



Heat Stress Risk Factors & Safety Solutions



WE KNOW WHAT'S AT STAKE.

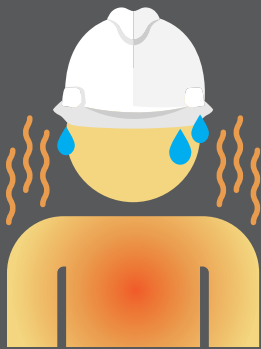
HEAT STRESS

Risk Factors & Preventative Safety Solutions

Working during the summer months means many workers may be at risk of heat-related illness—especially when exposed to direct sunlight and high temperatures, involved in heavy physical labor, or required to wear heavy protective clothing.

LEARN ABOUT THE DANGERS OF HEAT STRESS, WHAT IT MEANS FOR WORKERS AT RISK, AND HOW PROPER PPE CAN HELP KEEP WORKERS COMFORTABLE AND SAFE.

HEAT STRESS: RISK FACTORS & OCCUPATIONAL HAZARDS



38°C 100.4°F



33,890

ESTIMATED WORK-RELATED
HEAT INJURIES AND ILLNESSES
THAT RESULTED IN DAYS AWAY
FROM WORK FROM 2011-2020



3,389

(AVERAGE) PER YEAR
IN THAT TIME PERIOD

Heat stress is a physical condition in which the body cannot get rid of excess heat. It causes the body's core temperature to go up, increasing heart rate and making it difficult for a person to focus on a task. In severe instances, heat stress causes irritability, sickness, fainting, and even death.

Source: <https://www.osha.gov/heat-exposure>

According to the Occupational Safety and Health Administration (OSHA), “heat is the leading cause of death among all hazardous weather conditions in the United States.” In addition, the Bureau of Labor Statistics (BLS), notes that “there were 33,890 estimated work-related heat injuries and illnesses that resulted in days away from work from 2011-2020, an average of 3,389 per year in that time period.”* Workers in construction, especially those in road construction or working at height, agriculture, and oil and gas well operations are some of the most common industries for heat-related illnesses.**

* <https://www.osha.gov/heat-exposure/statistics>

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IDENTIFYING THE FOUR TYPES OF HEAT-RELATED ILLNESS AND THE CDC RECOMMENDED ACTIONS

The four common heat-related illnesses from most severe to least severe are:



Heat Stroke

Heat stroke is the most severe of the four and can have life-threatening consequences. Extreme heat can cause the body's regulating system to malfunction, too. The body temperature raises to critical levels of over 104°F (40°C).

The worker exhibits the signs of heat stroke, including confusion, loss of consciousness, and possibly seizures. Sweating, the body's main temperature regulation system, ceases. Make no mistake... this is a life threatening situation. **Call 911 immediately and get medical help.**



Heat Exhaustion

Heat exhaustion exhibits different signs, but is also serious. Unlike heat stroke, the worker will be sweating heavily, with a body temp of over 100.4°F (38°C). Other signs are weakness, irritability, confusion, and heavy thirst, along with nausea, dizziness, and a headache. Move the worker to a cool location and take the worker to an emergency room or onsite medical clinic as soon as possible.



Heat Cramps

Heat cramps are caused by the loss of body salts and fluids, usually the result of heavy sweating. Drinking water or carbohydrate-electrolyte replacement drinks (sports drinks) every 15 to 20 minutes may help alleviate the symptoms. While not immediately life-threatening, a cramp at the wrong time can be disastrous. Think... climbing a ladder. Definitely not a good time to cramp up.



Heat Rashes

Heat rashes could turn infectious if not treated. They show up as a small red cluster of pimples or blisters. Any place there's skin-on-skin contact or loose or tight damp clothing is present, rashes develop. Moving the worker to a cooler, less humid location helps.

HOW TO HELP PREVENT HEAT STRESS



Track weather and heat conditions and adjust work accordingly, particularly in the event of a heat wave.



Train workers in recognizing heat stress symptoms, and how/when to obtain medical assistance in the event of an emergency.



Schedule heavy work for earlier or later in the day instead of the hottest midday hours.



Designate a responsible person to monitor conditions and protect workers who are at risk of heat stress or use a buddy system.



During hot weather, give workers more frequent breaks and/or assign additional workers to the job. Ideally provide cool areas and shade for breaks.



Wear lightweight, light colored, loose-fitting working clothes.



Provide workers with plenty of fresh water. Encourage workers to drink water before and during their shifts to stay hydrated (avoid drinks containing caffeine/do not consume alcohol).



This will not help prevent heat stress, but it is important to prevent skin cancer: regularly apply high protection sunscreen on areas of your body not covered by clothing.



Drink plenty of water—every 15 minutes! Drink often, before you feel thirsty.



Consider protective clothing and PPE that provides cooling or at least are breathable.

These are tips for best practice only. Always refer to your company safety requirements or to your local health and safety authority's direction.

MSA PPE SOLUTIONS TO HELP PROTECT WORKERS FROM SEASONAL HEAT STRESS

V-GARD® CROWN COOLER WITH NECK SHADE

Tested and approved with all MSA Hard Hats and Safety Helmets. Use the Crown Cooler with Neck Shade with a vented V-Gard safety helmet model—i.e the V-Gard® C1 Hard Hat—for optimum performance (ensure your company’s risk analysis allows for vented safety helmets).



