Complete Head Protection Solutions

When it comes to industrial hard hats, one size does NOT fit all. Learn how to choose the right headgear for the right application.

COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 EXECUTIVE SUMMARY

PAGES 3-4

HOW TO CHOOSE AN INDUSTRIAL HELMET

PAGES 5-6

WORKING AT HEIGHTS: HOW TO CHOOSE THE RIGHT HEADGEAR

> PAGES 7-8 WORK-AT-HEIGHT SAFETY HELMETS

PAGES 9-10

SURVEY EXAMINES ADVANTAGES OF INTEGRATED EYE, HEAD AND FACE PROTECTION

PAGES 11-12

SIGNS YOU MAY NEED A NEW HARD HAT

PAGES 13-15

CONSTRUCTION SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?

EXECUTIVE SUMMARY

HEAD PROTECTION

very year OSHA publishes a list of the top 10 violations, and it's more than a little alarming to see how often failure to adequately protect employees working at heights appears on the list: fall protection appears twice (general requirements, and training requirements), as well as scaffolding, ladders, and personal protection equipment (PPE) violations. In fact, fall-related injuries and fatalities number in the hundreds of thousands every year, so this situation remains a serious issue for safety managers and their workers.

It seems obvious that companies need to get more proactive in their insistence that their workers wear protective helmets, but in fact, it's not a simplistic answer. There are numerous choices of helmets and headwear for various industries—construction, oil & gas, utilities, and general industry—and one size most definitely does NOT fit all. This eBook will help you determine how to choose the right headgear for the right application. We'll take a look at the various standards for hard hats, how to properly care for and use these hats, and help you determine when a hat has reached its "expiration date."

While protecting the brain is of primary concern, industrial headwear is also designed to work in conjunction with other PPE to protect the eyes, face and ears, and we'll examine how an integrated approach to protecting the entire head helps provide even more protection for workers. The helmet should function not just as a hard hat but as an entire protective system.

In the following pages, you'll also learn the key considerations in choosing the proper helmets, which begin with a thorough assessment of potential hazards, determining the applicable standards and requirements of the headwear, and evaluation of other factors that can impact wearer compliance. The more comfortable the fit and the more appropriate the protection provided, the better chances that all workers will wear their helmets, and go home safely at the end of the day.



COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 EXECUTIVE SUMMARY

PAGES 3-4

HOW TO CHOOSE AN INDUSTRIAL HELMET

PAGES 5-6

WORKING AT HEIGHTS: HOW TO CHOOSE THE RIGHT HEADGEAR

> PAGES 7-8 WORK-AT-HEIGHT SAFETY HELMETS

PAGES 9-10

SURVEY EXAMINES ADVANTAGES OF INTEGRATED EYE, HEAD AND FACE PROTECTION

PAGES 11-12

SIGNS YOU MAY NEED A NEW HARD HAT

PAGES 13-15

CONSTRUCTION SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?



HOW TO CHOOSE AN INDUSTRIAL HELMET

A special report for industrial safety directors and PPE distributors.



hen it comes to choosing head protection, there's not a "one-size-fits-all" solution. This article is designed to provide industrial safety directors, users, and personal protective equipment (PPE) distributors with information about the different types and classifications of industrial head protection.

FIRST THINGS FIRST

Hundreds of thousands of on-the-job accidents are reported each year. According to the National Institute for Occupational Safety and Health (NIOSH), the most common cause of non-fatal, on-the-job injuries is contact with objects or equipment. As a result, a spotlight has been placed on advancements in industrial helmet head protection.

THE HYPE ABOUT TYPE

According to OSHA standard 1926.100, "employees working in areas where there is a possible danger of head injury from impact, or from falling or flying objects, or from electrical shock and burns, shall be protected by protective helmets." While this OSHA standard does not establish specific criteria for protective helmets, it does require that protective helmets comply with the consensus standards issued by the American National Standards Institute (ANSI) for Industrial Head Protection (Z89.1-2014). Other regions of the world have their own standard requirements for example EN 12492 & EN 397 have certain design requirements that differ between the two. Climbing helmets that meet both ANSI/CSA as well as EN 12492 and/or EN 397

perform adequately as industrial helmets.

- 1. EN 12494 is the European standard for mountaineering helmets and includes protection against impacts.
- 2. EN 397 is a European standard for industrial helmets

There are only two recognized classifications of protective helmets that meet ANSI requirements:

- 1. Type I—Type I helmets are intended to reduce the force of impact resulting from a blow to the top of the head.
- 2. Type II—Type II helmets are intended to reduce the force of impact resulting from a blow to both the top and sides of the head.

Type I and Type II have different impact locations, are tested to different impact energies, have different criteria for helmet failure and may be available in multiple styles like cap or hat. Each type of helmet is different and may be available in different styles, such as cap, full brim hat, or climbing.

In general, ANSI requires that industrial protective helmets:



Absorb the energy from impact to the head





Act as an insulator against electric shock

Be water-resistant and slow burning



Shield scalp, face, neck, and shoulders

COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 **EXECUTIVE SUMMARY**

PAGES 3-4 **HOW TO CHOOSE AN**

INDUSTRIAL HELMET

PAGES 5-6

WORKING AT HEIGHTS: **HOW TO CHOOSE THE RIGHT HEADGEAR**

> PAGES 7-8 WORK-AT-HEIGHT **SAFETY HELMETS**

PAGES 9-10

SURVEY EXAMINES ADVANTAGES OF INTEGRATED EYE, **HEAD AND FACE** PROTECTION

PAGES 11-12

SIGNS YOU MAY NEED **A NEW HARD HAT**

PAGES 13-15

CONSTRUCTION **SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?**



Force and acceleration are only part of the equation in determining the likelihood of preventing injury. The other part? Duration of impact.

LET'S TALK VARIABLES

The reality of industrial head protection is that there are many variables within the workplace setting to limit head protection to one single offering for all hazards, all tasks, and all workers. Take the time to answer these fundamental questions as a first step in determining which industrial helmet is best for the worker and for the job:

ASSESS THE HAZARDS AND **UNDERSTAND THE** APPLICATION.



DETERMINE IF THE HELMET MEETS THE REQUIREMENTS **OF THE RIGHT INDUSTRIAL SAFETY** STANDARD.



DECIDE IF ACCESSORIES ARE NEEDED.



ASSESS OTHER FACTORS THAT COULD **IMPACT WEARER** COMPLIANCE.

