



HEAT STRESS IN INDUSTRIAL WORK ENVIRONMENTS

According to OSHA, heat is the leading cause of death among all weather-related phenomena, and it is becoming more dangerous as 18 of the last 19 years were the hottest on record.¹ Every year, thousands become sick from occupational heat exposure, and some cases are fatal.²

OSHA states that “occupational risk factors for heat illness include heavy physical activity, warm or hot environmental conditions, lack of acclimatization, and wearing clothing that holds in body heat.”²

OUTDOOR HIGH-HEAT WORK ENVIRONMENTS

Dangerous conditions due to heat stress are most prominent in outdoor jobs with high sun exposure, especially construction, working at height, and oil and gas.



Construction



Working at Height



Oil & Gas

HAZARDS & CHALLENGES DUE TO HIGH HEAT

In Temperatures of 90°F (32°C)...



↓ 29%

drop in worker productivity³



↑ 300%

increase in worker error³

Heat Stress Can Result in Injury or Death



31,560

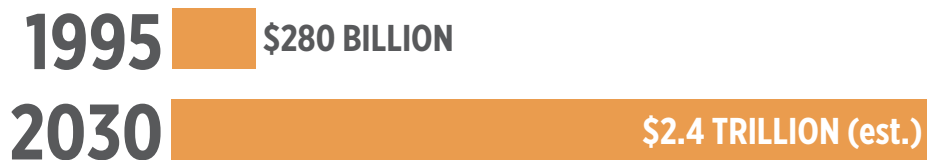
work-related heat injuries and illnesses involving days away from work have occurred from 2011-2019 in the U.S.⁴



907

U.S. workers killed from exposure to excessive environmental heat stress from 1992-2019⁴

Global Economic Loss Due to Heat Stress⁵



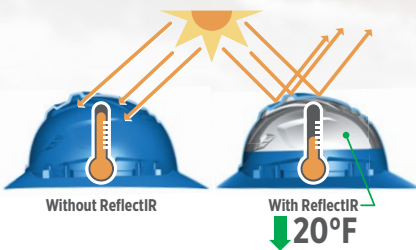
WE KNOW WHAT'S AT STAKE.

V-GARD C1™ HARD HAT: THE COOLEST HARD HAT ON THE MARKET

The 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.*

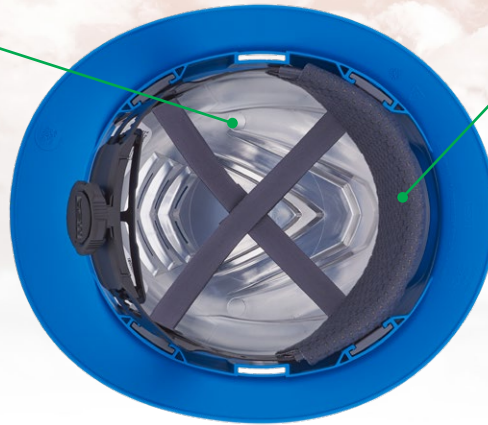
Patented ReflectIR™ Thermal Barrier Technology

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



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.



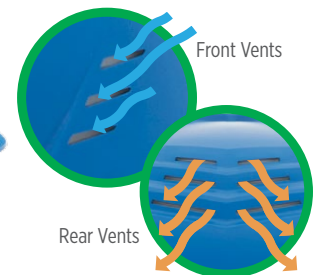
Increased Sun Protection

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



Optional Vents for Increased Air Flow

Strategically placed vents provide significant air flow.



Visit www.MSAafety.com/VGardC1 for more information.

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

Sources:

¹ <https://www.osha.gov/heat-exposure/rulemaking>

² <https://www.osha.gov/heat-exposure>

³ Bottomley TA, Roth EM. Compendium of human responses to the aerospace environment. 6. Thermal environment. NASA CR-1205(1). NASA Contract Rep NASA CR. 1968 May;6-148 passim. PMID: 4387196.

⁴ <https://www.federalregister.gov/documents/2021/10/27/2021-23250/heat-injury-and-illness-prevention-in-outdoor-and-indoor-work-settings>

⁵ https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_711919.pdf

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.msafety.com/Trademarks>.

MSA operates in over 40 countries worldwide. To find an MSA office near you, please visit MSAsafety.com/offices.