

TECH SHEET

EMC Insurance Companies®

Emergency Eyewash Stations

The first 10 to 15 seconds after exposure to corrosive substances or hazardous chemicals are critical to preventing serious eye injury. Emergency eyewash stations provide on-the-spot drenching facilities which allow workers to flush away hazardous substances that could cause injury if not quickly removed.

Accidental chemical exposures can occur even with good engineering controls and personal protective equipment programs in place. An eyewash station is a necessary backup to minimize the effects of accidental exposure to hazardous chemicals.

Where Are Emergency Eyewash Stations Required?

According to OSHA, emergency eyewash stations are required where a person's eyes may be exposed to injurious corrosive materials. Work areas and operations that may require eyewash stations include, but are not limited to:

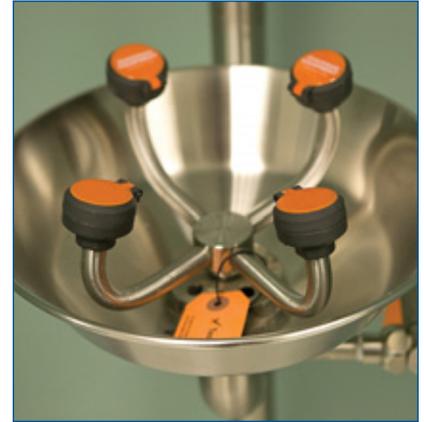
- Battery charging areas.
- Laboratories.
- Spraying operations.
- High dust areas.
- Dipping operations.
- Hazardous substance dispensing areas.

To be effective, the eyewash equipment has to be accessible at all times. ANSI recommends that a person be able to reach the equipment in no more than 10 seconds, or approximately 50-75 feet. Keep in mind that the injured employee may have difficulty locating the eyewash station, so it should be placed as close to the hazard as possible. The location of each emergency eyewash should be well lit and identified by a sign understood by all employees.

Emergency eyewash stations should also:

- Be on an unobstructed path from the hazard area.
- Not be separated by walls or doors from the hazardous work area.

- Be located near an emergency exit where emergency response personnel will have easy access to the employee.
- Not be located near any energized electrical equipment.
- Be protected from freezing, if installed outdoors.



Plumbed Emergency Eyewash Stations

Plumbed emergency eyewash stations, such as the one shown in the top photo, are preferred in most situations. According to ANSI, plumbed eyewash stations should be designed to deliver water to both eyes at a volume of at least 0.4 gallons per minute for 15 minutes. The unit should be between 33 and 45 inches from the floor and a minimum of 6 inches from the wall or nearest obstruction.

The injured employee should be able to open their eyelids with their hands and still have their eyes in the water. To protect the nozzles from airborne contaminants, units should be equipped with nozzle covers that are removed automatically when the unit is activated.

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ANSI recommends plumbed eyewash stations be tested for at least three minutes each week to flush the lines and verify proper operation. Preventative maintenance inspections should be completed at least annually to check for problems such as valve leakage, clogged lines and nozzles, and adequacy of water volume. Documentation of completed tests should be retained.

Self-Contained Emergency Eyewash Stations

Self-contained emergency eyewash station should be used where installation of a plumbed eyewash station is not feasible, such as for mobile crews and temporary work locations. Self-contained eyewash stations follow the same guidelines as plumbed eyewash stations with regard to placement, fluid volume, and signage.

Self-contained eyewash units require regular maintenance of the flushing solution used to control bacterial growth. The flushing solution should be changed several times per year, based on the manufacturer's specifications. The tank should also be flushed with fresh water prior to refilling to eliminate any residue that has accumulated. A record showing the date of the last solution change-out, and initialed by the responsible party, should be affixed to the exterior of the self-contained unit.

Eyewash Bottles

The main purpose of eyewash bottles is to supply immediate flushing of the eyes until a self-contained or plumbed emergency eyewash can be reached. Eyewash bottles should not be used as the only method for employees to flush their eyes for the following reasons:

- Holding the eyelids open while handling the bottle can be very difficult.
- Bottles cannot flush both eyes simultaneously.

- The water supply lasts only for a short period of time, normally not long enough to completely flush the eyes.

If your facility uses eyewash bottles as the only method for an employee to flush their eyes, a plumbed or self-contained unit should be installed.

Employee Training

All employees who may be exposed to corrosive chemicals should be trained on the location and operation of eyewash stations. It should never be assumed that employees are aware of the proper procedure for using the units in your facility. For example, studies have shown that despite the 15-minute flushing recommendation, exposed employees usually flush for less than five minutes. Eyewash training should cover at least the following information:

- Location and operation of emergency eyewash stations.
- "Hands-on" experience using the eyewash station.
- Quick removal of contact lenses prior to using the eyewash station.
- Review of exposed chemical's Material Safety Data Sheet to determine the manufacturer's recommended flushing times.
- Procedures for summoning emergency personnel, if necessary.

For Additional Information

Minnesota OSHA: www.dli.mn.gov

Canadian Centre for Occupational Safety & Health: www.ccohs.ca

Oregon OSHA: www.cbs.state.or.us