Euramax

WEEKLY SAFETY MEETING
All Euramax Subsidiaries

ELECTRICAL SAFETY

Safety Meeting Contents

- Meeting Notice
- Leaders Guide
- Employee Handout
- Employee Quiz
- Meeting Sign-In Sheet
- Employee Puzzle

PRIOR TO THE WEEKLY MEETING:

- Post the meeting notice by the timeclock
- Read through the Leaders Guide and Employee Handout to familiarize yourself with the topic for the week
- Make copies of the employee handout (one for each employee)
- Make copies of the employee quiz (one for each employee)
- Make copies of the weekly puzzle (one for each employee)

AT THE SAFETY MEETING:

- Pass around the meeting sign-in sheet – ensure all employees present at the meeting print and sign their names
- Pass out the employee hand-out
- Pass out the employee quiz
- Pass out the weekly puzzle
- Keep the meeting simple
- Encourage discussion and questions
WEEKLY SAFETY MEETING NOTICE

THIS WEEK, OUR SAFETY MEETING WILL COVER ELECTRICAL SAFETY

TIME: ____________________________________________

DATE: ____________________________________________

PLACE: ____________________________________________
ELECTRICAL SAFETY

Leaders Guide

EURAMAX PROCEDURE REFERENCE:
J-1.0: Electrical Safety

MEETING OBJECTIVE:
Electricity is responsible for over 300 on-the-job deaths and thousands of injuries annually. Electrical fires destroy businesses, homes, and people’s lives. Your employees need to develop a healthy respect for the hazards of electrical energy. The purpose of this meeting is to make your employees more aware of electrical hazards and teach them the precautions required to protect themselves and others.

MEETING PREPARATION:
Read the Euramax procedure, understand the contents, and ensure compliance.

Gather samples of portable electrical equipment used at your facility. You’ll need to bring them to the meeting to explain how to inspect electrical equipment.

Collect samples of grounding devices and PPE used to protect employees from electrical hazards. Be prepared to explain why these types of equipment are needed and when they should be used.

Review the employee handout to see if there are any other materials you wish to bring to the meeting.

Use a flip chart during the discussion to write key points and employee responses. This technique visually reinforces your instruction.

MATERIALS CHECKLIST:
- Samples of electrical equipment
- Samples of safety equipment
- Samples of required PPE
- Flip chart and marking pens

MEETING
INTRODUCTION
Many deaths – and many more injuries – are caused by electrical accidents. The threat of fire, electrocution, and burns is present wherever electrical hazards go unrecognized. Today, we are going to talk about how to recognize these hazards and how to take precautions to protect ourselves.
ELECTRICAL SAFETY

Leaders Guide

One of the greatest hazards of electricity is indifference on the part of workers. We are so used to having and using electrical power that we often take it for granted. We forget that electricity can kill, that it can cause devastating fires, and that it can cause painful burns. The dangers of electricity must be taken seriously, and this indispensable form of energy must be treated with respect.

Demonstrate the proper method for inspecting electrical equipment for defects. (Use one of the sample pieces of equipment that you brought to the meeting).

- Check wiring for signs of damage – cracks, abrasion, corrosion, etc.
- Check plugs for damage – weaken prongs, missing ground prong, pulled insulation, etc.
- Check for any other visible defects such as in switches and casing.

Question: What should you do if you determine that a piece of electrical equipment needs repair?

Answer: Stop using the equipment immediately.

Do not try to fix it yourself.

Prevent others from using it – lock and tag it out.

Report the problem to any supervisor or maintenance.

Question: What steps should you take to report an electrical problem?

Answer: Determine to the best of your ability exactly what is wrong.

Notify any supervisor immediately. Be prepared to describe the situation, giving the exact location and any other details that will help with corrective action.

Warn co-workers of the problem. Follow approved lockout / tagout procedures with electrical equipment.

Emphasize that electrical installation, repairs or modifications should be made only by qualified personnel.
ELECTRICAL SAFETY

Leaders Guide

**Question:** Regular inspections of our work areas can help us uncover electrical problems, too. What should you look for?

**Answer:**

- Check equipment for defects.
- Check ground connections to make sure they aren’t loose.
- Make sure wiring isn’t broken or loose.
- Make sure safety equipment isn’t damaged.
- Follow all warning signs.

**Question:** Using electrical equipment safely can also help prevent accidents and injuries. What steps can you take to ensure everyone’s safety?

**Answer:**

- Keep extension cords out of aisles and work area. Extension cords are for temporary use only. Place them so a tripping hazard isn’t created.
- Visually inspect electrical cords, plugs, and extension cords often.
- Disconnect plugs correctly.
- Watch for wet areas.
- Always wear the necessary safety gear.
- Never overload the capacity of the equipment.
- Ensure that grounding circuits are present and in good repair.
- Test tools regularly.

