



Safety

Dangerous Disguises: From Robotic Parts to PPE, Counterfeits Threaten Workplace Safety

James Langford | Feb 02, 2023

Not getting what you paid for is only part of the problem with counterfeit industrial supplies—and not even the largest part, despite a price tag in the billions.

The bigger threat posed by fakes, from electronic components to personal protective equipment, is that they don't meet the safety standards of the genuine articles they're cleverly made to mimic.

The result is gloves, gowns and respirators that won't protect wearers from workplace toxins and electronic components that may break down unexpectedly or fail to contain the potentially hazardous levels of energy that their authentic counterparts manage safely.

"Consider an electric motor as an example," Nigel Smith, head of TM Robotics, writes in a *post for Automation.com*, a subsidiary of the International Society of Automation. "An overheated or faulty motor could result in hours of unplanned downtime for the rest of the production line. If the breakdown is hazardous, which many counterfeit breakdowns are, this could also cause damage to peripheral equipment and risk injury to staff."

Similar risks exist with knockoffs of consumer products from medicine to children's toys, costing as much as \$250 billion a year. Heady growth in online sales has only compounded the problem, making purchases quicker and easier while rendering scams harder to spot.

A *U.S. Chamber of Commerce survey* three years ago found 73 percent of companies had set aside more money to combat counterfeits and blamed online sales for much of the increase in such scams.

In response, both the U.S. government and private industry have started sweeping initiatives to fight back against counterfeits.

Such goods "can pose significant risks to the health and safety of consumers and workers around the world," U.S. Trade Representative Katherine Tai said when her office published the *most recent government report* on markets notorious for counterfeiting and piracy.

Spotting Counterfeit PPE

As concerns surged over the past three years, particularly with regard to respirators, government agencies and PPE makers alike warned buyers to beware of counterfeits and published tips on how to spot fakes.

“Counterfeit PPE is a growing issue within the safety industry,” the British height-safety and fall-protection company **Safesite** says. “In recent years, there has been an influx of items which do not meet standards, with everything from poor quality gloves to high-vis vests being sold as the real deal.”

While the phony logos and certifications are often convincing enough to fool buyers, especially those without training in spotting counterfeits, the quality of the goods themselves is typically poor.

“Workers should be able to enter their workplace every day and feel confident the equipment they are using is of a high, safe standard,” Safesite says. “Fake and counterfeit items increase the risk of injury or worse and put those workers at risk.”

Protective gear manufacturer 3M has taken steps to address that risk that include a **comprehensive online guide** to spotting fake respirators.

The St. Paul, Minnesota-based company also uses its trademarked **Safe Guard system** to validate the authenticity of products from respirators to reflective tape, head protection and privacy screens.

The National Institute for Occupational Safety and Health, meanwhile, **trademarked** its logo to counter a surge in respirators made to look as if they had won the agency’s approval and posted a **list of models** that had passed scrutiny.

In addition to specialized verification systems, there are a variety of warnings signs that can tip procurement offices to counterfeiting scams, according to the risk management firm **Pinkerton**. Those indicators include:

- Unusual sale terms: any conditions outside of the norm, including demands for large sums of cash in advance
- Pricing changes, especially at the last minute
- Unexpected or unusual delays
- Lack of verifiable references

High-Risk Electrical Products

Along with phony, poor-quality PPE, knockoff industrial equipment including electrical products is a particular concern for manufacturing plants and industrial machining and metalworking businesses.

“Counterfeit electrical products can pose tremendous safety threats to work environments,” a risk heightened by the fact that many of them—such as surge protectors and circuit breakers—are intended to be protective devices, manufacturer Eaton Corp. warns in **Safety + Health magazine**.

“Using these counterfeit electrical products can result in malfunctions causing overheating or short-circuits—leading to fires, shocks or explosions that can cost workers their lives and produce considerable property damage,” Eaton says. The company offers the following tips to prospective buyers:

- Buy products from the manufacturer’s authorized distributors or resellers.
- Scrutinize labels. Watch out for signs of tampering, low-quality labels and non-genuine packaging.
- Be wary of bargains. Compare prices to similar products at a different retailer; when a deal seems

too good to be true, it usually is.

- Check authentication. When possible, use tools offered by the product manufacturer or certification group to verify that it's genuine.

"Investigating the origin of the equipment," says TM Robotics' Smith, "will reduce the chance of purchasing counterfeits and in turn, protect the production line. Without this consideration, manufacturers risk getting stung."

What steps does your company take to avoid scammers pushing counterfeit PPE or manufacturing supplies? Tell us in the comments below.

www.mscdirect.com/betterMRO

Copyright ©2025 MSC Industrial Supply Co.