropyl alcohol (IPA)** is a chemical and should be **handled with care**.

The **IPA**, as well as the **Cleaner CL-01**, can be used specifically for the following uses:

- Rinse the **resin vat**
- Rinse the **printed piece** (can be inserted into the Ultrasonic device)
- Clean any **residual liquid resin** from tools used to manipulate the piece and from work plan..

Always handle the **IPA** with **gloves** in a well **ventilated area**.

CAUTION: Keep isopropyl alcohol (IPA) away from sources of heat, sparks and naked flames. The IPA evaporates quickly, so try to keep tightly closed the bottles and the Ultrasonic device containing IPA. Keep the IPA always in properly **labeled and sealed** containers.

The methods of safe and proper disposal of IPA vary from location to location, it is the responsibility of the operator to inquire at structures responsible for, and to adopt the provisions in force.

CAUTION: The IPA is **flammable** and should be used and stored away from sources of heat, sparks, open flames.

Robot Factory don't produces, nor sells **Isopropyl Alcohol**, so it is advisable to consult the chemical manufacturer (or the supplier) for the **safety data sheet** of the specific product.

Resin and cleaner

The **Cleaner CL-01** contains **Isopropyl Alcohol (IPA)** therefore may be flammable and should be kept **away from sources of heat, fire or sparks**.

The use of the **Resin** and the **cleaner** (be it the **Cleaner CL-01** or **Isopropyl Alcohol**) require caution and due **precautions** to any chemical, it is recommended to follow the **safety rules** and wear gloves whenever you manipulates the liquid resin or the cleaner.

- **It is not allowed** the use of these substances (Resin and cleaner) in contact with food, drink, or medical applications that will be in contact with the human body.
- **Do not ingest** the cleaner or the resin in liquid or solid form.
- **Keep** these substances (resin and cleaner) **out of the reach of children**.

In the DVD supplied with the printer there are Material Safety Data Sheets (**MSDS - Material Safety Data Sheets**), both of the “**Resin**”, that of the “**Cleaner CL-01**”.

It is also advisable to have **good ventilation** when you work using the **Cleaner CL-01** or with **Isopropyl Alcohol** and naturally the **resin**.

If, after use, you want to recover the liquid used in the Ultrasonic device (be it the **Cleaner CL-01** or **Isopropyl Alcohol**) is it recommended to pour it in an empty bottle properly ‘**labeled**’ using a funnel. It should, however, take into account that after some time, the cleaner contained in the ultrasonic devise will go into **saturation** with resin, that decreases its effectiveness in rinsing of the printed parts.

Is the operator’s responsibility to make sure that the replacement of the liquids (resin and cleaner), components considered **special wastes**, their disposal is made in conformity with the **regulations in force** in the matter (rules vary from location to location).

Containers of **Cleaner CL-01**, **Isopropyl Alcohol** and the **resin** must be kept **tightly closed** when not in use.

CAUTION: Do not use isopropyl alcohol (IPA) or the **Cleaner CL-01** for cleaning the **cover** (orange lid), as these substances may damage it.

In order to improve and grow the product, we ask that you inform us of any possible improvements, sending an email to robot@robotfactory.it with the much detail as possible description about the required improvement.

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