ANSI Z89.1-2009

Protective Headwear for Industrial Worker

This standard provides performance and testing requirements for industrial helmets, commonly known as hard hats. It is a revision of ANSI Z89.1-2003, which established 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, or top-only impact, giving employers and users the flexibility to specify the helmet that best meets the needs of their specific workplace.

ANSI Z87.1-2009 was prepared by the members of ISEA's Head Protection Group as a revision to ANSI Z89.1-2003, and approved through the ANSI canvass method with input from users, government agencies and safety experts.

All hard hats are shipped with an ANSI certification label on the inside of the hard hat's shell. This label will clearly identify what type and class standards it was designed to meet. If this label is missing or cannot be read it is recommended that it should be replaced.

Hard Hat Impact Types

Type I Hard Hats
Type I hard hats are intended to reduce the force of impact resulting for a blow only to the top of the head. All hard hats, except bump caps, listed on the Cooper Safety website are Type I (top impact) hard hats.

Type II Hard Hats
Type II hard hats are intended to reduce the force of impact resulting from a blow which may be received off center or to the top of the head. A Type II hard hat typically is lined on the inside with thick high density foam.

Electrical Classes

Class G (General)
Class G hard hats are intended to reduce the danger of contact exposure to low voltage conductors. Test samples are proof tested at 2200 volts (phase to ground). However, this voltage is not intended as an indication of the voltage at which the hard hat protects the wearer. Please note: Class G hard hats were formerly known as Class A.

Class E (Electrical)
Class E hard hats are intended to reduce the danger of exposure to high voltage conductors. Test samples are proof-tested at 20,000 volts (phase to ground). However, this voltage is not intended as an indication of the voltage at which the helmet protects the wearer. Please note: Class E hard hats were formerly known as Class B.

Class C (Conductive)
Class C hard hats are not intended to provide protection against contact with electrical conductors.