**Question:** Keep your eyes, ears, and noses open can help warn of hazards. What types of information might alert you to a problem?
ELECTRICAL SAFETY

Leaders Guide

**Answer:** Tingling sensations (extremely serious – disconnect power at once)
- Sparks and flashes
- Crackling noises
- Burning smells
- Blown fuses or tripped circuit breakers

**Discuss** grounding. Explain why workers should never let themselves be part of the circuit between one wire and another, or between one wire and a ground. Remind them that:

- Ground faults can occur anywhere that electrical equipment is in operation without protection.
- Ground-fault interrupters are one form of protection. They are designed to limit electric shock to a current and a length of time that will not produce serious injury.

**Demonstrate** the proper use of the grounding devices you brought to the meeting.

**Review** the various types of required PPE to be used by your employees when they are working with electricity:

- Rubber mats
- Electricians’ rubber gloves
- Electrical conductive or insulating safety shoes.
- Nonconductive hard hats
- Eye and face protection
- Flame-retardant clothing

**Show** the PPE samples that you have brought to the meeting.

**Question:** What are some potential electrical fire and electrical shock hazards at work?

**Answer:** High-voltage equipment
- Switches
- Static Electricity
- Fuses and circuit breakers
ELECTRICAL SAFETY

Leaders Guide

SUMMARY:
Electrical energy is a wonderful thing. We couldn’t do without it. But it can present a hazard if we fail to take the proper precautions. The steps we discussed today will help each one of you to protect yourselves and our business from electrical hazards.

EMPLOYEE HANDOUT:

A. Employee Handout
B. Electrical Safety Quiz
C. Electrical Safety Crossword

QUIZ ANSWERS:

1. a
2. d
3. d
4. a
5. c
6. c
7. d
8. d
9. b
10. a
11. c
12. a
13. a
14. d
15. c
16. b
ELECTRICAL SAFETY

PUZZLE ANSWERS:

- Rubber
- TYPE C
- BREAKER
- UXE
- SOUND
- T
- SHOCK
- CONDUCTIVE
- SPARKS
- C
- INSULATION
- P
- OUTLETS
- OVERLOAD
- F
- G
No-fault electrical equipment

With any electric appliance or tool, fixed or portable, there is no such thing as a minor shock. Dry skin conditions might allow you to get a shock that does not injure you. However, the next time you or someone else contacts the short, it could be fatal. Such incidents have killed many workers.

To understand how these accidents happen, let’s start with a few basic electrical terms. Voltage is pressure, the force that causes electrical current to flow. Household-level voltage of 110–120 volts is common in non-industrial workplaces. Current, or amperage, refers to the amount of electricity that is flowing. Resistance means the restrictions that slow or stop the flow.

You get an electrical shock when a part of your body completes a path, or circuit, between a conductor and another conductor or grounding source. An electrical ground is a connection between a circuit and the earth or some other major conducting body.

Voltage does not cause death or injury. Damage is done by the amount of current that flows through your body. However, as a general rule, the higher the voltage, the greater the amount of current. Some people survive shocks of several thousand volts, but others die from as low as 12 volts — car battery levels.

Moisture and electricity are a dangerous mix because water conducts electricity. If your body is sweaty, the dampness lowers its resistance. Electricity takes the path where there is the least resistance, so an electrical device can be grounded with a wire for electricity to flow to the ground. If your electrical tool develops a short circuit while your hands are dry and you are standing on a dry floor, the current will likely go down the ground wire instead of heading to your vital organs.

Never use a power tool that has become wet. If you use a portable electrically powered hand tool it must be an approved double-insulated type unless you are certain the non-current-carrying part of it is grounded. A pipe that does not go into the ground is useless for grounding. If your double-insulated tool needs repairs, the manufacturer must do them.

Check electrical cords regularly for fraying, cracking or exposure of wires. Make sure any electrical equipment you use is in top condition with no damage to plugs, insulation or connections. If you see any defects, take the item out of service and tag it to prevent another person from using it.

The damaged tool must be repaired correctly by an authorized person before returning to service or replaced with safe equipment. If you find a grounded plug that has the third prong broken off, don’t use the tool.

Don’t do electrical work you’re not qualified to do, even if someone requests it. Not only would you put yourself in danger, incorrect repairs could endanger someone else later.

Electric work isn’t any place to use ingenuity — makeshift repairs kill. Report any sign of electrical malfunction. Malfunctions can cause shocks and fires.
ELECTRICAL SAFETY
Employee Quiz

How much do you know about electrical safety? Select the best response to the following statements.

