

ANSI/ASSP A10.50-2024

Standard for Heat Stress Management In
Construction and Demolition Operations

PREVIEW ONLY



AMERICAN SOCIETY OF
SAFETY PROFESSIONALS



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**American National Standard
Construction and Demolition Operations**

**Standard for Heat Stress Management
In Construction and Demolition Operations**

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Secretariat

American Society of Safety Professionals
520 N. Northwest Highway
Park Ridge, Illinois 60068

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Foreword (This Foreword is not a part of American National Standard A10.50-2024.)

This standard is one of a series of safety standards that have been formulated by the Accredited Standards Committee on Safety in Construction and Demolition Operations, A10. It is expected that the standards in the A10 series will find a major application in industry, serving as a guide to contractors, labor and equipment manufacturers. For the convenience of users, a list of existing and proposed standards and technical materials in the A10 series for Safety Requirements in Construction and Demolition Operations follows.

- A10.0 The Construction and Demolition Compendium of Standards
- A10.1 Pre-Project & Pre-Task Safety & Health Planning
- A10.2 Safety, Health, and Environmental Training (under development)
- A10.3 Powder-Actuated Fastening Systems
- A10.4 Personnel Hoists and Employee Elevators
- A10.5 Material Hoists
- A10.6 Demolition Operations
- A10.7 Use, Storage, Handling and Site Movement of Commercial Explosives and Blasting Agents
- A10.8 Scaffolding
- A10.9 Concrete and Masonry Construction
- A10.11 Personnel Nets
- A10.12 Excavation
- A10.13 Steel Erection
- A10.15 Dredging
- A10.16 Tunnels, Shafts and Caissons
- A10.18 Temporary Roof and Floor Holes, Wall Openings, Stairways and Other Unprotected Edges
- A10.19 Driven Pile Installation and Extraction Operations
- A10.21 Safe Construction and Demolition of Wind Generation/Turbine Facilities
- A10.22 Rope-Guided and Non-Guided Workers' Hoists
- A10.23 Safety Requirements for the Installation of Drilled Shafts
- A10.24 Roofing – Safety Requirements for Low-Sloped Roofs
- A10.25 Sanitation in Construction
- A10.26 Emergency Procedures for Construction Sites
- A10.28 Work Platforms Suspended from Cranes or Derricks
- A10.30 Installation of Anchors and Micropiles
- A10.31 Digger-Derricks
- A10.32 Fall Protection Systems for Construction Industry Users
- A10.33 Safety and Health Program Requirements for Multi-Employer Projects
- A10.34 Public Protection
- A10.35 Pressure Testing of Steel and Copper Piping Systems
- A10.37 Debris Nets
- A10.38 Basic Elements of a Program to Provide a Safe and Healthful Work Environment
- A10.39 Construction Safety and Health Audit Program
- A10.40 Reduction of Musculoskeletal Problems in Construction
- A10.42 Rigging Qualifications and Responsibilities in the Construction Industry
- A10.43 Confined Spaces in Construction and Demolition Operations
- A10.44 Lockout/Tagout in Construction
- A10.46 Hearing Loss Prevention
- A10.47 Highway Construction Safety
- A10.48 Communication Structures
- A10.49 Control of Chemical Health Hazards
- A10.50 Heat Stress Management in Construction and Demolition Operations
- A10.100 Prevention through Design in Construction
- A10.101 Drones in Construction (under development)
- A10.103 Lagging and Leading Indicators Used in Construction (under development)
- A10.104 Pandemics and Infectious Diseases on Construction and Demolition Sites (under development)

One purpose of these standards is to serve as guides to governmental authorities having jurisdiction over subjects within the scope of the A10 Committee standards. If these standards are adopted for governmental use, the reference of other national codes or standards in individual volumes may be changed to refer to the corresponding regulations.

Normative Requirements: This standard uses the single column format common to many international standards. The normative requirements appear aligned to the left margin. To meet the requirements of this standard, machinery, equipment and process suppliers and users must conform to these normative requirements. These requirements typically use the verb “shall.”

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**AMERICAN NATIONAL STANDARD A10.50
STANDARD FOR HEAT STRESS MANAGEMENT
IN CONSTRUCTION AND DEMOLITION OPERATIONS**

1. General

1.1 Scope

This standard establishes the minimum requirements for the prevention of heat illnesses and management of heat stress hazards and exposures encountered during construction and demolition operations. It establishes procedures for the management of heat stress hazards and the selection and use of appropriate controls and practices to reduce risks presented by heat stress and prevention of heat illnesses for all work environments.

1.2 Purpose

The purpose of this standard is to reduce the risk to workers of adverse occupational health effects from heat stress due to heat exposures in construction and demolition operations.

1.3 Objective

The objective of this standard is to (a) assist users in recognizing signs and symptoms of heat-related disorders in both indoor and outdoor work environments; (b) provide methods and strategies for reducing or eliminating workers' emergent heat-related disorders at construction worksites; and (c) provide planning help to establish training content for workers and supervisors related to heat stress and heat-related disorders.

2. Abbreviations, References, and Other Resources

2.1 Abbreviations

°C – degrees Celsius

°F – degrees Fahrenheit

ACGIH – formerly known as American Conference of Governmental Industrial Hygienists

AIHA – American Industrial Hygiene Association

bpm – beats per minute

ISO – International Organization for Standardization

HSMP – Heat Stress Management Program

NIOSH – National Institute for Occupational Safety and Health

NWS – National Weather Service of the National Oceanic and Atmospheric Administration

OSHA – Occupational Safety and Health Administration

RWS – Regular Work Schedule

TACO – Tarp Assisted Cooling with Oscillation

UPF-Rating – Ultraviolet Protection Factor Rating

WBGT – Wet Bulb Globe Temperature (an index of the ambient environment)

WBGT_{clo} – WBGT which includes adjustments for PPE clothing

2.2 References

ACGIH (2023). Heat Stress and Strain. In *TLVs and BEIs: Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices*. Cincinnati: ACGIH.

Bernard T. E. and Iheanacho (2015). Heat Index and Adjusted Temperature as Surrogates for Wet Bulb Globe Temperature to Screen for Occupational Heat Stress. *Journal of Occupational and Environmental Hygiene*. 12: 323-333