

# Head Protection

## Workplace Hazards to the Head

A bump on the head can be a serious matter. Don't take chances with your head. Use the proper protection to shield you against:

- Injury to your head from falling or flying objects
- Injury from bumping your head against a fixed object
- Electrical shock hazards (if you work near exposed electrical conductors)

## Types of Head Protection

The traditional protective helmet, the hard-hat, is made up of an outer shell and a suspension system.

- Outer shell:
  - Absorbs the force of impact
  - Deflects falling items
  - Prevents sharp objects from penetrating your head
- Suspension system:
  - Consists of a headband and crown straps that hold the suspension system to the shell
  - Spreads the force of impact over a wider area of your head

**Protective helmets are available in *types* and *classes*.**

### Types

Type 1: **full brim, not less than 1 ¼ inches wide**

Type 2: **brim-less with a peak extending forward from the crown**

### Classes

Class A: **general service, limited voltage protection**

This design offers impact protection and is commonly used in mining, construction, shipbuilding, lumbering and manufacturing.

***Impact resistance: 850lbs average; 1000lbs maximum***

***Penetration resistance: 3/8in maximum***

### Class B: utility service, high-voltage protection

Helmets are designed to protect your head from impact, penetration of falling objects, and high voltage shocks and burns. Used extensively by utility workers.

***Impact resistance: 850lbs average; 1000lbs maximum***

***Penetration resistance: 3/8in maximum***

### Class C: general service, no voltage protection

Helmets are lightweight (usually made of aluminum offering impact protection but no protection against high voltage. Worn in oil refineries, chemical plants and manufacturing areas where there are no electrical hazards.

***Impact resistance: 850lbs average; 1000lbs maximum***

***Penetration resistance: 7/16maximum***

*Note: Head protection for firefighters must consist of a protective head device with ear flaps and chin-strap. For more information see: 29 CFR 1910.156(e) (5).*

## Proper Fit, Care and Maintenance of Head Protection

To offer the best protection a protective helmet must fit properly. To ensure the best fit:

- Adjust the headband to fit your head so there is adequate clearance between the shell and the headband
- Adjust the chin strap (if provided) to keep it in place so the helmet stays firmly on your head.

Check your protective helmet everyday for signs of cracks, penetration or other damage.

Helmet liners may be used in cold weather.

Do not drill or punch holes in the helmet shell to gain ventilation. This only serves to reduce the helmet's ability to sustain impact.

Do not set your helmet on the rear window shelf of a vehicle, as sunlight and heat can reduce the degree of protection.

Materials used in helmets used must be water-resistant and slow burning.

Do not use paint or cleaning materials on your helmet's shell unless you have checked with your supervisor. Some paints and thinners can damage the shell and reduce its ability to protect the head against impact, penetration or electrical conductors.

*Note: All protective helmets purchased after July 5, 1994 must comply with the latest American National Standards Institute (ANSI Z89.1) standards. Equipment purchased before the July date must comply with the 1969 ANSI standards.*