- CSA: A global provider of testing, inspection, and certification services, and a leader in safety and environmental certification for Canada.
- EN: European standards are voluntary standards that "ensure compatibility and interoperability of components, products, and services across the whole of the european single market."
- Ancillary Standards: Determine if there are other reference standards that could be met, such as climbing helmet standard EN 12492, in addition to (not instead of) the industrial safety standard.

(3) Decide if accessories are needed.

- Face: Protect from impact, glare, uv, and other hazards, such as radiant heat, arc flash, and splash. There are options for both visors and frames to accommodate each application.
- Eye: There are many options for industrial evewear including anti-fog/anti-scratch, integrated spectacles, and overspectacles for those wearing prescription eyewear.
- Hearing: Helmet mounted muffs are available for both cap and hat styles of hard hats.
- Other: Chinstraps, goggle retainers, etc.

Note: While already a Z87 face protection requirement, the standard 2009 Version indicated that accessories or components installed onto hard hats cannot cause the helmet to fail. The 2014 standard update provides additional language further supporting the premise that accessory/component manufacturers are responsible for proving that their products do not cause helmets to fail: "the entity claiming that an accessory or replacement component, when installed, will not cause the helmet to fail the requirements of this standard, and is responsible for providing justification upon request."



(4) Assess other factors that could impact wearer compliance.

- Comfort: Considered one of the most important factors for 9 out of 10 wearers, comfort has a strong bearing on wearer compliance. Comfort features may include adjustable headbands, foam-free helmets that reduce heat stress, ventilation systems, and fast-dry sweatbands.
- Style: Industrial helmets are available in a multitude of styles and looks. Caps, hats and brimless options are available from many manufacturers. Additionally, many helmets are able to be customized with logos and design details, such as striping, can further enhance wearability. Climbing style helmets have made a splash in recent months within industrial safety settings. They provide a high level of quality with additional comfort features to ensure a secure fit when working-at-height or in confined spaces.

4 KEY CONSIDERATIONS

(1) Assess the hazards and understand the application.

• Environment: What conditions exist? Is work being done at height? With electrical sources? Extreme weather? In confined spaces?

- Task: What is the worker doing? Working in confined spaces? Climbing?
- Impact & Risk: Hitting or bumping the head? Falling objects? Electrical shock? Chemical splash?
- Electrical Classification: What's the need: General (g) proof-tested at 2200 volts? Electrical (e) proof-tested at 20,000 volts? Conductive (c) for no electrical contact?
- Style: Cap? Hat? Brimless? Climbing? Vented or non-vented?

(2) Determine if the helmet meets the requirements of the right industrial safety standard.

 ANSI: American national standards institute serves as "administrator and coordinator of the united states private sector voluntary standardization system."

COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 **EXECUTIVE SUMMARY**

PAGES 3-4 **HOW TO CHOOSE AN INDUSTRIAL HELMET**

PAGES 5-6

WORKING AT HEIGHTS: **HOW TO CHOOSE THE RIGHT HEADGEAR**

> PAGES 7-8 WORK-AT-HEIGHT **SAFETY HELMETS**

PAGES 9-10

SURVEY EXAMINES ADVANTAGES OF INTEGRATED EYE, **HEAD AND FACE** PROTECTION

PAGES 11-12 SIGNS YOU MAY NEED

A NEW HARD HAT

PAGES 13-15

CONSTRUCTION **SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?**





WORKING AT HEIGHTS: HOW TO CHOOSE THE RIGHT HEADGEAR

ou already understand that wearing a hard hat is essential for protecting your most valuable tool: your brain. The effects of Traumatic Brain Injury or TBI can be devastating, not just for the injured, but for their families as well. There are two important parts of choosing the proper head gear with regard to regulatory standards:

- TYPE Standards referring to impact resistance and direction
- CLASS Those concerning the electrical rating of a hard hat

We also touched briefly on style. Although not governed by standard or regulation, it's important. The wearer's preference may determine this. But there can also be benefits of one style over another in particular scenarios.

Today we're going to look at some situations where a climbing-style helmet might be the best choice for head protection.

But first... what is a climbing helmet?

BRIMLESS HELMETS GIVE YOU A BETTER FIELD OF VISION ON THE JOB

We're all familiar with hard hats sporting partial or full brims. They give a measure of safety from falling objects by deflecting them.

Brims can also shield our eyes from direct sunlight. They can be used in any situation, provided their Type and Class designations match the task at hand.

However, there are scenarios where brimless headgear — climbing helmets — provide increased visibility of your surroundings, and still maintain hazard protection.

For example, have a look at the MSA H1 line of safety helmets. While similar, they do have some significant differences in helmet construction and design, and may be used for different applications.

Because climbing helmets are virtually brimless, you have a wider field of vision, particularly when looking up. This makes them extremely desirable for industrial tasks that require a lot of climbing – ladders, power and telecom poles, etc.

COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 EXECUTIVE SUMMARY

PAGES 3-4 HOW TO CHOOSE AN INDUSTRIAL HELMET

PAGES 5-6

WORKING AT HEIGHTS: HOW TO CHOOSE THE RIGHT HEADGEAR

> PAGES 7-8 WORK-AT-HEIGHT SAFETY HELMETS

PAGES 9-10

SURVEY EXAMINES ADVANTAGES OF INTEGRATED EYE, HEAD AND FACE PROTECTION

PAGES 11-12 SIGNS YOU MAY NEED A NEW HARD HAT

PAGES 13-15

CONSTRUCTION SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?



Of course, up isn't the only direction you might be climbing. A brimless climbing helmet will benefit utility workers as well. Gas, water and sewer pipes, and even electrical lines and cables are installed underground. A brimless, lower profile helmet might be more useful than a brimmed hard hat when descending into a manhole or working within a confined space.

In fact, any task that requires a greater field of vision or could use a low profile helmet to reduce snag hazards would be a great time to go brimless. Rescue workers may also benefit from the increased mobility and vision of a climbing helmet.

TO VENT OR NOT TO VENT... THAT'S A GOOD QUESTION!

Obviously, vents on a climbing helmet reduce heat stress. But, just like its brimmed hard hat counterpart, certain restrictions apply. To comply with ANSI Z89.1-2014, a helmet or hard hat cannot be vented when used in electrical work. The same is true in Canada, following the CSA Z94.1-2015 standard.

OF COURSE, UP ISN'T THE **ONLY DIRECTION YOU MIGHT BE CLIMBING. A BRIMLESS CLIMBING HELMET WILL BENEFIT UTILITY WORKERS** AS WELL. GAS, WATER AND **SEWER PIPES, AND EVEN ELECTRICAL LINES AND CABLES** ARE INSTALLED UNDERGROUND. A BRIMLESS, LOWER PROFILE HELMET MIGHT BE MORE **USEFUL THAN A BRIMMED HARD** HAT WHEN DESCENDING INTO A **MANHOLE OR WORKING WITHIN** A CONFINED SPACE.



