

## Working in an office: printer toners and inks are potentially damaging to our health

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ECHA (the European Chemicals Agency, which is based in Helsinki) has added other materials to the list of products that are potentially harmful to people and to the environment. These new substances include **dioctyltin dilaurate and tetraglyme**, which are used in a variety of industrial fields for the production of plastic and rubber, and are also used as solvents in the production of toners and printing inks. These substances have been added to the list of potentially harmful substances because they are toxic for man and can negatively affect sexual function and fertility.

The effects of toners on people's health have been a topic of discussion and study on several occasions and it is now well established that inhaling the toner dust emitted by laser printers and photocopiers can cause respiratory disorders, especially in people with hypersensitive mucous membranes.

The most important international institutions classify toner as a non-carcinogenic substance. In fact, there are no epidemiological studies that indicate a direct correlation between exposure to toner dust and an increased incidence of respiratory tract tumours. It must be said that, as with any other chemical substance, a harmful effect cannot be completely excluded, which is why it is important to use **certain precautions when using toners and cartridges** and, more generally, to apply certain safety measures when working in close contact with printing devices. The people at risk are obviously those who are most exposed to these substances, i.e. those who maintain photocopiers or those who regenerate

cartridges and toners. The likelihood of developing respiratory illnesses or disorders for people who do normal office work is very low and can be minimised by implementing some simple environmental hygiene rules, such as frequent ventilation.

### **Risk identification and management**

The European Union regulation on protecting the health of humans and the environment stipulates that manufacturing companies are obliged to identify and manage risks associated with the hazardous substances they produce. In addition, since January 2021, it has been necessary for companies to inform ECHA, under the Waste Framework Directive, if their products contain substances of very high concern.

In the future, the candidate substances, which were identified on 19 January, could be included in the list of substances requiring authorisation, which means that manufacturing companies would have to apply for authorisation to continue using them, applying appropriate product labelling and providing sufficient information to their customers and consumers for safe use. In addition, all suppliers of products in the list (whether supplied alone or in mixtures) must provide their customers with a safety data sheet.

### **Which type of printer is safest for your health?**

The use of equipment for printing and copying documents is widespread in all offices, and it is difficult to decide which type of machine to use. However, if we have to buy a printer for the home, we can opt for the technology that is safest for our health. It is good to know that laser printers and photocopiers, in addition to the risk of inhaling toner, expose users to another chemical risk linked to the emission of ozone and the decomposition of toner under the action of heat. These emissions are small and do not cause damage if the equipment is placed in a sufficiently ventilated environment. The likelihood of laser printers causing health problems depends on the type of machine, the frequency of use and the circulation of air.

Generally speaking, we can say that laser printers are more likely to cause health problems than inkjet printers, and should be given more attention during installation and use.

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