

CT P-1 and P-2 CEU Class

Emergency Shower and Eye-wash Stations

When it comes to emergency showers and eye wash stations OSHA has both general and specific regulations. The general regulation covers general requirements while specific regulations cover certain industries.

OSHA general regulation 29 CFR 1910.151(c) applies to any location that requires emergency shower and eyewash stations as a matter of first aid. In part, the regulation 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.”

Some of the industries that require eye wash stations are: Activities Utilizing an Open Surface Tank, Storage and Handling of Anhydrous Ammonia, Powered Industrial Trucks, Pulp, Paper and Paperboard Manufacturing, Telecommunications, and Hazardous Materials.

Both the general and specific regulations specify as to when and where emergency shower and eye wash stations must be made available, but they do not address minimum installation set-up requirements or operating requirements.

ANSI standard Z358.1-1990 has set up requirements for operation and installation set-up. ANSI does not have the enforcement capabilities of OSHA but it does have standards that cover when employees are exposed to hazardous materials. Included in ANSI definition of “hazardous material” are caustics along with any substance or compound that can produce adverse effects on human health and safety.

In 2004 and 2009 revisions were made to the standard. In 2009 the ISEA (International Safety Equipment Association) prepared the standard which was approved by ANSI and is now referred to as ANSI/ISEA Z358.1-2009. This standard helps with the selection and installation of emergency equipment to comply with OSHA requirements. It also establishes that tepid water, water between 60 and 100° F, must be used for emergency wash stations.

Under Section 411 of the 2003 International Plumbing Code, waste connections are not required for emergency showers and eyewash stations.

Emergency Shower Requirements: for plumbed emergency showers

- ***Heads***
 - Positioned 82” to 96” above floor.
 - Spray pattern will have a minimum diameter of 20” at 60” above the floor.
 - Flow Rate=20 gallons per minute (GPM) at 30 pounds per square inch (PSI).
 - The center of the spray pattern shall be located at least 16” from any obstruction.

- **Valves**
 - Activate in 1 second or less.
 - Stay-open valve (no use of hands).
 - Valve remains on until the user shuts it off.
- **Installation**
 - Emergency Shower shall be located in an area that requires no more than 10 seconds to reach. “Consult a medical professional to determine the appropriate distances for the harsh acids and caustics (high hazard=closer distance).”
 - Shower location shall be in a well-lit area and identified with a sign.
 - Shower shall be located on the same level as the hazard.
- **Maintenance and Training**
 - Plumbed emergency showers will be activated weekly to verify correct operation.
 - All employees who might be exposed to a chemical splash shall be trained in the use of the equipment.
 - All showers shall be inspected annually to make sure they meet with ANSI Z358.1 requirements.

Eye Wash Station Requirements: for plumbed emergency eye wash stations

- **Heads**
 - Positioned 33” to 45” above floor.
 - Positioned 6” from wall or nearest obstruction.
 - 0.4 gallons per minute (GPM) for 15 minutes for plumbed units shall provide flushing fluid at 30 PSI.
 - 0.4 gallons per minute (GPM) for 15 minutes for gravity-feed units.
- **Valves**
 - Activate in 1 second or less.
 - Stay-open valve (leaving hands free).
- **Installation**
 - Eye wash station shall be located in an area that requires no more than 10 seconds to reach. “Consult a medical professional to determine the appropriate distance for hash acids and caustics (high hazards=closer distance).”
 - The location of the eye wash station shall be in a well-lit area and identified with a sign.
 - Eye wash station shall be on the same level as the hazard.
- **Maintenance and Training**
 - A plumbed eye wash station will be activated weekly to verify proper operation
 - Gravity-feed units shall be maintained according to the manufacturer’s instructions.
 - All employees who might be exposed to a chemical splash shall be trained in the use of the equipment.
 - All eye/face wash stations shall be inspected annually to make sure they meet with ANSI Z358.1 requirements.