Vents could allow an energized conductor or cable to come in contact with the worker's scalp. If using a climbing helmet for work around energized components, make sure your headgear is NOT vented.

For applications — governed by the same ANSI and CSA standards — a vented helmet or hard hat is permissible as long as no live electrical cables, wires or other sources will be encountered.

The H1 Safety Helmet can be purchased with or without vents. Make sure to choose the correct one for your application.

All H1 Trivent helmets are vented. Classified by both ANSI Z89.1-2014 and the European mountaineering standard, EN12492, H1 Trivent helmets are rated as Type 1 Class C headgear for ANSI approvals.

OTHER NECESSITIES AND ACCESSORIES

When using a climbing helmet, use a chinstrap to keep it on your head at all times. We provide a quick adjust 4-point chinstrap to help ensure a secure fit. A pivoting nape system provides a greater range of motion... and added comfort.

The chinstraps for the Novent helmets are slightly different than for the Trivent. The Trivent chinstraps must conform to EN12492 while the Novent conforms to EN397. These standards specify the force under which the strap must release from the helmet should it be caught on or lodged in a structure, etc.

Of course, ear and eye protection are required in many industries. Accessories for climbing helmets include attachable ear muffs, full-face visors, and eye shields.

While some forms of ear and eye protection can be separately worn, attaching them to the helmet keeps them readily available and are integral for worker safety.

One caveat: shields and earmuffs must be designed specifically for the helmet or hard hat on which they're being used.

If your industrial tasks include climbing (up to heights or down into the ground), consider a climbing helmet for personal head protection.

Your brain will thank you.

COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 **EXECUTIVE SUMMARY**

PAGES 3-4 **HOW TO CHOOSE AN INDUSTRIAL HELMET**

PAGES 5-6

WORKING AT HEIGHTS: **HOW TO CHOOSE THE RIGHT HEADGEAR**

> PAGES 7-8 WORK-AT-HEIGHT **SAFETY HELMETS**

PAGES 9-10

SURVEY EXAMINES ADVANTAGES OF INTEGRATED EYE, **HEAD AND FACE** PROTECTION

PAGES 11-12 SIGNS YOU MAY NEED

A NEW HARD HAT

PAGES 13-15

CONSTRUCTION **SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?**



WORK-AT-HEIGHTS SAFETY HELMETS

How to have confidence without compromise



all-related injuries and fall-from-height fatalities number in the hundreds of thousands each year. Most at risk are workers involved in tower climbing, forestry, rescue, and confined-space work.

So, what can you do to help ensure 300 feet of confidence for work-at-heights applications?

It's a no-brainer: To help protect your head, those working at height or in confined spaces must wear protective headwear. The question is, which kind?

This white paper gives industrial safety managers in utilities, OG&P, general industry, and construction a better understanding of the differences between industrial head protection and recreational climbing helmets so they can select a brimless helmet solution for their work-at-heights applications and workers.

THE IMPACT OF REPURPOSING **RECREATIONAL CLIMBING HELMETS**

Climbing-style helmets are great for some things. Like recreational climbing. Hobbyists. Weekend thrills. But for keeping workers safe at height in the most challenging and rigorous conditions? Not a chance. That calls for next-generation industrial head protection.

INADEQUATE PROTECTION

At face value, using a recreational-style or rock-climbing helmet might seem a reasonable thing. After all, weekend warriors and rock climbers need to protect themselves from falling objects and fall-related head injuries just as much as utility or construction workers. The problem, though, is that recreational helmets do not provide the same level of protection in dangerous workplace settings as industrial helmets do.

Key Considerations:

• What type of impact protection does the worker need? Crown? Crown, front, rear, and sides? Or crown, and a limited amount of all sides?

Is the worker on the ground, in a confined space, or at height? Might the worker be at higher risk of a misstep or a harder, unintended swing into an object such as a climbing tower or pole?

TESTED TO OTHER STANDARDS

There are definitive differences between climbing helmets and

industrial helmets. An industrial-grade safety helmet is specially designed and specifically tested to industrial impact energies and standards. Climbing helmets are not.

In addition, industrial helmets have alternate criteria for helmet failure. For example, although ANSI Type I helmets are tested at half of the impact energy as climbing-style helmets, they allow only one-third of the force to be transmitted to the wearer. Key Considerations:

- Is the climbing helmet tested only to the EN 397 or EN 12492:2012 mountaineering standard, which are similar to, but not the same as OSHA-required ANSI/ISEA Z89. 1-2014 and CSA/CAN Z94.1-15?
- Is the helmet tested to options outside the scope of ANSI/ISEA, higher and lower temp?
- Does the helmet conform to shock and penetration testing?

COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 **EXECUTIVE SUMMARY**

PAGES 3-4 **HOW TO CHOOSE AN INDUSTRIAL HELMET**

PAGES 5-6

WORKING AT HEIGHTS: HOW TO CHOOSE THE RIGHT HEADGEAR

> PAGES 7-8 WORK-AT-HEIGHT **SAFETY HELMETS**

PAGES 9-10

SURVEY EXAMINES **ADVANTAGES OF INTEGRATED EYE**, **HEAD AND FACE** PROTECTION

PAGES 11-12 SIGNS YOU MAY NEED **A NEW HARD HAT**

PAGES 13-15

CONSTRUCTION **SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?**



DIFFERENT REQUIREMENTS

The chinstrap requirements for industrial and climbing helmets aren't the same, either. The mountaineering standard requires that the chinstrap be extremely high-strength (500+ N). The idea is that it will help keep the helmet on the head of a climber in the eventual of multiple impacts during a fall. However, because a 500 N (over 100 lbf) force on the neck of an industrial worker could cause injury, the EN industrial standard limits the pull strength to 250 N.

Ventilation requirements also factor in. Climbing helmets are highly ventilated. While not a bad thing in general, it's useless for wearers who a require a helmet with an electrical classification as vents void Class E ratings. And while ventilation can help keep the wearer cooler, too much ventilation in the wrong area could jeopardize safety by not protecting against debris, molten metal, or chemical splashes.

Key Considerations:

- Does the worker need a helmet approved to electrical insulation requirements?
- Is it necessary for the helmet to be ventilated? Lightweight? Equipped with a replaceable chinstrap?

