



## GOALS

This safety session teaches employees to:

- Identify extension cord hazards.
- Choose the right extension cord for the job.
- Use extension cords safely.

### Applicable Regulations: 29 CFR 1910.305



#### 1. Understand potential hazards of extension cords.

- Hazards associated with the use of extension cords, include:
  - Fire
  - Electrical shock
  - Electrical burns
  - Tripping
- Because extension cords are so commonly used in the workplace and at home, people often fail to appreciate the potential hazards associated with their use.

#### 2. Choose the right extension cord for the job.

- Only use extension cords with labels saying that they have been tested and approved by an independent laboratory (e.g., Underwriters' Laboratories (UL)).
- Extension cords are considered temporary wiring and are intended for only temporary use.
- The extension cord you choose will depend on whether you are using it indoors or outdoors and the length you need.
  - Don't use indoor cords outside.
  - Don't plug one cord into another to make it longer, which could start a fire; use a cord of the right length.
- Your choice of extension cord might also depend on conditions of use, such as whether it will be used in areas where there is moisture, heat, or chemicals.
  - If so, select cords specially constructed to resist these conditions.
- The gauge and length of an extension cord tell you the maximum wattage of equipment the cord can power.
  - Check the label on extension cords to determine length and gauge.
  - The smaller the gauge, the larger the wattage of the equipment that can be used with the cord (e.g., a cord labeled 12-gauge can be used with higher wattage equipment than a 16-gauge cord).
  - The longer the cord, the less current the cord can carry (e.g., a 20-foot extension cord can power higher wattage equipment than a 50-foot cord).
- The label on electrical equipment provides information about the wattage rating.
  - To determine the wattage rating, multiply amps by volts.
- If you use an extension cord with more than one piece of electrical equipment, you must choose a cord that is safe to use with the total combined wattage rating of all the equipment.



### 3. Use extension cords safely.

- Inspect extension cords carefully before each use to make sure the cord and plug are in good condition.
- Insert the plug fully into the outlet and uncoil the cord to reduce the risk of overheating.
- Plug extension cords into a ground-fault circuit interrupter (GFCI) when used in wet or damp areas.
- Make sure electrical equipment is turned off before you plug it into an extension cord.
- Don't run extension cords across aisles or through doorways where they may be damaged or create tripping hazards.
- Don't run extension cords under rugs, which could cause the cord to overheat and start a fire.
- Don't attach extension cords to floors or walls with nails or staples, which could damage insulation, expose wires, and cause an electrical shock and/or fire.
- Unplug extension cords when not in use.
- To prevent damage to outdoor cords, store them indoors when they are not being used.

### 4. Take appropriate steps to deal with damaged or defective extension cords.

- Normal wear and tear can damage extension cords and make them hazardous.
- Don't use cords that have damaged plugs or insulation, which increases the risk of electrical shocks and fires.
- Damaged cords should be replaced or repaired by a qualified person.
  - Don't try to patch or repair them yourself.
  - Put a tag on a damaged cord ("DO NOT USE") to prevent others from using it.



#### DISCUSSION POINTS:

Review your policy on the use of extension cords, emphasizing that extension cords are for temporary use only and should not be used as permanent wiring. Identify proper and improper uses for extension cords.



#### CONCLUSION:

- Use extension cords safely.
- Extension cords can be hazardous if not used properly. Make sure you always choose the right cord for the job and use it safely.



#### TEST YOUR KNOWLEDGE:

Have your employees take the Extension Cord Safety quiz. By testing their knowledge, you can judge their ability to work safely with extension cords and whether they need to review this important topic again soon.



## EXTENSION CORD SAFETY QUIZ

- 1. Which is a potential hazard of extension cords?**
  - a. Tripping
  - b. Fire
  - c. Both a and b
- 2. Extension cords are intended for permanent use.**
  - a. True
  - b. False
- 3. If an extension cord is too short for a job, it is safe to plug in up to four other extension cords to make the required length.**
  - a. True
  - b. False
- 4. If you use an underwriters' laboratories (UL)-approved indoor extension cord, it is safe to use it outdoors.**
  - a. True
  - b. False
- 5. If you are working in an area where there is moisture, heat, or chemicals, you can safely use a regular indoor extension cord as long as it is in good condition.**
  - a. True
  - b. False
- 6. The larger the gauge of an extension cord, the larger the wattage of the electrical equipment the cord can power.**
  - a. True
  - b. False
- 7. The longer the extension cord:**
  - a. The more current it can carry safely.
  - b. The less current it can carry safely.
  - c. Length has no effect on amount of current the cord can safely carry.
- 8. Inspect extension cords once a month.**
  - a. True
  - b. False
- 9. When used in wet or damp conditions, extension cords should be plugged into a two-prong adapter.**
  - a. True
  - b. False
- 10. What should you do if the insulation on a cord is cut and the wire is exposed?**
  - a. Put tape on it.
  - b. Use it as is unless it shocks or sparks.
  - c. Don't use it.

When you have completed this quiz, turn it in to your supervisor.

Name: \_\_\_\_\_

Date: \_\_\_\_\_



## ANSWERS TO EXTENSION CORD SAFETY QUIZ

1. c. Both of these are potential hazards of extension cords, along with electrical shocks and burns.
2. b. False. Extension cords are intended only for temporary use and should not be used in place of permanent wiring.
3. b. False. Do not plug one extension cord into another. This is unsafe and could start a fire.
4. b. False. While you should always use extension cords approved by an independent testing laboratory, outside you should use only cords approved for outdoor use.
5. b. False. You need cords specifically constructed and approved for use in these conditions.
6. b. False. It's the other way around. The smaller the gauge, the larger the wattage of the electrical equipment the cord can power. Check cord label to determine gauge.
7. b. The longer the cord, the less current it can safely carry, which means the lower the wattage rating of the equipment it can safely be used with.
8. b. False. Cords should be inspected before each use to make sure the plug and insulation are in good condition. Do not use a damaged cord.
9. b. False. Use only an approved extension cord for wet or damp conditions, and plug the cord into a ground-fault circuit interrupter (GFCI).
10. c. Don't use it. Tag it "DO NOT USE" and replace it. Don't try to patch or repair damaged extension cords yourself. If the cord is to be repaired, a qualified person must repair it.