Best Practices

**Extension Cords and Equipment Power Cords**

Extension Cords in the workplace are only allowable as temporary wiring for up to 90-days. “Temporary” is defined as a one-time job or transient condition. Install permanent wiring for long-term or repetitive needs.

**Usage:**

*Never mix, interconnect or “Daisy Chain” Extension Cords, Power Strips or Surge Protectors together!*

- Do not plug one extension cord into another, or use detachable multi-tap adapters on cords or receptacles.
- Use a GFCI protected Receptacle and/or Circuit when using extension cords in damp environments.
- Insure the extension cord plug is fully inserted in the outlet; replace the outlet if a plug is too loose inside.
- If the cord’s grounding pin and/or plug blades do not fit into an older outlet, replace the receptacle.
- Avoid tight coiling or winding excess cord length when in use, as it can overheat the cord.
- Always unplug cords when not in use. The cord will still conduct electricity until it is unplugged from the outlet.
- Cords must be clean with no exposed live parts or bare conductors, splices, frays, cuts, substantial abrasion, or other damage. Cords must never be repaired with electrical tape. Never use if the third prong is missing.
- Continually audit all cords; all damaged or modified cords must be taken out of service immediately.

**Location:**

- Extension Cords cannot be attached to building surfaces or structural members, nor concealed in walls, ceilings, or under floors. Cords may not be run through doors, ceilings, windows, or holes in walls.
- Do not tie cords to over-head pipes or run through moisture, under carpets, or across high foot traffic areas.
- If it is absolutely necessary to temporarily run a cord through a doorway or open window, the cord must be protected from damage should the door or window slam shut; remove immediately when no longer in use.
- If it is absolutely necessary to temporarily run a cord through a high traffic area, secure to the floor with tape or use cord molding. Position cones or other attention-getting warnings to alert passersby to trip hazards.
- Store all cords inside when not in use; sunlight and temperature can deteriorate even “Outdoor” rated cords.

**Specifications:**

- All Cords must be UL approved; never remove the UL or Manufacturer’s Power Rating labels from the cord.
- For 120v single-phase service, only use unmodified, commercially manufactured extension cords equipped with molded three-wire plugs and receptacles, applicable to the usage environment (indoors or outdoors).
- Consult the label, tag or manufacturer to determine how much electricity is required to run different devices. If the device is rated in watts, divide wattage by 110 to convert to amps, 1625 watts div by 110 = 14.8 amps.
- A cord’s wire thickness (Gauge) directly affects the amount of current it can carry over a certain distance. As cord length increases, carrying capacity decreases e.g., a 16 gauge 25 foot length cord can power a 10 amp (1100 watt) device, but a 16 gauge 50 foot length cord can only power up to a 7 amp (770 watt) device.

<table>
<thead>
<tr>
<th>Cord Length</th>
<th>Load Ampere (Current) Rating</th>
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<tbody>
<tr>
<td></td>
<td>1-4</td>
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<tr>
<td>25 ft</td>
<td>16 ga</td>
</tr>
<tr>
<td>50 ft</td>
<td>16 ga</td>
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<tr>
<td>100 ft</td>
<td>16 ga</td>
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- Extension Cords for three-phase service, e.g., 208v or 480v, may be shop-made. Only qualified electricians should fabricate or repair shop-made cords using only NRTL approved components, including installation of cord connectors or plugs. After fabrication or repair, shop-made cords must be tested by an electrician for proper wiring and grounding; include a tamper-resistant safety-inspection seal on the plug and receptacle.

**Equipment Power Cords**

- Power cords on equipment that is heavily used and/or moved frequently (Shop Vac, Floor Scrubber, Power Tools, Battery Chargers) often sustain damage to Plugs (missing ground prong, wire covering pulled-back to expose inner wires), as well as frayed or damaged Cords. Follow the Extension Cord Usage and Location practices noted above; all damaged Equipment Power Cords must be taken out of service immediately.

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