



MEL SAFETY INSTITUTE SHIFT BRIEFING

Emergency Eyewash Training



Emergency eyewash stations provide on-the-spot decontamination by allowing you to flush away hazardous substances that can cause injury.

I hope that you never need to use emergency eyewash equipment.

However, you will want to make sure emergency eyewash stations are both clean and accessible in case you find yourself needing one. If you get foreign particles or chemicals in your eyes, an emergency eyewash station is the most important initial step in first-aid treatment.

Delaying treatment, even for a few seconds, may cause serious injury.

Location

Eyewash stations are needed if you handle corrosive materials. Review your Safety Data Sheets (SDSs) and chemical labels. If you see warnings such as “causes chemical burns” or “causes permanent eye damage” you need an eyewash station in your area. In general, eyewash units must:

- Have highly visible markings and signs.
- Be on the same floor as the hazard. An injured worker should not have to use stairs to travel between the workstation and the emergency equipment.
- Not come into contact with any electrical equipment that may become a hazard when wet.
- Be protected from freezing when installed outdoors.
- Have pure clean water.
- Have hands-free operation.
- Maintain a constant water flow rate for a full 15 minutes.
- Have unobstructed access. Workers should not have to pass through doorways or weave through machinery or other obstacles to reach eyewash units.

Accessibility - Make sure no barriers are blocking the unit!

To be effective, the equipment must be accessible. The single most important treatment for chemically burned eyes is copious irrigation within *seconds* of injury. This means injured workers should not have to climb over or around obstacles to find the eyewash station. The American National Standards Institute (ANSI) recommends that a person can reach the equipment in no more than 10 seconds. In practical terms, consider that the person who needs the equipment will be injured and may not have use of their vision.

This lesson plan is intended for general information purposes only. It should not be construed as legal advice or legal opinion regarding any specific or factual situation. Always follow your organization's policies and procedures as presented by your manager or supervisor. For further information regarding this bulletin, please contact your Safety Director at 877.398.3046.

Maintenance Requirement

If eyewash equipment is located in your shop, mechanical room, or custodial closet, it must be inspected to ensure it functions properly with adequate water flow that is clean and sanitary. The following steps should be performed:

- The person conducting the inspection must date and initial that the inspection was performed.
- Plumbed units must be activated monthly to verify operation;
 - Allow the water to run for 2-3 minutes to ensure adequate flushing of the equipment.
 - Place the protective caps back on the eyewash outlets to prevent dust and debris from collecting.
- Portable eyewash units are an option in areas where plumbed water is not accessible. These units also need an anti-bacterial additive to ensure proper water sanitation. The manufacturer's change-out schedule must be followed. Also, the unit should be activated in accordance with the manufacturer's instructions.



Training in Proper Use

Employees who are exposed to possible chemical splashes must know in advance how to use an eyewash station properly:

1. Immediately after the accident, flood the eye with water, using your fingers to keep the eye open as wide as possible. Water may be colder than body temperature, which can be uncomfortable, but it is imperative to irrigate for *at least 15 minutes*.
2. If you wear contact lenses, remove the lenses as soon as possible to ensure the chemical is not trapped behind the lenses. Continue to flush the eyes to ensure the chemical has been rinsed away.
3. Seek medical attention after irrigating for the required time.

It's easy to forget about eyewash stations until they are needed in an emergency, but this is not the time you want to find out that yours is covered with dust or not working at all. Test your eyewash equipment weekly and learn how to use it. It could save your sight!

Questions for Discussion

1. What water temperature is required?

Answer: The ANSI standard recommends that the water should be "tepid". The ANSI 358.1-2004 appendix defines tepid water as water temperature between 60° F – 100° F. In locations where freezing temperatures exist, frost-proof or freeze-protected equipment must be installed. In locations



where temperatures reach scalding levels from heat or exposure to direct sunlight, scald protection valves must be installed

2. What are examples of areas that may require eyewash stations?

Answer: Work areas and operations that may require these devices include:

- Battery charging areas
- Laboratories
- Spraying operations
- High dust areas
- Hazardous substances dispensing stations

3. Do I need to test (activate) plumbed eyewashes weekly?

Answer: Yes, testing of plumbed units is required to ensure a flushing fluid supply is available when needed. Flushing helps clear the supply line of any sediment buildup and minimizes microbial contamination due to sitting water.

4. How often do I need to clean and maintain my portable self-contained eyewash?

Answer: Portable eyewashes that mix potable water and preservative should be cleaned and refilled per the manufacturer's instructions, which typically is every four to six months.

5. Does bottle eyewash meet the requirements of ANSI for flushing?

Answer: Bottle eyewash is classified by ANSI as personal and does not meet the main criteria of plumbed or self-contained eyewash equipment.

Eyewash Station Regulation:

OSHA regulation:

OSHA regulation requires the installation of an emergency shower or eyewash station equipment as a form of first aid. [\[29 CFR 1910.151 \(c\)\]](#) states:

"Where the eyes or body of any person may be exposed to injurious corrosive materials, suitable facilities for quick drenching or flushing of the eyes and body shall be provided within the work area for immediate emergency use."



There is also reference in industry-specific OSHA regulation and recommendations that specify certain industries must include emergency eyewash and/or shower equipment in every facility where hazardous chemicals or materials exposure is possible.

American National Standards Institute (ANSI Z358.1-2014)

The American National Standards Institute (ANSI) developed the ANSI standard Z358.1-1990 that meets regulatory requirements. While it doesn't have the full force of an OSHA regulation, the ANSI standard covers situations when employees are exposed to hazardous materials.

ANSI's definition of "hazardous material" would include caustics, as well as additional substances and compounds that have the capability of producing adverse effects on the health and safety of humans.

Note: The ANSI standard was revised in 2004, 2009, 2014.

This "Emergency eyewash and Shower Equipment" standard helps the user select and install emergency equipment to meet OSHA requirements.

- Verification is needed to ensure:
 - Proper water flow, quality, and temperature, along with the proper operation of the unit
 - Access to all emergency wash stations must remain clear of obstructions at all times.
 - Emergency eyewash/shower locations are clearly labeled.
 - All eye/face wash stations are also verified monthly and inspected annually by maintenance staff per ANSI Z358.1 requirements.
 - Gravity-feed units shall be maintained according to the manufacturer's instructions. They shall also be activated weekly to verify correct operation.
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