1. A live wire without insulation or guarding is:
   a. Exposed
   b. De-energized
   c. Open
   d. Close

2. A worker who knows how to avoid the hazards of working on or near an exposed electrical part is:
   a. Authorized worker
   b. Unqualified worker
   c. Affected worker
   d. Qualified worker

3. A flexible cord should be inspected for the following defects:
   a. Pinched outer jacket
   b. Missing or damaged outer jacket
   c. Damaged insulation
   d. All of the above

4. When using portable electric equipment, you should do all of the following except:
   a. Remove the ground pin on the plug so the plug matches the two prong receptacle
   b. Use adaptors which do not affect the equipment grounding connections
   c. Remove from service equipment which deformed plugs
   d. Use dry hands to plug and unplug equipment

5. One safe work practice while working around electrical equipment is:
   a. Wear jewelry
   b. Use conductive ladders
   c. Use insulated tools
   d. Wear keys or key chains on your clothing

6. Exposed de-energized parts are parts which have:
   a. Their energy state at zero
   b. No electrical power source attached
   c. Their conductors and parts of the electrical equipment de-energized and locked out
      and/or tagged out
   d. None of the above

7. To alert you of exposed energized parts, you might see the following:
   a. A sign warning of shock hazard
   b. A barricades surrounding the electrical hazard area
   c. An attendant to warn you of the hazard
   d. All of the above
WEEKLY SAFETY MEETING
All Euramax Subsidiaries

ELECTRICAL SAFETY
Employee Quiz

8. Flammable materials should be:
   a. Always be stored near electrical equipment that may cause a spark
   b. Not be stored near electrical equipment that may cause a spark
   c. Only stored near electrical equipment when precautions are taken to prevent the development of a hazardous condition
   d. Either b or c

9. Exposed energized parts:
   a. Are enclosed
   b. Are capable of being accidentally approached nearer than a safe distance
   c. Are usually insulated
   d. Are always guarded

10. Exposed parts are considered to be energized:
    a. If they are not locked/tagged out
    b. If they are insulated
    c. If they are locked/tagged out
    d. If you can't see that they are disconnected

11. A qualified person:
    a. Is automatically considered to be qualified to work on all electrical equipment
    b. Must be a licensed electrician
    c. Is familiar with the construction and operation of the equipment and the hazards involved
    d. All of the above

12. Lockout/tagout:
    a. Must be done by a qualified person
    b. Can be done by an unqualified person
    c. Must be done by a supervisor
    d. Can be done by anyone

13. Portable cord – and plug-connected equipment:
    a. Must be inspected before use on every shift
    b. Should be inspected each morning
    c. Must be inspected annually by a licensed electrician
    d. Only needs an inspection if you notice a problem

14. When electrical hazard warning signs are posted and a barricade limits entry into an area:
    a. You must use the buddy system to enter the area
    b. A written entry permit must be posed near the space
    c. Non-qualified persons need special permission before they work in the area
    d. The area contains exposed energized parts
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ELECTRICAL SAFETY
Employee Quiz

15. If you need to use a ladder while working near electrical parts:
   a. Use a conductive ladder
   b. Use a metal ladder
   c. Use a non-conductive ladder
   d. The ladder must be intentionally grounded.

16. If a circuit breaker trips and de-energized the machine you are using:
   a. You can just manually re-set the circuit breaker and continue to use the machine
   b. It must be determined that it would be safe to re-energize the circuit before the circuit breaker can be re-set
   c. You must immediately lock out the machine
   d. You must install a new circuit breaker
# Weekly Safety Meeting

**All Euramax Subsidiaries**

## Electrical Safety

**Meeting Sign In Sheet**

**Location**

**Meeting Date**

**Meeting Conducted By**

**Contents of Meeting:**

(Attach Handouts, etc.)

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ELECTRICAL SAFETY
Employee Puzzle

Electrical Hazards
Don’t be shocked if you quickly finish this crossword puzzle. It’s because of your training in electrical safety.

ACROSS
2 what some protective gloves are made of
4 fire extinguisher used for electrical fires (2 words)
7 this disconnects a circuit
11 electrical stream
12 overhead dangers (2 words)
14 luminous discharge between two electrodes
15 a surprise or an electrical hazard
16 able to transmit heat or electricity
18 electrical hazard
20 kitchen or bathroom outlet
21 protective material that prevents transmission of heat or electricity
23 sockets to plug into
24 too much electrical burden
25 electrical movement
6 a spanning cord
8 electricity will take the path of least _____
9 faulty electrical connection (2 words)
10 the electromotive force
13 electrical cable connection
17 stop the flow (2 words)
19 electricity is a _____ source
22 pointed part that goes into an outlet

DOWN
1 directing electricity to the earth in case of a fault
3 scorch