Regulations and Standards for Industrial Head Protection

Types of Hard Hats

Type I/1 – Conventional hard hats that are designed to reduce the force of impact to the top of the head, neck, and spine.

Type II/2 – Designs that offer additional impact protection to the front, sides, and back, as well as the top of the head.

Bullard Model	Standard	Type and Class
 C30	ANSI/ISEA Z89.1-2014 CSA Z94.1-2005	Type I, Class E & G, , LT, HV Type 1, Class E & G
 C33	ANSI/ISEA Z89.1-2014 CSA Z94.1-2005	Type I, Class E & G, , LT, HV Type 1, Class E & G
 C34	ANSI/ISEA Z89.1-2014	Type I, Class E & G, , LT, HV
 C35	ANSI/ISEA Z89.1-2014	Type I, Class E & G
 911C	ANSI/ISEA Z89.1-2014	Type I, Class E & G, , LT, HV
 911H	ANSI/ISEA Z89.1-2014	Type I, Class E & G, , LT, HV
 S51	ANSI/ISEA Z89.1-2014 CSA Z94.1-2005 EN 397-2012	Type I, Class E & G, , LT, HV Type 1, Class E & G Type 1, Class E & G, LT
 S61	ANSI/ISEA Z89.1-2014	Type I, Class E & G, LT, HV
 S62	ANSI/ISEA Z89.1-2014	Type I, Class C,  , LT, HV
 S71	ANSI/ISEA Z89.1-2014	Type I, Class E & G,  , LT, HV
 Advent®	ANSI/ISEA Z89.1-2014	Type II, Class E & G, LT
 Vector	ANSI/ISEA Z89.1-2014 CSA Z94.1-2005	Type II, Class E & G, LT, HV Type 2, Class E & G

National Standard for Canada CAN/CSA Z94.1-2005 - www.csa.ca

This is the fifth edition of CSA Z94.1, Industrial Protective Headwear Performance, Selection, Care and Use. It supersedes the previous editions published in 1992, 1977, and 1966 under the title Industrial Protective Headwear. It also supersedes the Preliminary Standard, published in 1965, and replaces the protective headwear requirements specified in CSA Z94-1948, Code for Head and Eye Protection. Bullard's S51, C30, and C33 all meet CSA Z94.1-2005, Type 1, Class E & G; Bullard's Vector meets CSA Z94.1-2005, Type 2, Class E & G.

European Standard for Industrial Safety Helmets EN 397:2012

EN 397:2012 certifies that safety helmets are designed to offer protection from lateral impact or top impact. It supersedes EN 397:1995. This European Standard specifies physical and performance requirements, methods of test, and marking requirements for industrial safety helmets. The mandatory requirements of EN 397 apply to helmets for general use in industry in the European Union as mandated by 89/686/EEC for personal protective equipment. Additional optional performance requirements are included to apply only where specifically claimed by the helmet manufacturer. Industrial safety helmets (also known as headgear) are intended primarily to provide protection to the wearer against falling objects to avoid brain injury and skull fracture. EN 397:2012 is written by Technical Committee CEN/TC 158 on "Head Protection." Countries in Europe are expected to adopt it as a national standard, either by publication of an identical text or by endorsement.

Classes of Hard Hats

Class E (electrical) hats are tested to withstand 20,000 volts.

Class G (general) hats are tested at 2,200 volts.

Class C (conductive) hats provide no electrical protection.

OSHA 29 CFR 1910.135 - www.osha.gov

This standard requires head protection if any aspect of the work environment presents a risk of head injury.

National Standard for U.S. ANSI/ISEA Z89.1-2014 - www.ansi.org or www.safetyequipment.org

This standard provides performance and testing requirements for industrial helmets (commonly known as hard hats). It establishes the types and classes of protective helmets, depending on the type of hazard encountered. It includes specifications for helmets designed to offer protection from lateral impact (Type II), or top-only impact (Type I), giving employers and users the flexibility to specify the helmet that best meets the needs of their specific workplace.

This standard outlines requirements for industrial head protection relating to:

1. Impact Protection
2. Penetration Protection
3. Electrical Insulation Protection

Three main changes to the ANSI/ISEA Z89.1-2014 standard were issued on May 15, 2014. (ANSI/ISEA Z89.1-2014 is the revision of the previous ANSI/ISEA Z89.1-2009) Manufacturers who want to claim any of these features can (1) test their helmets according to the new procedures, and (2) label their products appropriately:

1. Under the section of Accessories and Replacement Components there is further clarification that accessory or component manufacturers are required to prove that their components do not cause the helmets to fail. Helmet accessory or component suppliers must provide justification upon request that their product would not cause the helmet to fail the requirements of the Head Protection Standard.

2. Some additional language added under the Instructions and Markings section to help clarify that "useful service life" for helmets is not required by the Standard. It is up to helmet manufacturers if they want to include specific service life in terms of years. Manufacturers could elect to specify the number of years for their helmet's service life or elect to identify certain conditions that may affect a helmet's protection capability over time.

3. The last section revised was the Higher Temperature section for users who work in hot environments. This section was updated to incorporate an optional preconditioning at a higher temperature of 140° F ± 3.6° F (60° C ± 2° C). Previously hot temperature preconditioning was conducted at 120° F +/- 3.6° F (48.8° C ± 2° C) under the 2009 Standard. Helmets that meet the performance criteria after being preconditioned to these higher temperatures (140° F) will be designated with an "HT" marking.