The Advantages of Human-Centric Design

The reason climbing helmets made their way onto construction platforms, utility towers, and other industries was due, in part, to the look of the helmet. Workers want a design that varies from the traditional, shifting to more recreational-looking PPE products.

The fact is, climbing helmets typically have a sporty, low-profile look that some workers prefer. And preference can sometimes dictate worker compliance.

But who says safety has to trump aesthetics – or aesthetics has to ignore safety? At MSA, we say workers can have both. Which is why we took a human-centric approach to the design and development of our newest industrial helmet, the V-Gard[®] H1.

The H1 human-centric design was inspired by the wearer, then tested and refined in challenging conditions with the most critical audience. The result is an industrial-grade safety helmet characterized by MSA quality, comfort, ease of use, and style.

ABOUT THE V-GARD H1 SAFETY HELMET

Partner with MSA to find the complete, above-the-neck safety solutions The new V-Gard H1 Safety Helmet and accessories provide exceptional comfort and ease of use in a stylish, low-profile design. Even better? It's from MSA, manufacturer of the #1 hard hat in the nation, the V-Gard.

MSA has developed thousands of products, owns hundreds of patents, and has a global reach in the millions – all to keep in motion the mission of worker safety that started more than 100 years ago.

TAKE THE NEXT STEP

When it comes to helping to protect human lives, there can be no shortcuts. That's why utilities, oil & gas companies, general industry, and construction firms count on MSA to help keep their workers safe. MSA has protected generations of lives in dangerous workplaces for more than 100 years - and we'll continue to do so.

Find out for yourself why MSA's safety product innovation and reliability, combined with award-winning customer service and support has made us the world leader in head protection.

V-GARD H1 HELMET

V-Gard H1 Half-V-Gard H1 Trivent V-Gard H1 Mesh Visor



- Cool + Comfortable + Breathable
- Integrated Safety System
- Simple, Streamlined Accessories
- 100+ Years
- Vented & Non-Vented Configurations
- Logo Customization
- Competitively Priced



V-Gard H1 Novent Safety Helmet



Face Spectacles





V-Gard H1 Face Shields



V-Gard H1 Earmuffs

COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 **EXECUTIVE SUMMARY**

PAGES 3-4 **HOW TO CHOOSE AN INDUSTRIAL HELMET**

PAGES 5-6

WORKING AT HEIGHTS: **HOW TO CHOOSE THE RIGHT HEADGEAR**

> PAGES 7-8 WORK-AT-HEIGHT **SAFETY HELMETS**

PAGES 9-10

SURVEY EXAMINES ADVANTAGES OF INTEGRATED EYE, **HEAD AND FACE** PROTECTION

PAGES 11-12

SIGNS YOU MAY NEED **A NEW HARD HAT**

PAGES 13-15

CONSTRUCTION **SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?**





SURVEY EXAMINES ADVANTAGES OF INTEGRATED EYE, HEAD AND FACE PROTECTION

An extensive research project to help further understand the needs of specifiers and wearers of above-theneck personal protective equipment (PPE) found that comfort, compatibility and style were important.

hen safety managers are selecting protective eyewear, do they only focus on the eyes? Or do they think about protecting the entire head, if necessary, and how integrating eyewear with other protective equipment can provide better protection for employees?

We should view "the head" as the total head (including brain, eyes, ears, mouth, etc.) and focus exclusively and relentlessly on safeguarding it. Work injuries that occur above-the-neck are, after all, the most likely to result in death or permanent disability. We believe that by protecting the head, the creativity and judgement that shape our world is safeguarded.

We conducted research to gain insights from more than 250 specifiers and end users, to focus on the key aspects of selecting, purchasing, testing and ultimately wearing above-the-neck PPE solutions.

When asked to rank (between 1-10) the key factors when selecting PPE, the research determined that specifiers, purchasers and wearers continue to place considerable importance on:

- Comfort for the wearer (55 percent gave this a 9 or 10 in importance).
- Compatibility of the product with other equipment (45 percent gave this a 9 or 10 in importance).

COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 **EXECUTIVE SUMMARY**

PAGES 3-4 **HOW TO CHOOSE AN INDUSTRIAL HELMET**

PAGES 5-6

WORKING AT HEIGHTS: HOW TO CHOOSE THE RIGHT HEADGEAR

> PAGES 7-8 WORK-AT-HEIGHT **SAFETY HELMETS**

PAGES 9-10

SURVEY EXAMINES **ADVANTAGES OF INTEGRATED EYE**, **HEAD AND FACE** PROTECTION

PAGES 11-12 SIGNS YOU MAY NEED

A NEW HARD HAT

PAGES 13-15

CONSTRUCTION **SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?**



 Style and how it contributes to the company and wearer's image (19 percent rated this a 7 to 10 in importance).

The research uncovered an increasing concern and need for hassle-free selection and compatibility. Both specifiers and the end users want to feel more confident that their PPE (i.e., hardhats, eyewear, face protection and hearing protection) are compatible with one another. Checking products for compatibility, various risks and the necessary regulations is daunting, especially above the neck, where stakes are at their highest. One of the clearest solutions to this problem is to embrace head protection more as a system and intuitively integrate key elements.

COMPATIBILITY

The frustrations of end users around compatibility reveal that still more can be done to drive awareness for such solutions. There are several benefits when considering integrated eyewear in a head protection system:

Increased impact protection: Eye protection requirements under ANSI in the United States are divided between basic Z87 approval and the more stringent High Impact Z87+ standard. For approval to Z87+, safety glasses must pass a high mass test of dropping a 500-gram, pointed weight from a height of 5 feet onto the lens. Safety glasses must also withstand a test where a 1/4" steel ball is shot at the lens at 102 MPH from a distance of 150 feet to meet the Z87+ approval.

Within the European standard EN 166, there are different grades of impact strength given to eyewear and face protection. Stand-alone safety glasses conform to grade F (low-energy impact), which equates to withstanding an impact from an object traveling up to 45 meters per second (145 feet per second). Integrated eyewear systems often can provide a higher level of impact protection.

Accommodating prescription eyewear: The donning of prescription glasses in the general population is increasing globally. In East Asia, for example, 80-90 percent of urban 18 year olds+ suffer from near-sightedness. In the UK, the rate of people wear-ing prescription glasses has increased 8 percent over a five-year period to 69 percent.

