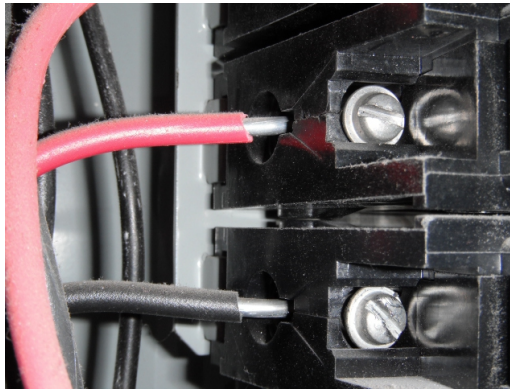


What's Wrong with Aluminum Wiring?

If your home was built between the mid 1960's and mid-1970's, there's a chance that you have aluminum wire in your home instead of copper.

Aluminum wire was previously approved in the National Electrical Code (NEC) and Underwriters Laboratories (UL) for some purposes, **but it is now required in Texas that homes have copper wiring in its branch circuits.** (Remember that "branch circuits" are the wires that are inside the walls of your home.) While aluminum wiring isn't necessarily *directly* dangerous, it can pose a number of safety issues that most homeowners may not be aware of.

The (Very) Short Story



The AA-1350 series aluminum alloy used in the 60's and 70's was originally designed for power transmission, and not for branch circuitry. A straight run of this type of wire from a power pole to your home did not pose a safety hazard, as the wire is a much larger gauge. However, when homes were wired with aluminum, every connection made to a junction box, outlet, and switch posed a potential risk.

So why did some contractors continue to use aluminum? To be blunt, it was cheaper than copper, which is still the case to this day.

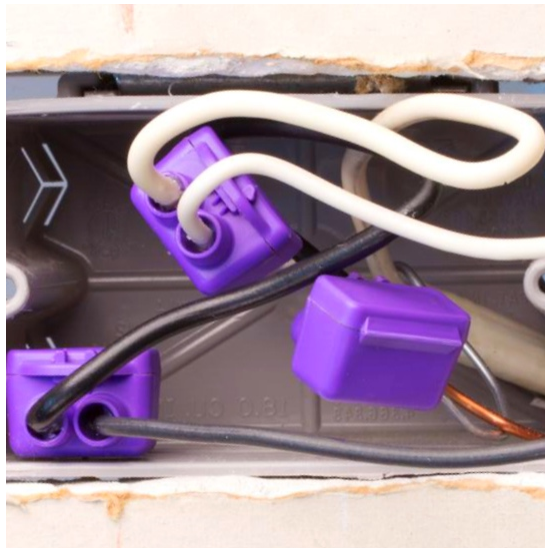
How Does Corrosion Happen?



Aluminum wire has a 30% higher expansion/contraction rate than copper (expansion, meaning it moves more in extreme temperatures), creating loose connections over time. This can lead to arcing and short circuits, and eventually can cause fires.

When exposed to humidity, aluminum oxide forms on the metallic surface and acts like an insulator (it looks like rust, except it's white). It is also more prone to actual rust and corrosion, as shown in the picture above. As the oxidation continues to build, resistance increases and heat builds, which can melt the insulation.

What You Can Do About Aluminum Wire



Many electricians use COP-ALUM connectors as a way to “make safe” aluminum connections to home devices. Newer devices and fixtures have copper connections, so the COP-ALUM fixtures “safely” connect the two. By the way, that word “*safely*” is in quotes for a reason.

So what will we, as Jackson Electric, do about it?

We will rewire your home and replace all of the aluminum with copper. It is the most surefire, guaranteed way to prevent this type of overheating and fire risk. Our company does not use COP-ALUM connectors; in fact, we do not do repair work in homes wired with aluminum at all. In our company's opinion and experience, they are merely a stop-gap for a larger problem. COP-ALUM might be more cost-effective up-front, but it is a short-term answer to a long-term problem.

Jackson Electric provides a variety of services for your electrical needs. However, due to liability reasons, it is our company policy to not repair lighting, devices, or circuits that have aluminum wire. We also do not install COP-ALUM fixtures. Again, these issues are costly and dangerous to repair, and require much higher levels of maintenance.

If you have an older home, consider getting an inspection of your wiring to ensure it is not faulty.