

# Electrical Safety Factsheet

Electricity is a familiar and necessary part of everyday life, but electricity can kill or severely injure people and cause damage to property.

There are simple precautions when working with, or near electricity that can be taken to significantly reduce the risk of electrical injury to you and others around you.

Most of the fatal incidents are caused by contact with overhead power lines. Even non-fatal shocks can cause severe and permanent injury. For example, shocks from faulty equipment may lead to falls from ladders, scaffolds or other work platforms. Those using or working with electricity may not be the only ones at risk – poor electrical installations and faulty electrical appliances can lead to fire, which may also cause death or injury to others. Most of these accidents can be avoided by careful planning and straightforward precautions.

## Legislation

The purpose of the Electricity at Work Regulations 1989 is to require precautions to be taken against the risk of death or personal injury from electricity in work activities. Duty holders must ensure an assessment has been made of any electrical hazards, which covers:

- who could be harmed by them
- how the level of risk has been established
- the precautions taken to control that risk

The risk assessment should take into consideration the type of electrical equipment used, the way in which it is used and the environment that it is used in.

You must make sure that the electrical installation and the electrical equipment is:

- suitable for its intended use and the conditions in which it is operated
- only used for its intended purpose

In wet surroundings, unsuitable equipment can become live and make its surroundings live too. Fuses, circuit-breakers and other devices must be correctly rated for the circuit they protect. Isolators and fuse-box cases should be kept closed and, if possible, locked.

Cables, plugs, sockets and fittings must be robust enough and adequately protected for the working environment. Ensure that machinery has an accessible switch or isolator to cut off the power quickly in an emergency.

You must make sure that electrical equipment and installations are maintained to prevent danger.

Users of electrical equipment, including portable appliances, should carry out visual checks.

Remove the equipment from use immediately and check it, repair it or replace it if:

- the plug or connector is damaged
- the cable has been repaired with tape, is not secure, or internal wires are visible etc
- burn marks or stains are present (suggesting overheating)

Repairs should only be carried out by a competent person (someone who has the necessary skills, knowledge and experience to carry out the work safely).

Have more frequent checks for items more likely to become damaged (e.g. portable electrical tools

frequent checks are needed for equipment less likely to become damaged (e.g. desktop computers etc).

Visual checks are not usually necessary for small, battery-powered items, or for equipment that works from a mains-powered adaptor (laptops or cordless phones etc). However, the mains-powered adaptor for such equipment should be visually checked.

Consider whether electrical equipment, including portable appliances, should be more formally inspected or tested by a competent person. Also think about the intervals at which this should be done.

### Are your employees at risk?

- Ensure that workers know how to use the electrical equipment safely.
- Make sure enough sockets are available. Check that socket outlets are not overloaded by using unfused adaptors as this can cause fires.
- Ensure there are no trailing cables that can cause people to trip or fall.
- Switch off and unplug appliances before cleaning or adjusting them.
- Ensure everyone looks for electrical wires, cables or equipment near where they are going to work and check for signs warning of dangers from electricity, or any other hazard. Checks should be made around the job, and remember that electrical cables may be within walls, floors and ceilings (especially when drilling into these locations) etc.
- Make sure anyone working with electricity has sufficient skills, knowledge and experience to do so. Incorrectly wiring a plug can be dangerous and lead to fatal accidents or fires.
- Stop using equipment immediately if it appears to be faulty – have it checked by a competent person.
- Ensure any electrical equipment brought to work by employees, or any hired or borrowed, is suitable for use before using it and remains suitable by being maintained as necessary.
- Consider using a residual current device (RCD) between the electrical supply and the equipment, especially when working outdoors.