A key advantage of integrated eyewear within the head protection system is that a



THE DONNING OF PRESCRIPTION GLASSES IN THE GENERAL POPULATION IS INCREASING GLOBALLY. IN EAST ASIA, FOR EXAMPLE, 80-90 PERCENT OF URBAN 18 YEAR OLDS+ SUFFER FROM NEAR-SIGHTEDNESS. significant proportion of solutions available are designed to allow prescription glasses to be worn underneath the integrated safety eyewear. One of the alternative safety eyewear solutions is to provide workers with prescription safety eyewear, which is both time consuming and costly. Another option is to wear specialist safety eye glasses over prescription glasses (sometimes called "over specs"), which, by nature create discomfort and therefore reduce likelihood of usage.

Reduced costs: Health and safety professionals and facilities managers continue to cite frequent loss or damage of the safety eyewear issued to workers as a problem. This issue not only has a financial implication (for replacements), but also raises the question of inappropriate eyewear being worn for certain tasks, putting workers at risk of injury. Over a prolonged period, through the reduction of loss and damage to eyewear, a head protection system can save significant cost. According to our market study, companies can save up to 29 percent (versus premium head protection and standalone safety glasses) annually per worker.

It is all too easy for safety eyewear to become damaged or scratched once removed. Workers often place them on tables or benches among tools, or put them in pockets with keys and other objects, where the lenses can become scratched. Workers also run the risk of dropping them or dropping tools or other heavy objects on their safety glasses, which can break both lens and frames. An integrated system puts the safety eyewear out of harm's way (within the hard hat), ensuring it stays damage-free and eliminating the likelihood of the eyewear being removed and misplaced.

Comfort and compliance: PPE compliance is simplified by the introduction of comfortable equipment. Conversely, even the most protective safety glasses offer no protection at all when the user keeps them on top of their head, or avoids wearing them altogether due to discomfort. Issues introduced by too much pressure on the temples or bridge of the nose, and poor fit leading to slippage and ineffective coverage, are eliminated by the use of eye protection integrated into the hard hat.

The research also highlights that for those aware of integrated eyewear systems, there is some concern of added weight when eyewear is not in use or required, but the integrated eyewear element of the system can be added with minimal additional weight versus many standalone hardhat and eyewear options, which need more material to provide the same protection.

With so many benefits to the specifier and end user, it comes as no surprise that hardhats with integrated eyewear is a growing trend. When the systems are designed to overcome compatibility concerns – and with comfort top of mind – employees are more likely to wear their PPE and avoid eye and head injuries.

COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 EXECUTIVE SUMMARY

PAGES 3-4

HOW TO CHOOSE AN INDUSTRIAL HELMET

PAGES 5-6

WORKING AT HEIGHTS: HOW TO CHOOSE THE RIGHT HEADGEAR

> PAGES 7-8 WORK-AT-HEIGHT SAFETY HELMETS

PAGES 9-10

SURVEY EXAMINES ADVANTAGES OF INTEGRATED EYE, HEAD AND FACE PROTECTION

PAGES 11-12

SIGNS YOU MAY NEED A NEW HARD HAT

PAGES 13-15

CONSTRUCTION SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?

> PAGE 16 RESOURCES

> > 10

SIGNS YOU MAY NEED A NEW HARD HAT

e've trained ourselves to look at the label's expiration date on medicines, milk, bread, and other perishable foods. But we also know that some of these dated consumables can still go bad before their time if not handled properly. For example, that glass of cold milk can sour quickly if left in the hot sun. Did you know hard hats have an "expiration date," too?

And just like food items, their useful life can be shortened if not cared for properly.

YOUR FIRST LINE OF DEFENSE AGAINST FALLING OR FLYING OBJECTS.

Hard hats — a vital part of your PPE (personal protective equipment) gear — provide protection for the most important part of your body: the brain. In any industry where a potentially damaging impact to the head is possible, hard hats must be used.

The Occupational Safety and Health Administration (OSHA) requires hard hats be used in these occupations ... it's the law.

According to 29 CFR 1910.135(1) for general industry: The employer shall ensure that each affected employee wears a protective helmet when working in areas where there is a potential for injury to the head from falling objects.

29 CFR 1910.135(2) reads: The employer shall ensure that a protective helmet designed to reduce electrical shock hazard is worn by each such affected employee when near exposed electrical conductors which could contact the head.

For the construction industry, 29 CFR 1926.100 applies. It reads: Employees working in areas where there is a possible danger of head injury from impact, or from falling or flying objects, or from electrical shock and burns, shall be protected by protective helmets.

While OSHA doesn't regulate how hard hats are designed and constructed, it does require their use. The construction, testing, and certification are deferred to Standards ANSI Z89.1-2014 in the United States, and CSA Z94.1-2015 in Canada.

Both categorize and develop testing requirements for hard hats by Type (impact hazard) and Class (electrical hazard).

Simply put, Type I hard hats are tested for top impact only, while Type II must pass testing for both top and lateral impact. As for electrical hazard resistance:



- Class G must withstand 2,200 volts
- Class E must withstand 20,000 volts , and
- Class C hard hats are not tested for electrical insulation

Make sure the hard hat you choose to wear is rated for the task at hand.

SO, DOES A HARD HAT HAVE AN "EXPIRATION" DATE?

Technically speaking, the answer is no. After all, we're not talking about foods, medicines, or even that delicious glass of milk.

That said, most manufacturers have recommendations on helmet and suspension lifespans. MSA hard hat shells should be used *no longer than 5 years*, while suspensions should be replaced after 12 months. Both are the maximum time frame for replacement, calculated from date of first use.

The date of manufacture is stamped or molded onto the hard hat shell, usually on the underside of the brim. Similarly, the suspension will be marked with the month and year of manufacture, along with the headband size. Remember the recommended replacement date is from the *day of first use*. Markers or labels can be used to identify

COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 **EXECUTIVE SUMMARY**

PAGES 3-4

HOW TO CHOOSE AN INDUSTRIAL HELMET

PAGES 5-6

WORKING AT HEIGHTS: **HOW TO CHOOSE THE RIGHT HEADGEAR**

> PAGES 7-8 WORK-AT-HEIGHT **SAFETY HELMETS**

PAGES 9-10

SURVEY EXAMINES **ADVANTAGES OF INTEGRATED EYE**, **HEAD AND FACE** PROTECTION

PAGES 11-12

SIGNS YOU MAY NEED **A NEW HARD HAT**

PAGES 13-15

CONSTRUCTION **SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?**

the date the hard hat was first placed in service. This helps avoid replacing a sound hard hat too soon.

Depending on the environment, application and use, the shell might need replaced more frequently.

