Metalworking

A Guide to Handling Sheet Metal Safely

Matt Morgan | Apr 17, 2025

More than *120,000 Americans* work with sheet metal every day; the thin, versatile material is used in thousands of products and a staple of many manufacturing facilities. Its usefulness comes with risks, however.

The biggest risk to workers when handling sheet metal is lacerations to the hands and arms from exposed edges, which are "obviously razor sharp," says Jason Kokoszka, associate director of marketing for the mechanical portfolio at ***Ansell***.

A related concern is grip, as metal sheets often have a thin layer of lubricant on them to prevent pieces from sticking together and from rusting. "If you have a loose grip, then that presents an opportunity for whatever they're handling to create a slashing motion in their hand," says Chris Smith, vice president of marketing and product development for ***MCR Safety***.

Sheet metal cutting and forming also increase the potential for eye injuries as metal shavings fly in the air. "It could be a scratching of the cornea. It could be getting something embedded in your eye that would require an eye doctor to take care of," Smith says.

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> Chris Smith
> MCR Safety

Other hazards come from operating heavy machinery to transport sheet metal rolls or heavy sheets, and slips and trips from an untidy work area while moving unwieldy sheets. "Being acutely aware of your surroundings is vitally important," Kokoszka says.

Smith adds, "You always want to be cognizant of your environment and where you're working, and making sure that your hands are coming in contact with static materials—meaning materials that are not moving."

Hand Protection Regulations

The Occupational Safety and Health Administration's requirements for hand protection (***29 CFR 1910.138***) state that employers must select appropriate hand protection for employees who are exposed to hazards, and require them to use PPE.

ANSI/ISEA 105-2024, a standard by the American National Standards Institute and the International Safety Equipment Association, sets the testing and classification parameters for hand protection. Following this voluntary standard helps ensure that employers are compliant with OSHA's hand protection requirements.

Cut-resistant gloves and ***sleeves*** provide hand and arm protection while allowing enough dexterity for the worker to do the job.

Read more: Is Higher Cut Protection Always Better?

Cut-protection ratings are on a scale from A1 to A9 based on the glove's ability to resist cuts. A1 gloves can resist a cutting load of 200 to 499 grams, and A9 gloves can resist more than 6,000 grams. A4 gloves (1,500 to 2,199 grams) are useful for sheet metal cutting, according to MCR Safety, though your workers may need a different level of protection.

Understanding Eyewear Regulations

OSHA's standard for eye and face protection (***29 CFR 1910.133***) says that employers must "ensure that each affected employee uses appropriate eye or face protection when exposed to eye or face hazards from flying particles."

When there is a hazard from flying objects, eyewear with side protection is required, the standard says.

"In the case of sheet metal and potential metal shavings, you want to prevent that from entering the eye. To do that, you need to create a barrier between the frame of the safety glass and your eye area," Smith says.

"Over the last 10 or 15 years," he adds, "we've seen safety glasses have some type of sealing property, whether it be an open-cell foam seal, a closed-cell foam seal or a TPR [thermal plastic rubber] seal."

Per OSHA, protective eyewear must meet the specifications in ***ANSI/ISEA Z87.1-2020***.

PPE Solutions for Sheet Metal Work

OSHA's requirements for hand protection say that appropriate PPE selection should be relative to the task performed. As with most PPE, deciding which products to use is application-specific. The cut protection a worker needs for handling sheet metal will vary based on the gauge of the metal and whether it's being bent manually or by machine, for instance.

Read more: Which Gloves to Wear When Working with Certain Metals

Where grip is concerned, "latex—a lot of times we refer to it as a crinkle-finish latex—is a great polymer to put on cut-protection gloves if you're dealing with dry materials," Smith says. For handling oil-coated sheet metal, he adds, "you can look at polyurethane or foam nitrile options."

When selecting protective eyewear for the workplace, employers should look for the "Z87" marking on the product, indicating that it meets all of the requirements of the standard. ***Other approved markings*** indicate prescription, coverage, shade number for welding filter, dust use, anti-fog, and scale numbers

for UV, infrared and visible light filters.

Picking the Right PPE for Metal Fabrication

Given the vast number of options of PPE, how do you know what safety features your workers need when they're handling sheet metal?

"The best way to do that is through a ***worksite assessment***," Kokoszka says.

Many industry suppliers and distributors have trained safety consultants who can visit a facility, assess the hazards and recommend products to protect against those hazards. PPE manufacturers ***Ansell*** and ***MCR Safety*** each have their own assessment programs, as does ***MSC Industrial Supply***, whose experts have deep knowledge about industrial safety, plus insights into the suppliers that can help solve a facility's unique needs.

A site visit may reveal that workers are using gloves that aren't suited for handling sheet metal, for example. "They might like a glove because it's orange, but it's only a cut level A2. What they need is an A9 glove, which for us is black," Kokoszka says.

"We make recommendations based on applications," he adds, "and those go back to the corporate safety manager to reduce incidents, making sure that they're aligned with the proper PPE."

What precautions do you take when handling sheet metal? Let us know in the comments below.

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