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Working on a Site Requiring Hard Hats? Here's What You Need To Know!

This is the first in a series of reminders to AIC members about selecting certain types of PPE.

Work hazards need to be minimized through engineering controls or eliminated altogether through safer methods or non-toxic materials. But sometimes, Personal Protective Equipment (PPE) needs to be worn as well. PPE can serve as an effective safety barrier as long as it is selected to protect the worker against the specific hazards (see "Job Hazard Analysis," AIC News, Vol. 39, No. 6, Nov. 2014, pp. 13-16). It must be worn and maintained properly because, if it fails, you are exposed to the full force of the hazard. Remember: PPE only protects the worker wearing it, not other bystanders in the area. Even in the "casual" atmosphere of museum work, industrial hazards exist and industrial controls must be enforced.

HEAD PROTECTION

Protective helmets (commonly known as "hard hats") are required when working in, or visiting, areas where there is a potential for injury to the head from impact and/or falling objects. Helmets specifically designed to reduce electrical shocks are necessary where heads could contact exposed electrical conductors. Your employer (or you, if you are self-employed) is always responsible for providing PPE. The person in charge of a site may also have a selection for visitors; size selection is rarely an issue as most helmets have interior adjustable headbands. Check before you go!

Protective headwear should meet professional consensus standards incorporated into each country's regulations. These types of performance standards will typically test headwear for electrical protection, impact resistance, penetration resistance, flammability resistance, and water absorption.

Examples:

- ANSI Z89.1-2009 (new revision 2014) *Standards on Industrial Head Protection* (http://webstore.ansi.org/RecordDetail.aspx?sku=ANSI%2FISEA+Z89.1-2014)
- CAN/CSA Z94.1-15 *Industrial Protective Headwear—Performance, Selection, Care and Use* (http://www.scc.ca/en/standardsdb/standards/27865)

TYPES

The most recognizable hard hat is the type that has a short (duck-bill type) brim at the front of the hat dome. This type provides protection from impact both to the top **and** the sides of the head. Another type of helmet, having a full brim encircling the entire dome, offers protection **only** to the top of the head. Helmets and hard hats may also be classified in terms of the amount of electrical protection they provide, if any, to both low-voltage electrical conductors and high-voltage sources.

MARKINGS

Be familiar with the approval markings specified by your country's regulations and prevailing test standards. For instance, ANSI-compliant hard hats will be marked, as a minimum, with:

- Manufacturer's name
- ANSI Z89.1-2009 or
- ANSI Z89.1-2003 or ANSI Z89.1-1997
- Designation regarding electrical protection

Be aware that shells typically listed in catalogues as "bump caps" (the kind sometimes worn by butchers or baseball players) look similar to a true hard hat, but are not manufactured to industrial testing standards and should not be used in your workplace.

Usually listed in safety catalogues as "bump caps"

Listed as ANSI Type 1 Front Brim Hard Hat

INSPECTION AND USE

Protective helmets and hard hats should be inspected visually every time they are worn. Use hard hats that are new and recently manufactured and discard any hard hat that has been damaged by impact, or shows signs of dents, cracks, or any other damage, including damage caused by ultraviolet radiation (UV) damage, if the hats are worn routinely on outdoor projects. Degradation of plastic by UV light will cause the glossy finish of the plastic to fade, turn chalky, and eventually fall apart; the hat should be discarded at the first signs of UV degradation.

Credit: Partial reprint from Ch. 5 of *Health and Safety for Museum Professionals* (2011), Hawks et al, Society for the Preservation of Natural History Collections, New York

Questions about health and safety? Contact us at HealthandSafety@conservation-us.org.