Some visible signs of hard hat damage, such as cracks, dents, or holes, are easy to see and are obvious reasons to remove the hard hat from service. But even scores or scuffs on the surface might signal that it's time to retire it.

If a hard hat has been impacted or penetrated, remove it from service immediately.

Dents from impacts stress the hard hat material, causing weak spots that are not acceptable. Scuffs or scores also weaken it by thinning out the shell. Consider replacement as soon as possible.

If the suspension straps are frayed or ripped, or have damaged stitching, remove the webbing immediately and replace it with a new suspension assembly. Check the plastic attachment clips to make sure they aren't weakened or broken as well.

Here's a word of caution, though: When replacing the suspension, or any other attachment for that matter, use only those made by the original manufacturer specifically for that model and size. Hard hats are tested and certified with the manufacturer suspension installed and approved as a system.

Incorrect parts and accessories or those made from any other source render the certification null and void. Additionally, an incorrect headband and web could reduce or eliminate the amount of impact protection. The impact space might not be adequate.

Fading, normally seen in fiberglass or plastic shells, is a sign that sunlight or UV rays have started weakening the shell. This often shows up as a chalky, brittle surface or discoloration.

This can cause brittleness, easily noticed by flexing the brim. Too much flexibility can also be a sign of shell weakness.

Harsh chemicals or other severe conditions can also break down the shell material, producing brittleness. This often shows up as fading or discoloration as well. Chemicals can damage the suspension, too.

So, how do you extend the life of this important PPE?



HARSH CHEMICALS **OR OTHER SEVERE CONDITIONS CAN ALSO BREAK DOWN THE SHELL** MATERIAL, PRODUCING **BRITTLENESS. THIS OFTEN SHOWS UP AS FADING OR DISCOLORATION AS WELL.** CHEMICALS CAN DAMAGE THE SUSPENSION, TOO.

PROPER CARE AND USE OF HARD HATS.

Nothing lasts forever. But your hard hat is possibly one of the most robust pieces of personal protective equipment you have. Proper care can help you get the full recommended life from your hardhat and suspension.

First, it's important to inspect the hard had regularly. And by that, I mean each time you intend to wear it. Be sure to do quick inspections throughout the workday when in a safe place to do so.

Hard hats should be cleaned with an approved cleaner. Our Confidence Plus® cleaning solution or a mild, nondetergent soap and warm water are recommended.

No harsh chemicals or abrasives should be used. Oil-based solvents will deteriorate the shell, so don't use gasoline or similar products to remove tar, grease and other sticky contaminants. Do NOT use scrapers, knives, or other abrasive tools to remove debris. Cleaning the headband and webbing in a mild soap and water solution will help to

eliminate the buildup of oil and contaminates.

Here's a quick note about helmet decoration.

Many workers love to show their loyalty to their favorite sports teams or companies like their logo and information displayed on their employees' hard hats. Is this permissible? Some paints will attack and damage the shell materials. This reduces the degree of protection the hard hat provides. However, most hard hat manufacturers, including MSA, provide imprinting at time of purchase. They have the proper inks that won't damage the integrity of the shell and will be resistant to cracking or fading.

Some decals may be used as long as they're not metallic, the adhesives aren't damaging to the shell's composition and are placed no closer than $\frac{1}{2}$ " from the helmets edge.

A FINAL RECAP.

Your hardhat protects the most important part of your body and you want to make sure it is working as hard as you do. Remember to inspect your hard hat for signs that it might need replaced:

- Cracks, dents, and punctures
- Fading, chalkiness, and discoloration
- Loss of flexibility or too much flexing
- Torn, broken, or otherwise damaged webbing components

Your hard hat is a vital part of your PPE. It protects the most valuable organ in your body. Take care of it and it will take care of you.

Use your hard hat whenever there is chance of falling or flying objects. It's not just the law ... it's the right thing to do.

COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 **EXECUTIVE SUMMARY**

PAGES 3-4

HOW TO CHOOSE AN INDUSTRIAL HELMET

PAGES 5-6

WORKING AT HEIGHTS: **HOW TO CHOOSE THE RIGHT HEADGEAR**

> PAGES 7-8 WORK-AT-HEIGHT **SAFETY HELMETS**

PAGES 9-10

SURVEY EXAMINES ADVANTAGES OF INTEGRATED EYE, **HEAD AND FACE** PROTECTION

PAGES 11-12 SIGNS YOU MAY NEED

A NEW HARD HAT

PAGES 13-15

CONSTRUCTION **SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?**



CONSTRUCTION SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?

The key to reducing fatalities and injuries in construction is safety leadership from business owners, project managers and supervisors.



s we all know, construction work is responsible for hundreds of fatalities and thousands of work-related injuries and illnesses each year. As the head of the OSHA Directorate of Construction, Jim Maddux dealt with a number of preventable, deadly incidents:

- A foreman operating a backhoe sends a worker into an unguarded trench. The watersoaked soil collapses, killing the worker before emergency crews can rescue him.
- A contractor is working on Super Bowl Sunday, rushing to meet a deadline. One crew is purging gas lines for the new electric generation plant. Nearby, gas space heaters are keeping workers warm. Workers are welding and performing other spark-producing work. The explosion kills six workers and destroys the facility before it produces its first kilowatt.
- A parking garage is being built using prefabricated panels. Grout wasn't properly installed at the ground floor. The project manager, foremen and a dedicated inspector either didn't notice or didn't say anything about it. Four workers die when the structure collapses.

To help prevent incidents like these and others, construction owners and general contractors increasingly are looking for contractors and subcontractors with outstanding safety programs.

Many construction contractors, especially larger ones, who have implemented formal safety and health management systems to deal with the hazardous nature of the work, report success in reducing hazards, injuries and fatalities. Typical of these structured programs is the recognition that safety leadership from management – including business owners, project managers and supervisors – is key to that success.

Construction contractors, the building trade unions and safety researchers also are recognizing there's another key to success: the importance of having foremen, lead workers and other front-line supervisors practice safety leadership skills on the job site. Because these individuals are responsible for effectively communicating the company's safety policies and procedures to workers, they are the linchpin to safety program success.

SAFETY CLIMATE

Research tells us that worker perceptions of how well safety policies, procedures and practices are implemented on the job site, also called Safety Climate, is key to improving safety outcomes. Foremen and lead workers play a key role in creating a strong job site safety climate by being good safety role-models and effectively communicating safety expectations during their daily interactions with workers.

COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 **EXECUTIVE SUMMARY**

PAGES 3-4 **HOW TO CHOOSE AN INDUSTRIAL HELMET**

PAGES 5-6

WORKING AT HEIGHTS: **HOW TO CHOOSE THE RIGHT HEADGEAR**

> PAGES 7-8 WORK-AT-HEIGHT **SAFETY HELMETS**

PAGES 9-10

SURVEY EXAMINES ADVANTAGES OF INTEGRATED EYE, **HEAD AND FACE** PROTECTION

PAGES 11-12 SIGNS YOU MAY NEED

A NEW HARD HAT

PAGES 13-15

CONSTRUCTION **SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?**





Practicing safety leadership skills has shown the potential to help construction firms improve their safety and health programs and reduce the human and economic consequences of workplace incidents. Unfortunately, there is a shortage of safety leadership skills training in the construction industry that could help employers reach their safety goals.

To help address the gap, CPWR - The Center for Construction Research and Training developed The Foundations for Safety Leadership (FSL), a safety leadership training module designed to enhance foreman and lead workers' understanding of the importance of safety leadership and skills to put them into practice.

There were two key drivers that led CPWR to recognize the need for such training. First were findings from a 2012 McGraw Hill (now Dodge Data Analytics)/CPWR survey showing that many construction companies, regardless of size, require their newly promoted foremen to take the OSHA 30-hour course to learn leadership skills, which up to now has not been part of the course. The second was discovered at a 2013 CPWR/National Institute of Occupational Safety and Health (NIOSH) workshop. Seventy stakeholders from the construction industry worked together and concluded there were eight key leading indicators of a positive safety climate in construction, one of which was site supervisor safety leadership.

The FSL module, which was approved for use by OSHA earlier this year, is the result of a rigorous development process. Under the direction of Dr. Linda M. Goldenhar, director of Research and Evaluation at CPWR and researchers from the University of Colorado Boulder and the Center for Health, Work & Environment at the Colorado School of Public Health with expertise in leadership, a multi-disciplinary curriculum development team was convened that included OSHA 10- and 30-hour outreach trainers, construction workers, safety and health professionals from small and large companies, representatives of building trade unions, consultants and government officials.

FIVE LEADERSHIP SKILLS

Well Done

The curriculum development team agreed on five safety leadership skills that they believe all foremen and lead workers' need to practice if they want to be effective safety leaders, which are:

5 SKILLS AND ACTIONS OF AN EFFECTIVE SAFETY LEADER		
Leader	ship Skills	Good Leadership Actions
Leads t	oy Example	 Establishes safety expectations as a constraint of the safety vision with team members. Demonstrates a positive attitude about 'Walks the Talk' Leads up!
Engage Empow Membe	es and vers Team ers	 Engages, encourages, and empowers t identify and act upon unsafe situations Reporting hazards and safety concer Providing solutions Reporting near misses Stopping work if necessary
Activel Practic Commu	y Listens and es 3-way ınication	 Actively listens to hear what team men Practices 3-way communication by have the message they heard
Develop Membe Teachir and Fee	ps Team ers Through ng, Coaching, edback	 Respectfully teaches and coaches wor Watches the learner fix the hazardous perform the task to make sure it's don Focuses on potential consequences rateam member Uses the FIST principle: Facts, Impact, Timely
Recogn Membe	izes Team ers for a Job	 Privately and/or publicly acknowledges for going above and beyond when it co

ore value ers it safety

eam members to ıs by... ns

mbers are saying ving person repeat

kers situation or e correctly ther than on the

Suggestions,

s team members for going above and beyond when it comes to safety

COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 **EXECUTIVE SUMMARY**

PAGES 3-4

HOW TO CHOOSE AN INDUSTRIAL HELMET

PAGES 5-6

WORKING AT HEIGHTS: **HOW TO CHOOSE THE RIGHT HEADGEAR**

> PAGES 7-8 WORK-AT-HEIGHT **SAFETY HELMETS**

PAGES 9-10

SURVEY EXAMINES ADVANTAGES OF INTEGRATED EYE, **HEAD AND FACE** PROTECTION

PAGES 11-12

SIGNS YOU MAY NEED **A NEW HARD HAT**

PAGES 13-15

CONSTRUCTION **SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?**



There are many benefits that can come from foremen and lead workers put these skills into practice including:

- Increased morale
- Increased teamwork
- Positive safety climate
- Reduced hazards
- Better quality work
- Reduced family and co-worker suffering
- Better business reputation
- More productive workforce
- Reduced insurance premiums
- Fewer injuries and illnesses
- Fewer work stoppages to conduct incident investigations

The potential benefits of using the Foundations for Safety Leadership module greatly outweigh the small costs of conducting the training; there is no cost to downloading the materials from CPWR https://www.cpwr.com/foundations-safety-leadership-fsl. In fact, in addition to providing the FSL training to all current and newly promoted foremen and lead workers, others also may benefit from the course materials, including higher-level managers, project engineers and human resources professionals.

"After the training, we had one issue where something probably would have gone not corrected, except for the fact that one of the workers brought it up to the foreman and the foreman gave them exact explicit direction on how to correct it, and it got done right away," said Richard Coakley, corporate safety director, Gaston Electrical Co.

For contractors, providing safety leadership training to employees can improve the safety program, reduce the human and business consequences of workplace incidents and show a commitment to construction safety.

"I think the crew is more willing to bring up items to the foreman... I know that we have had guys bring stuff up that matters, and we've actually made changes on site or brought it to the attention of people who can make changes because of what our guys are bringing up," said Ray Grosshans, president of Panel Masters

Leadership training allows foremen and lead workers to learn ways to handle safety responsibilities more effectively, engage work crews in safety matters and improve success as a lead worker or foreman.

As one foreman said: "The biggest thing I took out of it – and it's something that I've always done but never took it as seriously as I do now – is that three-way communicating. Instead of just giving somebody some information, sending them off blindly to

"I THINK THE CREW IS MORE WILLING TO BRING UP ITEMS TO THE FOREMAN... GUYS BRING STUFF UP THAT MATTERS, AND WE'VE ACTUALLY MADE CHANGES ON SITE." do the job and then getting mad 'cause they didn't do it right, they can explain to you exactly what you said to them. If they didn't get it the first time, you can talk about it, have an opportunity to get it right. And it also makes them feel like they're part of the planning."

"I pulled everybody together at lunch and told them what my lead did for going above and beyond for safety, pulling [a worker off a lift] because he didn't have fall protection," noted another foreman/lead worker. "That gave him reassurance that what he did was right and gave him props. Everybody else recognized that at the same time. We get to do that more as people are being more aware of their surroundings and the dangers around them."

