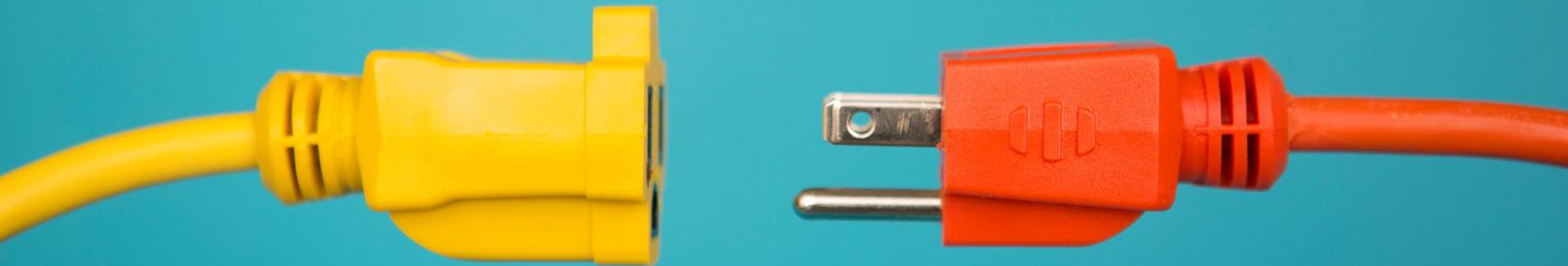




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Electrical Dangers in the Workplace



Nearly every workplace has some sort of electrical service, and that makes electrical safety a workplace issue. According to the Centers for Disease Control and Prevention, some workers are unaware that they work among potential electrical hazards. Educate employees on the safe use of electrical equipment such as extension cords and power strips. Encourage employees to point out potential electrical dangers, such as frayed wires, a light socket that is shorting out or any other potential problems.

Electrical Hazards

An electrical hazard is a risk of death, shock or other personal injury caused directly or indirectly by electricity. The main hazards associated with these risks are:

1. Contact with exposed live parts causing electric shock and burns (for example exposed leads or other electrical equipment coming into contact with metal surfaces such as metal flooring or roofs).
2. Faults that could cause fires.
3. Fire or explosion where electricity could be the source of ignition in a potentially flammable or explosive atmosphere (for example, in a spray paint booth).

Risk of Injury from Electricity

The risk of injury from electricity is strongly linked to where and how it is used. The risks are greatest in harsh conditions, such as:

1. Outdoors or in wet surroundings – equipment may become wet and may be at greater risk of damage.
2. In cramped spaces with earthed metalwork, such as inside a tank or bin – it may be difficult to avoid electrical shock if an electrical fault develops.

Some items of equipment can also involve greater risk than others. Portable electrical equipment is particularly liable to damage including to plugs and sockets, electrical connections and to the cable itself. Extension leads, particularly those connected to equipment which is frequently moved, can suffer from similar problems.

Controlling Electrical Risks

Common measures to control electrical risks at a workplace include:

1. Ensuring only appropriately licensed or registered electricians carry out electrical work.
2. Providing safe and suitable electrical equipment (e.g. not using leads and tools in damp or wet conditions unless they are specially designed for those conditions).
3. Inspecting leads for damage before use, and removing any that are damaged from the workplace.
4. Providing enough socket outlets; overloading socket outlets by using adaptors can cause fires.
5. Ensuring power circuits are protected by the appropriate rated fuse or circuit breaker to prevent overloading.
6. If the circuit keeps overloading, do not increase the fuse rating as this creates a fire risk due to overheating.
7. Using battery powered tools instead of mains operated where possible.
8. So far as is reasonably practicable, arranging electrical leads so they will not be damaged: not running leads across the floor or ground, through doorways and over sharp edges.
9. Using lead stands or insulated cable hangers to keep leads off the ground.
10. Using cable protection ramps or covers to protect cables and cords, where applicable.
11. Using residual current devices (RCDs), also known as safety switches, to protect workers using portable equipment.
12. Determining the reason why an RCD, circuit breaker or other over current protective device disconnected the electricity before it is switched back on.
13. Ensuring RCDs are effective by regular testing.
14. Carrying out preventative maintenance on electrical equipment as appropriate. For example, an appropriate system of visual inspection and where necessary, testing.

Consider implementing the following procedures to ensure unsafe equipment is not used at a workplace:

1. Procedures requiring the physical condition of electrical equipment, including the lead and plug connections, to be checked prior to use and having appropriate procedures for taking the electrical equipment out of service if there is any doubt as to electrical safety, including during use.
2. Procedures for reporting faulty equipment.



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