

MBAA Safety Tool Box Talk



Electrical Safety

Overview

Working with electricity can be dangerous. Everyone from office workers to electricians to operators work directly or indirectly with electricity and may be exposed to electrical hazards.

What is Electricity?

Electricity is a type of energy. In a manufacturing setting, electricity is used to provide power to practically every piece of equipment in the facility including the following:

- Motors
- Welders
- Control devices
- Lights in the building

Electricity is the flow of energy from one place to another.

A flow of electrons (current) travels through a conductor.

Electricity travels in a closed circuit.

When an electric charge builds up in one place it is called static electricity.

Electricity that moves from one place to another is called current electricity.

Electrical Conductors

Conductors allow the flow of electric charge.

Examples of conductors are:

- Iron
- Steel
- Brass
- Gold

Electrical Insulators

Insulators do not normally allow the flow of electricity

Examples of insulators are:

- Rubber
- Glass

- Plastic
- Air

General safety precautions

In general, safety to personnel and safe operation of machines and tools should be of uppermost importance in all considerations of using electricity in the workplace. Electrical problems are among the most commonly cited OSHA violation. Below are some general electrical safety tips to help you work safely around electricity:

- Always stay away from exposed electrical parts unless you are a trained and qualified worker.
- Only use electrical equipment that is good working condition, e.g., not frayed or damaged. Report and/or repair all faulty or damaged equipment.
- Never overload an electrical outlet, power strip, or extension cord.
- Use waterproof cords outdoors and in areas with moisture.

Equipment

Due to the nature of manufacturing equipment, normal use of electrical equipment can cause wear and tear that could result in insulation breaks, short-circuits, and exposed wires. If there isn't a grounding line it can cause a ground-fault that sends current through the worker's body.

Extension Cords

Normal wear on cords can loosen or expose wires. Cords that are not 3 wired types are not designed for hard-usage.

Only use extension cords when necessary. Do not rely on extension cords for permanent use.

Do not modify cords or use them incorrectly.

Do not use cords that are kinked or missing parts.

Remove cords from receptacles by pulling on the plugs, not the cords. Never plug one cord into another.

Power Strips

When used effectively, power strips can help with day to day tasks by providing additional outlets. However, it is not advised to rely on power strips for permanent usage in manufacturing areas.

Do not daisy chain power strips (plug one into another).

Do not plug power strips into extension cords.

Ground Fault Circuit Interrupters

The GFCI is a fast acting device that senses a small current leakage to ground. Within 1/40 of a second it shuts off the electricity and "interrupts" the current flow.

It provides effective protection against shocks and electrocution.

LINKS

Please refer to the links below or ask the MBAA Brewery Safety Committee for additional information as needed.

- [OSHA electrical safety quick card](#)
- [Workplace safety train the trainer](#)
- [NFPA 70E work place standards](#)

FOR MORE INFORMATION ON
BREWERY SAFETY PROGRAMS,
PLEASE VISIT THE MBAA SAFETY
WEBSITE AT:

www.mbaa.com/brewresources