



Health & Safety

Multi-functional Devices, Laser Printers, Specialist Printing Devices and 3D Printers

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¹ or earlier if change in legislation or on risk assessment

Amendment Control

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Policy Contents

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|----|---|---|
| 1. | Introduction..... | 3 |
| 2. | Recommendations..... | 3 |
| 3. | Purchasing a MFD or specialist printing equipment | 3 |
| 4. | Installing and using the MFD or printer..... | 4 |
| 5. | 3D printing..... | 5 |
| 6. | References and other information | 5 |

1. Introduction

Multi-functional devices (MFDs) are widely available in all campus buildings. They serve both staff and students. Some areas have specific printing machines that also require to comply with this policy also. However, in the past people have raised concerns with the use of certain desktop printers in rooms. Any potential health issues require to be reported to the Health and Safety Office for investigation.

2. Recommendations

The responsibility for ensuring that MFDs and other printers do not present a health hazard is shared between the manufacturer, the installer and the operator. Whilst the risks to health from MFDs and other printers use are slight, the following points should be kept in mind as they are purchased, installed and used. Modern and well maintained machines present fewer hazards. Information on the machines can either be provided by the supplier if bought by the School or Service or if machines were supplied and maintained by Information Services then they would supply the relevant information.

3. Purchasing a MFD or specialist printing equipment

Information Services carry out the allocation of MFDs within the university and this reduces the overall risks to users. MFD and specific printer manufacturers are sensitive to the concerns of their customers with regard to the safety aspects of their machines. Companies will readily supply Product Safety Data Sheets (PSDS) relating to their machines and, by law, they have to provide, on request, Material Safety Data Sheets (MSDS) relating to the products used with the machine e.g. toner.

The PSDS will give details of siting requirements for the particular machine e.g. minimum volume of the room required for natural ventilation situations, noise, emission levels, ozone emission levels etc.

The MSDS will give information on the health risks of the product, if any, e.g. route of entry to the body, symptoms, first aid measures, waste disposal, etc.

It is advisable to ask for the PSDS before placing the final order for a machine in order to highlight any siting problems. Whilst the health hazards from the associated products, if they are used correctly, are insignificant it may be prudent to ask for a copy of the MSDS to allay user concerns.

Specific printing equipment for high volume use requires the room to be fully risk assessed to ensure all ventilation and safety controls will meet the requirements. Contact the Health and Safety Team for further help and advice.

4. Installing and using the MFD or printer

Much can be done to alleviate employee concerns about MFDs and printers by giving careful consideration to the location of the machine in relation to the employee workstations.

Large machines which are capable of collating, or are used regularly for long copy runs, should ideally be sited in dedicated copy rooms with adequate natural or mechanical ventilation. If this is not possible, they should be placed well away from staff workstations and long runs of printing or copying carried out at times when the minimum of stress will be caused to staff e.g. break times.

Smaller machines which are not capable of collating etc. and are not used regularly for long runs, may be housed within the room occupied by staff, however, it is prudent to observe the following points:

- Air vented from the machine into the room should be filtered (note: most modern machines incorporate such filters to reduce ozone emission).
- Do not place anything around or near the exhaust or air intakes around the machine. Maintain a distance of at least 500mm from any area of the machine. Also, ensure that any flammable materials or chemicals are kept well clear of the machine. Any chemicals require to be stored in a cupboard and recorded on the hazardous database (contact Health and Safety Office for access to this system).
- Machines should be sited such that exhaust emissions do not travel over workstations or personnel.
- Ensure regular servicing of the machine.
- Consideration should be given as to the adequacy of the ventilation in the room i.e. size of room, natural or mechanical ventilation.
- Refilling techniques for toner in dry (xerographic) machines should be given special attention avoiding spillage wherever possible.
- Toner spillages should be cleaned up with care and ideally if persons are known to have compromised respiratory systems they should not be asked to carry out this task. This cleaning and disposal must be carried out following manufacturer's instructions.
- Spent toner from a machine should be placed in sealed bags for disposal (note: this is managed through Information Services).

MFDs and printers are used world-wide by many people without any problems. However, machines that are improperly installed, maintained or operated can cause problems of an unpredictable nature. In addition, as with any chemical hazard, certain individuals are more susceptible to the possible problems caused by the machine than others.

5. 3D printing

Prior to ordering and using 3D printers ensure the following is complied with:

- The relevant authorisation and training have been given to order, install, operate and maintain the equipment.
- All safety legislation, requirements and manufacturer's instructions are being adhered to.
- All materials used are fit for use and necessary precautions are put in place prior to use.
- Maintenance on the equipment is carried out in accordance with manufacturer's instructions.
- Relevant enclosures and extraction is in place where required.
- Relevant risk assessments and safe systems of work communicated, followed and reviewed.

6. References and other information

MFDs - faults/issues consult information sheet above the machine.

Ozone: Health Hazards and Control Measures. [Health and Safety Executive Guidance Note EH38](#)

Workplace Exposure Limits. [Health and Safety Executive Guidance Note EH40](#)

Control of Substances Hazardous to Health. [Health and Safety Executive Approved Code of Practice](#)

3D Printing In Schools and Colleges: Managing the Risks – [CLEAPSS & HSE](#)