



## Electrical safety

The hazard of electricity is well known. It is, however, not generally appreciated that a low voltage shock of only 240 volts can, under certain circumstances, be enough to kill.

Many people have received an electric shock by unwittingly becoming part of an electrical circuit. However, the severity of injury that could occur depends on exactly where in the body the electrical current flows and for how long.

### How does an electric current affect the body?

- Breathing could stop – the nervous system becomes temporarily paralysed.
- Heart beating is interrupted or stopped – blood stops being circulated through the body.
- Damage to nerves and severe contraction of muscles – internal bleeding, burns and fractures may result.

### Injuries would also occur due to several related factors:

- Burns due to arcing/electrical fires.
- Falls due to a loss of balance / throw back after touching electrical equipment.
- Cuts or mechanical injury due to machinery starting unexpectedly.

### Key Points to Remember:

- 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, or within a wet or confined place (see HSE's electrical safety at worksite).

### Environmental issues:

- Endeavour to order the exact quantities of electrical fittings and associated equipment for the contract you are working on, as this will help to minimise (reduce) the electrical waste being produced by your activities.
- Ensure you reuse all unwanted electrical components, sockets, switches, conduit etc. as far as is practical.
- Ensure that you segregate all waste electrical cables, tray work, conduit etc. as this will help to simplify either their reuse or identify them for recycling.
- Only use approved waste contractors to remove and dispose of unwanted electrical wastes – you should obtain a copy of their waste carrier's license to fulfil your Duty of Care obligations.