

Copper Electrical Wiring Keeps Building Occupants Safer

Electricians Trust Copper to Protect Against Power Outages, Personal Injuries and Fires

Almost no modern building material is more time-tested than copper electrical wiring. From generators and motors to electric lights, copper is recognized as the industry standard and is the only wiring material to be approved by all electrical codes nationwide. It's resilient, reliable, and most importantly, safe.

With National Electrical Safety Month in May, reviewing your electrical system is as important as understanding the safety benefits of copper wiring. Copper electrical wiring is used commercially and residentially because it's easy to work with and can be easily, securely and safely connected to outlets and other electrical equipment. It requires less maintenance and its connections are much less likely to loosen and corrode over time. It's these advantages, not to mention copper's superior conductivity, that make this metal the preferred choice among professional contractors working on building wire systems.

"Electrical wiring is everywhere, nestled just behind every wall of your home or office. It's just not worth the risk to rely on non-copper wiring materials that can corrode or give under pressure," said David Brender, program manager for the Copper Development Association, CDA. "It's hard to find a material better suited than copper to prevent electrical fires and keep building occupants safe."

Copper wiring is known for withstanding an overload better than other materials because of its significantly higher melting point (1,984 degrees Fahrenheit, compared with aluminum's melting point of 1,221 degrees Fahrenheit). Additionally, repeated cycling is less likely to loosen a copper joint.

Corrosion is another major risk of using other metals and alloys in wiring. Commonly called a "noble metal," copper is not susceptible to galvanic corrosion when connected to non-copper metals. It effectively resists moisture- and humidity-driven corrosion that can destroy other wiring systems, reducing the risk of power outages, system failures and fires. Copper wiring typically does not require the use of conductive greases at its connections, and torque is not critical. It does not loosen over time; connections remain tight.

Because copper is regarded as a timeless building material, it's well-known. Electrical contractors and electricians alike require little special training, reducing the risk of a dangerous mishap. For that same reason, copper wiring is very common, meaning electricians making repairs rarely encounter compatibility issues.

The unique combination of strength and ductility allows copper electrical wiring to be bent further, twisted tighter and pulled harder, all without stretching, creeping, nicking or breaking. Such exceptional strength ensures that copper is the safest and most preferred wiring material available to electricians.

To learn more about the safety benefits of copper electrical wiring, visit www.copper.org.