The construction industry has said loud and clear that ity wants its foremen and lead workers to have the skills needed to be effective job site safety leaders. As one trainer noted, "During my introduction, I ask what is MISSING from the OSHA 30. Everyone's eyes light up when I say: 'How to communicate effectively. How to lead.' Everyone gets it. During [a training session] we had a fantastic conversation about three-way communication, and how to make it natural and not offensive, and how to ask clarify-ing questions as a way to achieve the same goal. Everybody got something out of it, including this experienced trainer."

(Author's Note: Funding for the Foundations for Safety Leadership (FSL) training module came from CPWR - The Center for Construction Research and Training, as part of their five-year cooperative agreement with NIOSH. The FSL curriculum including Power Point presentation, animated videos, instructor guides and student materials are free to anyone who wants to use them. You can download them from the CPWR web <u>site.</u> If you want additional information about the module or have questions, please contact Dr. Linda M. Goldenhar at Igoldenhar@cpwr.com.)

Jim Maddux retired from OSHA in 2016, where he was director of the OSHA Directorate of Construction. Before being appointed to the construction position in 2010, Maddux held several leadership positions at OSHA, including director of the Office of Physical Hazards, the Office of Maritime, the Office of Biological Hazards and acting deputy director for the Directorate of Standards and Guidance. Maddux has been a project director, author and contributor to numerous OSHA standards, guidance, enforcement and outreach projects. Topics include cranes, communication tower safety, personal protective equipment, pandemic influenza, injury and illness recordkeeping, ergonomics, motor vehicle safety, hearing conservation and maritime safety issues. He was a major contributor to the OSHA/NIOSH/CPWR fall prevention campaign and stand-down. Maddux has a bachelor's degree in economics, an associate degree in computer information systems and an associate degree in chemistry. He provides consulting, training, curriculum development, public speaking and executive coaching services to public and private sector clients.

Dr. Linda M. Goldenhar received her PhD in Public Health and began her career in occupational safety and health as a research psychologist at NIOSH. While there, she focused her research on a variety of construction-related issues including tradeswomen's safety and health concerns, worker perceptions of the ideal amount of overtime and others. Goldenhar currently is the director of Research and Evaluation at CPWR, where she is the lead investigator on project creating leadership training for frontline foremen and supervisors (Foundations for Safety Leadership (FSL)) and also the lead on CPWR's Safety Climate efforts. She has published over 65 peer-reviewed publications, numerous articles in trade magazines and written book chapters and manuals. She has presented her work at many national and international academic and construction-specific conferences.

COMPLETE HEAD PROTECTION SOLUTIONS

SPONSORED BY



EHSToday

PAGE 2 EXECUTIVE SUMMARY

PAGES 3-4

HOW TO CHOOSE AN INDUSTRIAL HELMET

PAGES 5-6

WORKING AT HEIGHTS: HOW TO CHOOSE THE RIGHT HEADGEAR

> PAGES 7-8 WORK-AT-HEIGHT SAFETY HELMETS

PAGES 9-10

SURVEY EXAMINES ADVANTAGES OF INTEGRATED EYE, HEAD AND FACE PROTECTION

PAGES 11-12

SIGNS YOU MAY NEED A NEW HARD HAT

PAGES 13-15

CONSTRUCTION SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?





NEW V-Gard® H1 SAFETY HELMET THIS IS NO ORDINARY WORK-AT-HEIGHTS HELMET

This is the one you asked for. Introducing the intuitively designed MSA V-Gard H1 Safety Helmet. Inspired, tested, and refined in some of the most challenging applications, under the most rigorous conditions, by the most critical wearer – you.



WE KNOW WHAT'S AT STAKE.

RESOURCES

V-Gard H1 Safety Helmet

The V-Gard H1 Safety Helmet provides exceptional comfort and ease of use in a stylish low-profile hard hat design. A complete above-the-neck platform for all applications.

V-Gard Hard Hats

See why the MSA V-Gard is the safety solution of choice for workers across the world.

Matte V-Gard Hard Hat

The iconic V-Gard Hard Hat in a matte finish; the safety and performance you expect from the V-Gard brand with a new twist on style.

MSA Logo Express

Customize and personalize your hard hat with MSA's industry leading logo process, let us make your hard hat unique and personalized.

MSA's Corporate Blog, Spotlight On Safety

MSA puts a Spotlight on Safety! Check out our industrial blog dedicated to helping keep people and places safe.

Safety Evaluation

MSA can support you with an on-site safety equipment evaluation—at no cost and zero strings attached.

ABOUT MSA

Established in 1914, MSA Safety is the global leader in the development, manufacture and supply of safety products that protect people and facility infrastructures. Many MSA products integrate a combination of electronics, mechanical systems and advanced materials to protect users against hazardous or life-threatening situations.

MSA recently introduced the V-Gard H1 Safety Helmet. For the modern industrial worker who values comfort and convenience, our V-Gard H1 is the safety helmet that delivers ease-of-use and ultimate comfort in some of the most demanding applications. Unlike other 'climbing-style helmets,' the V-Gard H1 has been intuitively designed to be an integrated safety solution thanks to MSA's over 100 years of safety experience.

Along with head protection, MSA also works to improve safety in unpredictable work environments that are often part of the job. That's why it's critically important to have the right safety equipment at the moment it matters most. MSA's complete lines of safety solutions help protect those workers at the heart of your operation. To learn more about head protection solutions from MSA, visit <u>MSAsafety.com/vgardh1</u> COMPLETE HEAD PROTECTION SOLUTIONS

Helmet. For the modern ience, our V-Gard H1 d ultimate comfort in other 'climbing-style gned to be an integrated f safety experience. improve safety in part of the job. That's ty equipment at the safety solutions help ion. To learn more <u>ASAsafety.com/vgardh1</u> SPONSORED BY



EHSToday

PAGE 2 EXECUTIVE SUMMARY

PAGES 3-4 HOW TO CHOOSE AN INDUSTRIAL HELMET

PAGES 5-6

WORKING AT HEIGHTS: HOW TO CHOOSE THE RIGHT HEADGEAR

> PAGES 7-8 WORK-AT-HEIGHT SAFETY HELMETS

PAGES 9-10

SURVEY EXAMINES ADVANTAGES OF INTEGRATED EYE, HEAD AND FACE PROTECTION

PAGES 11-12

SIGNS YOU MAY NEED A NEW HARD HAT

PAGES 13-15

CONSTRUCTION SAFETY: DOES SAFETY LEADERSHIP TRAINING MAKE SENSE FOR YOUR BUSINESS?