Hook and loop conveniently attaches easily to V-Gard helmet suspensions

Lightweight, high-viz, and durable approved accessory

Provides up to 10 hours of cooling relief

Cooling function easy to activate, re-usable (up to 100 activations) and machine washable

Powered by HyperKewl™PLUS, Patented Evaporative Cooling Technology

Standard 100 by OEKO-TEX® approved fabric

V-GARD H1™ SAFETY HELMET

Type I helmet providing exceptional comfort and ease of use in a stylish, low-profile design from MSA, the leader in industrial head protection.

RESCUE WHISTLE

Convenient rescue whistle integrated into the chin strap buckle.

MOISTURE-WICKING SWEAT BAND

Premium moisture wicking headband with breathable foam and Velcro® attachment for easy field replacement.

NON-CONTACT FOAM LINER

Helps maximize air flow and breathability for optimal cooling and hygiene.



4-POINT CHINSTRAP

Field replaceable 4-point chinstrap with multiple adjustment points for customized fit and comfort.

“PUSH-BUTTON” ACCESSORY

Patent-pending “push-button” accessory attachment rail and universal lighting clips for quick installation and removal

FAS-TRAC® III PIVOT RATCHET SUSPENSION

Superior comfort, adjustability, and range of motion.

V-GARD C1® HARD HAT

Helps alleviate heat stress for workers in sunny conditions with ReflectIR™ Thermal Barrier technology that keeps the hard hat interior up to 20°F (11°C) cooler.*

PATENTED REFLECTIR™ THERMAL BARRIER TECHNOLOGY

Keeps the hard hat interior up to 20°F (11°C) cooler.

Without ReflectIR With ReflectIR
↓ 20°F

MOISTURE-WICKING SWEAT BAND

Premium sweat band wicks moisture, keeping the user drier and more comfortable. The sweat band can be easily removed to be laundered or replaced to help maintain hygiene.

OPTIONAL VENTS FOR INCREASED AIR FLOW

Strategically placed vents provide significant air flow.

Front Vents
Rear Vents

INCREASED SUN PROTECTION

Full Brim provides 12% more coverage for increased shade compared to any other full brim V-Gard® Hard Hat.

SUNSHADES & SUNSHIELDS

Type I helmet providing exceptional comfort and ease of use in a stylish, low-profile design from MSA, the leader in industrial head protection.

SUNSHADES

Enhance worker visibility while protecting from the sun

- MSA SunShades not only help to protect wearer's ears and neck from sun and heat, but also enhance worker visibility with contrasting color band and reflective striping. Fits most hats and caps.
- Breathable, bright mesh fabric
- Choice of bright yellow-lime or orange colors
- Hat clips help to keep SunShade from falling or rotating

SUN SHIELDS

Protect workers from the sun's rays

- Sun Shields extend the brim of V-Gard and Topgard protective caps all the way around to help protect wearer's ears and neck from sun's rays. Made of ABS (front portion is polycarbonate, smoke tint).
- Easily attaches to helmets and caps
- Polyurethane brim extender protects against sun and heat
- Smoke-tinted Lexan front for extra protection

* Compared to a hard hat without the ReflectIR Thermal Barrier in sunny conditions; testing done with black, non-vented, V-Gard C1 Hard Hats.



V-GARD® 500 VENTED HARD HAT CAP & FULL-BRIM HAT

Cooling vents for improved circulation and durable shell construction.

The MSA V-Gard Helmet, with its distinctive trademark “V” design, is a world recognized brand known for comfort, quality, and durability. MSA has sold well over 100 million V-Gard Helmets since its introduction—so many in fact, that the iconic “V” design has been a mainstay for many years on even the toughest worksites. When you want the best comfort, quality and durability worn by millions across the globe, you need to buy the original MSA V-Gard Helmet, settle for nothing less.

- Robust design, durable shell construction
- Cooling vents for improved air circulation and comfort
- Glaregard® Surface underbrim to reduce reflective glare
- Lateral contours for easy integration of hearing protection
- Extended rain trough for around-the-brim protection in hot and/or wet environments
- Available in a variety of colors
- Custom imprinting and striping options



ORDERING INFORMATION

Part Number	Description
GA90023	V-Gard Crown Cooler with Neck Shade
10215828	V-Gard C1 Hard Hat, Vented, White; Available options: Chinstrap, reflective stripes, logo printing, and more!
10034018	V-Gard 500 Cap, Vented, White; Available options: Chinstrap, reflective stripes, logo printing, and more!
10167911	V-Gard 500 Hat, Vented, White; Available options: Chinstrap, reflective stripes, logo printing, and more!
10194783	V-Gard H1 Trivent (EN12492), Vented, White (includes 4-pt chinstrap and reflective stickers). Clear visor, clear spectacles, and logo printing options are available

Part Number	Description
10098032	SunShade Hard Hat Accessory, Yellow-green, with reflective striping
10098031	SunShade Hard Hat Accessory, Orange, with reflective striping
697290	Sun Shield for standard V-Gard Cap-Style Hard Hats <i>only</i>
697410	Sun Shield for standard V-Gard Full-Brim Hard Hats <i>only</i>
10039114	Sun Shield for standard V-Gard 500 Cap-Style Hard Hats <i>only</i>

Note: This Bulletin contains only a general description of the products shown. While product uses and performance capabilities are generally described, the products shall not, under any circumstances, be used by untrained or unqualified individuals. The products shall not be used until the product instructions/user manual, which contains detailed information concerning the proper use and care of the products, including any warnings or cautions, have been thoroughly read and understood. Specifications are subject to change without prior notice. MSA is a registered trademark of MSA Technology, LLC in the US, Europe, and other Countries. For all other trademarks visit <https://us.msasafety.com/Trademarks>.

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