MISSISSIPPI STATE UNIVERSITY EXTENSION

MSU DAWG TRACKS

An item commonly found during the safety inspections is the misuse of extension cords. While they are an easy solution for power when a wall outlet is just too far away, they should be used with certain precautions. Extension cords are a leading cause of electrical fires.

The most frequent causes of these fires are short circuits in the cord, overloading, damage, or misuse. Here are some common questions that arise and answers for those that wonder, "What's wrong with this extension cord?"

Since extension cords are only supposed to be used for temporary power, what's the difference in that and permanent power?

Temporary means for 90 days or less. Overtime, with continuous use, extension cords can deteriorate resulting in localized resistance heating = fire potential. So unplug them when not in use.

For an alternative, when longer term is needed, use a power strip. Power strips with circuit breakers or breaker power switches have built in over-current protection. Power strips may be used for long term installation.

What's the matter with how this extension cord is run?

Don't run cords under carpets or rugs, through windows, wrapped around other objects, or in any position where they can be pinched or damaged. Damaged insulation can cause shorts or ground faults resulting in a source of ignition.

Also take care to not run extension cords across doorways and other pathways to prevent tripping hazards.

Since extension cords come in different gauges, how do I know which to choose?

Each extension cord has a maximum amperage - the limit on the current it can conduct safely. If an extension cord doesn't include a maximum amperage rating, you can figure out its capacity by looking at its American Wire Gauge (AWG) rating. A lower AWG number indicates a thicker wire and a higher capacity, so the lower the number, the higher the cord's capacity to deliver power.

Remember that the longer the cord length is the more current it pulls, meaning the cord size should increase too.

Avoid using extension cords for any high draw devices, such as refrigerators, toaster ovens, microwaves, air conditioners, etc. Overloading of extension cords causes an increase in the wires' temperature which can lead to melting, decomposition, or burn.

What's the difference in an indoor and outdoor extension cord?

Outdoor extension cords can be used inside or outside, but indoor extension cords must only be used inside.

Outdoor extension cords are made with a special type of protective insulation to prevent moisture from getting in and to add protection against temperature changes, sunlight exposure, oil & some chemicals which can all cause damage to the insulation.

Outdoor cords also have larger gauge options for their safe use with powering heavier tools/machinery and compensating for their longer lengths than indoor cords.

For more info contact:
Leslie Woolington
MAFES/MSU-Extension
Risk Mgmt./Loss Control
662.325.3204

Sources:

IFC 605.5
www.theelectricconnection.com