



Naval Support Activity Monterey / Naval Postgraduate School



SAFETY GRAM

Emergency Eyewash/Shower

Background: *Emergency Eyewash/Shower Stations* provide on-the-spot decontamination and allow personnel to flush away hazardous substances that can cause injury. Splashing or spilling type of accidents demand prompt and effective action. The affected body part should be flushed for a minimum of 15 minutes using a clean supply of flushing fluid under low pressure. **Emergency showers** are designed to flush the user's head and body. They can also be used effectively in flushing contaminants from clothing. The emergency showers should not be used to flush the user's eyes because the high rate of water flow could cause damage. **Eye and face wash stations** are designed to flush both eyes and face simultaneously at a velocity low enough to be non-injurious to the user. Medical help should be sought immediately after the first aid has been given.

Deluge showers should be used in all chemical and cryogenic handling areas, in battery rooms and in all situations where clothing, fires or impingement burns may occur.

Employers should look for signs of hazardous materials in the work environment where workers are using personal protective equipment such as goggles and liquid proof gloves and **make sure the eye wash station and emergency shower are within the required 10 second travel time to reach the emergency eyewash/shower and are flow tested on a weekly basis and recorded.**

Emergency eyewash/showers are **NOT** a substitute for primary protective devices such as eye and face protection and protective clothing. Again, they are not an alternative to safe procedures for handling hazardous materials.

Purpose: To provide clear instruction regarding the use and required flow testing of eyewash and emergency shower units. This document serves as a SOP for eyewash and emergency shower unit operation use and testing. On-the-Job Training will be provided by supervisors / lab & shop managers. It's to note that **emergency eye wash and emergency shower units** are designed to deliver water to rinse contaminants from a user's eyes, face or body; **they are a form of first aid equipment to be used in the event of an accident.**

Scope & Applicability: Emergency Eyewash/Shower regulatory requirements and SOP's are applicable to all faculty, staff, and students, temporary/term, contract, and permanent employees as well as visitors who may require to utilize one of our Emergency Eyewash/Showers located within NSAM/NPS labs, machine shops and other facilities.

Emergency Eyewash/Shower Regulations 29 CFR 1910.151© & ANZI 358-1-2004: 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. This Standard also requires that valves be of a simple operation; that they turn off to on in one second or less, and provide hands free operation once activated. The Standard also requires that the flushing fluids be tepid.

Consideration should be given to the possible need for multiple emergency shower installations based upon access distance and the possibility that more than one person may be affected at the same time.

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EMERGENCY SHOWER/EYEWASH COMBINATION UNIT CHECKLIST



- There must be an unobstructed travel path between the hazard and the emergency shower. The emergency shower must be installed within 10 seconds of the hazard and on the same level as the hazard. It is recognized that the average person covers a distance of approximately 55 ft. in 10 seconds when walking a normal pace.
 - The water delivered by the emergency shower - eyewash unit must be tepid (lukewarm) 60 to 100 Degrees Fahrenheit.
 - The emergency shower station should provide 20 gallons (75.7 liters) of water per minute for 15 minutes.
 - The "hands free" stay open valve has to activate in one second or less.
 - The water supply has to be sufficient to supply at least 20 gallons per minute in required pattern for 15 minutes.
 - There has to be an easily accessible actuator and not be higher than 69 inches (173.3cm) above the floor.
 - The emergency shower unit has to be identified with a highly visible sign and the area well lighted.
- The emergency shower unit should be activated weekly and documented.

The 15 minute flush tip: Do not forget to install a floor drain or some other means of fluid disposal that complies with local, state and federal codes. There can be a lot of water to clean up if forgotten.

Consistent activation makes the difference between meeting minimum requirements for installed products, and having emergency equipment that is truly functional and provides the best performance in an emergency.

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EYEWASH STATION CHECKLIST

- The eye wash unit must be within 10 seconds of the hazard and on the same level as the hazard and within an unobstructed travel path.
- The valve actuator must be easy to locate and readily accessible to the user.
- The flushing fluid should be tepid and in the range of 60 degrees F to below 100 degrees F. The output flushing fluid must be within that range immediately at start-up of the equipment and remain there throughout the full 15-minute use cycle.
- There should be a controlled, low velocity flow, which rinses both eyes and is not injurious to user.
- The spray head should be protected from contaminants.
- The eye wash unit must deliver at least 0.4 gallons (1.5 liters) of water per minute for 15 minutes.
- A 'hands-free' stay open valve must activate in one second or less.
- The eye wash unit should be connected to an uninterrupted water supply delivering 0.4 GPM.
- A highly visible sign should identify the eye wash and the unit should be well lighted.



GENERAL INSTRUCTIONS

Inspection Tag for FLOW TEST: An Inspection Tag or other administrative means should be attached or adjacent to each emergency fixture noting activation testing -- as this log serves as important documentation of required weekly flow test. **NOTE:** The intent OF THE FLOW TEST is to ensure that there is a flushing fluid supply at the head of the device and clear the supply of any sediment build-up that could prevent fluid from being delivered to the head of the device and minimize microbial contamination due to sitting water.

Maintenance: Annual maintenance must be performed on eyewash and combination units as per manufacturer's instructions and ANZI Z358.1 - 2004.

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Signs: Each eyewash unit and eyewash/shower combination units shall be identified with a highly visible sign.

Training: Employees must be instructed in the location and proper use of the device. Utilize the manufacture's recommended operating procedures to train personnel on the device.

Emergency Response/First Aid Procedures:

- Do not panic.
- Shout out for help to allow co-workers to assist you.
- Get to the eye wash station and turn the eye wash on.
- Rinse both eyes with copious amounts of tepid water for a minimum of 15 minutes.
- Keep the eyelid open by using the hand thumb and forefinger to ensure adequate flushing of the eyes with tepid water for at least 15 to 20 minutes. Ensure the exposed employee rolls/blinks their eyes while using the eyewash.
- Someone should contact emergency medical personnel at 9-911.
- Continue rinsing eyes until emergency medical personnel arrive to assist.

NOTE : The emergency eye wash station is only for first aid. It is not medical treatment for chemical exposures. Make certain that you seek proper medical attention. It is important to inform the physician what you were exposed to.