

## Creating a Cut-Free Workplace

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Well-fitted and comfortable gloves can reduce on-the-job hand injuries.

In 2001, the Bureau of Labor Statistics reported that more than 30 percent of all injuries and occupational illnesses in the fabricated structural metal product industry were hand-related. We know that plenty of effort has been applied to the problem, including:

- Industry partnerships with OSHA
- All-time-high levels of training being reported
- Regulatory focus on improving worker safety in the industry
- Stricter contractual requirements by owners and construction managers

But we are still a long way from zero. With this stark reminder, it's obvious that we should continue to place importance on the correct Personal Protective Equipment (PPE) in environments where shearing, slicing, cutting, and handling sharp or jagged objects is part of the job description. It is also incumbent on glove manufacturers to continue innovations that will improve both the protective qualities and the comfort of cut-resistant gloves.

To achieve a cut-free workplace, three components must be in place: willing and educated workers, a supportive employer, and a quality glove.

### AN IDEAL GLOVE

Thanks to innovations in cut-resistant fibers and knitting equipment, a cut-resistant glove is available for almost any application. Most gloves used in the fabricated structural steel industry are designed to prevent injuries from ordinary physical hazards, including cuts and lacerations, abrasions, puncture wounds, burns from heat or cold, snags and pinches. Gloves meant to protect hands from sharp edges should meet ASTM F1790-97, Standard Test Method for Measuring Cut Resistance of Materials Used in Protective Clothing.

With the ideal glove, injuries are largely preventable. New advances in polymer and fiber technology have



created a new category of cut-resistant fibers. Gloves manufactured from these advanced fibers provide superior protection from cuts and lacerations, compared to cotton, leather or standard synthetic yarn gloves. Additional protection can be provided through coatings applied to the glove.

One particular type of coating method is known as flat dip. Flat-dip technology is the precise palm coating of a polymer onto an advanced knitted cotton or synthetic shell. As the name implies, flat dip is the application of polymer coating from the palm to the sides of the fingertips. Where it differs from other coated gloves is in the shell itself and the precision with which the coating is applied. The shell is characterized by its knitting, which produces an extremely lightweight and durable glove with a greater concentration of woven fabric per surface area. It conforms to the hand and resists degradation through stretching.

Recent innovations have contributed significantly to increased comfort found in hand protection. Seamless liners in the coated glove lines provide a glove that can achieve a second-skin-like fit. Lighter weight coatings of advanced polymers can improve comfort and manual dexterity. Advanced fibers can dramatically increase cut resistance without adding bulk.

### A CUT-FREE ALLIANCE

Choosing the correct PPE can be a challenging task, especially for businesses that lack on-site safety professionals. Training and selection is crucial to a company's success in cut-free safety. Workers and employers have a joint responsibility to educate and learn the importance of proper hand protection. If an untrained worker is wearing the incorrect type of glove, it can result in inadequate protection or even contribute to an injury.

Wearing an ill-fitting or uncomfortable glove makes tasks more hazardous since the worker might lack the dexterity or tactile response needed to operate a piece of equipment safely. Workers might remove unwieldy gloves to complete a task without interference, and injure themselves as a result.

One way employers can help solve this problem is by creating a safety committee made up of management and shop employees. Gloves should be performance-tested for different types of operations and equipment, and evaluated for comfort. An experienced purchasing manager can work with the committee to find competitive products that meet these requirements. The committee can then choose a standard glove for each unique shop operation, and provide training for correct glove use.

With the tremendous costs associated with injuries, it is important to ensure that workers and managers cooperate to choose PPE that does the job comfortably within protection, production and budget requirements. Evaluating several models for workplace performance and employee comfort gives companies a chance to choose from a variety of gloves—and soon find the best fit.

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