



SAFETY



HSEQ library

TOOLBOX INFORMATION

ELECTRICAL HAZARDS

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HSEQ Direct is a digital communication, registration and training platform with a focus on Health, Safety, the Environment and Quality.

Designed specifically for the workplace!

Associated IOGP Life-Saving Rules



HSEQ DIRECT  safer healthier workplace



WHAT IS IT?

An electrical hazard is a dangerous condition where you can or do make electrical contact with energized equipment or a conductor. Working on live electrical systems and equipment is strictly prohibited.

You can only work on an electrical system if you are appointed in writing. Ask your company for further details relating to their particular policies. **Incidents involving electricity can have disastrous consequences.** You need to be aware of the risks posed by dangerous electrical situations because you can't see it, smell it or hear it. If you feel it, it may already be too late.



HAZARDS

- electrocution
- serious burns
- shock-induced falls
- fire
- explosion; ask your company about explosion risk zones
- damage to tools and materials



PREVENTION (1/3)

BEFORE YOU START WORK

- discuss the risks
- inspect your workplace
- know what to do in the event of an emergency; ask your company about this
- together with an authorized person, check that the equipment you are going to be working on has been made safe in the way your company has prescribed; ask your company for details relating to their particular policies.



PREVENTION (2/3)

BEFORE YOU START WORK

- electrically driven equipment must be electrically locked and secured if necessary; so be present when an authorized person takes measurements to check that the equipment you are going to be working on is electrically dead.



PREVENTION (3/3)

DURING WORK

- remember that circumstances can change, so reassess your work situation regularly in order to work safely
- report any changes in your work situation to your HSE Manager
- if anything is unclear, stop work immediately
- never improvise
- report any defects or damage immediately to your HSE Manager



PROTECTION (1/2)

Most electrical accidents result from one of the following three factors:

- **unsafe equipment or installation**
- **unsafe environment**
- **unsafe work practices**



PROTECTION (2/2)

Some ways to prevent these accidents are through the use of

- insulation
- guarding
- grounding
- electrical protective devices
- safe work practices

Always use the correct equipment and tools. Ask your company for clarification. It is important to always use the correct equipment and tools; and if necessary, take additional precautions. Ask your company about their specific requirements.



IN CASE OF...

SOMEONE RECEIVING AN ELECTRIC SHOCK:

- switch off the power
- ensure that you are not exposed to electricity when approaching or touching the affected person
- make the affected person safe
- immediately notify the person responsible for first aid in your company

IMPORTANT INFORMATION

- 1 Ensure electrical equipment is **switched off**.
- 2 Have an authorized person check that **the equipment is isolated**.
- 3 **Know what a safe workplace means;** only then can you start working.
- 4 Make sure temporary power sources **are known** and **have been checked** by a qualified electrician.
- 5 The power supply must be reconnected by an **authorized person**.

QUESTIONS? MORE INFORMATION? UNSAFE WORKING CONDITIONS?

Your HSE Manager is there to help answer any questions and ensure a safe working environment for all.

QUESTION 1

When are you permitted to work on an electrical installation?

- A. You are only permitted to work on an electrical installation if you receive formal written approval. Ask your company about this.
- B. You are only permitted to work on an electrical installation after you carried out a Last Minute Risk Analysis. Ask your company about this.
- C. You are only permitted to work on an electrical installation if you wear the correct Personal Protection Equipment and have an Electrical Isolation Certificate. Ask your company about this.

ANSWER 1

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QUESTION 2

Are you allowed to carry out electrical work if there is no Permit to Work?

.....

A. Yes, because the Site Manager ensures that all necessary safeguards are in place.

.....

B. No, unless you have carried out a Last Minute Risk Analysis.

.....

C. No, because a Permit to Work is required for all electrical work.

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QUESTION 3

What first aid do you offer in case of electrocution?

- A. You switch off the power and make the affected person safe. You ensure that you are not exposed to electricity. Then you immediately alert the medic or first aider and check the isolation measures.
- B. You switch off the power. You ensure that you are not exposed to electricity when approaching or touching the affected person. Then you make the affected person safe and immediately alert the medic or first aider.
- C. First you alert the medic or first aider. Then you switch off the power and you make the affected person safe. Subsequently you ensure that you are not exposed to electricity and check the isolation measures.

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B. You switch off the power. You ensure that you are not exposed to electricity when approaching or touching the affected person. Then you make the affected person safe and immediately alert the medic or first aider.

C. First you alert the medic or first aider. Then you switch off the power and you make the affected person safe. Subsequently you ensure that you are not exposed to electricity and check the isolation measures.

QUESTION 4

Which factors cause most electrical accidents?

.....

A. Unsafe work practices, unsafe equipment or installation, unsafe environment.

.....

B. Unsafe equipment or installation, unsafe weather conditions, unsafe isolation.

.....

C. Unsafe work practices, unsafe equipment or installation, unsafe weather conditions.

.....

ANSWER 4

Which factors cause most electrical accidents?

A. Unsafe work practices, unsafe equipment or installation, unsafe environment.

B. Unsafe equipment or installation, unsafe weather conditions, unsafe isolation.

C. Unsafe work practices, unsafe equipment or installation, unsafe weather conditions.

QUESTION 5

What extra precautionary measures do you take before you start working on an electrical installation?

- A. Use of the correct Personal Protection Equipment such as rubber gloves. Wearing of a watch to note the time in the event of an incident. Ask your company about this.
- B. Use of the correct Personal Protection Equipment such as arc-flash clothes. Use of rubber mats, insulated covers and hoods and insulated tools. Ask your company about this.
- C. Use of the correct Personal Protection such as a safety helmet. Restore earth connections that are temporarily disconnected. Ask your company about this.

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