How to Use an Eyewash Meeting Kit

What’s At Stake

If you have an accident at work that involves your eyes, an emergency eyewash station can protect you from serious eye damage or the loss of your sight. When you work with corrosive, irritating, toxic, or tissue-damaging materials in the workplace, it is important to have an emergency eyewash station immediately available.

What’s the Danger

THE IMPORTANCE OF EMERGENCY SHOWERS OR EYEWASH SITUATIONS

The first 10 to 15 seconds after exposure to a hazardous substance, especially a corrosive substance, are critical. Delaying treatment, even for a few seconds, may cause serious injury.

Emergency showers and eyewash stations provide on-the-spot decontamination. They allow workers to flush away hazardous substances that can cause injury.

Accidental chemical exposures can still occur even with good engineering controls and safety precautions. As a result, it is essential to look beyond the use of goggles, face shields, and procedures for using personal protective equipment. Emergency showers and eyewash stations are a necessary backup to minimize the effects of accident exposure to chemicals.

HOW TO PROTECT YOURSELF

HOW TO CHOOSE AN EMERGENCY EYEWASH SHOWER STATION

Once you have determined that an emergency station is needed, you need to define whether a portable or plumbed station is most appropriate. A portable eyewash is a self-contained ANSI-compliant emergency response product that is needed for locations that have no access to water and that can be moved to meet a facility’s rapidly evolving needs. Various types of portable eyewashes are available, including gravity-fed, air-pressurized and personal squeeze bottles.

A plumbed unit is just as it sounds – a permanent emergency response solution that is in a fixed location connected to a continuous source of potable water with sufficient flow and pressure for ANSI compliance and victim comfort.

ANSI Z358.1 requires that all emergency stations – portable or plumbed – must provide sufficient flow (flow rate depends on product type [i.e., eyewash vs. eye/face wash vs. shower]) for a minimum of 15 minutes. They are also required to be located within

10 seconds of the potential hazard. Supplemental eyewashes, such as personal squeeze bottles, are a useful solution while a victim is en route to primary equipment.

In addition to water source, ask yourself these questions when determining if a portable or plumbed unit is needed:

Does the potential hazard stay in the same location within the facility or is it mobile? If it is a static workstation, a plumbed unit is the recommended product choice and must be installed within 10 seconds of the hazard. If the hazard is mobile, such as at a construction site, a portable product is recommended and should be placed within 10 seconds of the hazard.

Does the location need tempered water (60-100° F/?16-38° C)? If the emergency fixture will be located in areas where the internal water temperature could drop below 60° F (16° C) or rise above 100° F (38° C), the water temperature will need to be regulated. Only a few manufacturers offer portable units with an option for tempered water, therefore a plumbed unit along with a tempering solution is the recommendation.

Maintenance of portable and plumbed units differ. As portable units hold stagnant water, they are required to be drained and refilled with potable water on a more frequent basis. On a weekly basis, ANSI requires a visual inspection to take place to ensure the unit is full and clean. Regarding plumbed units, ANSI mandates a weekly activation requirement to verify proper operation and flush buildup that may have formed due to stagnant water in the piping and unit.

FACTORS TO CONSIDER WHEN SELECTING/USING EMERGENCY SHOWERS AND EYEWASH STATIONS

Potentially hazardous substances in the immediate work area. All hazardous substances need to be properly identified. A review of safety data sheets (SDSs) and labels can help to evaluate the hazard.

Number of workers in an area with a hazardous substance. More than one emergency shower or eyewash station may be required in an area where many workers use hazardous substances.

Isolated workers. The installation of an audible or visual alarm can alert other workers when the emergency shower or eyewash station is being used.

Comfort and warmth. Extra overalls and foot covers should be stored near emergency showers.

Quality of the Flushing Fluid. Changing the fluid in self-contained systems frequently and cleaning the units regularly can prevent inadvertent use of contaminated fluid.

LIMITATIONS – PLUMBED EMERGENCY SHOWERS / EYEWASH STATION

Studies have shown that despite a general minimum of 15-minute flushing time being recommended, users usually flush exposed body parts five minutes or less. The reasons were always related to the extreme discomfort users experienced using cold water. In cold climates, the water temperature in indoor plumbed systems can be in the 2-7°C (35-45°F) range.

Portable, Self-Contained Eyewash Stations. Portable, self-contained eyewash stations have a limited amount of fluid. As a result, maintenance is critical to ensure that units are fully charged at all times.

These eyewash stations also require ongoing maintenance of the flushing solution. The agents used to control bacterial growth are effective for certain limited periods of time. Also, small amoebae capable of causing serious eye infections to have been found in portable and stationary eyewash stations. Consequently, it is important to

monitor the shelf life of the solution and replace the solution when it has expired.

Eyewash Bottles. Eyewash bottles or personal eyewash units supplement plumbed and self-contained stations, but in no way can replace them. They are portable and permit immediate flushing of contaminants or small particles. However, eyewash bottles are very difficult for the user to handle, especially when alone and when both eyes have been exposed. (e.g., holding the eyelids open while handling the unit is awkward). Also, one bottle cannot flush both eyes simultaneously. Since the fluid supply lasts for only a short period of time, the bottle may not be able to wash the eyes sufficiently.

WORKER TRAINING

All workers require instruction in the proper use and location of emergency showers or eyewash stations before any emergencies occur. It should never be assumed that workers are already aware of the proper procedures. Written instructions should be made available to all workers and posted beside the emergency shower and eyewash station. Part of the instructional process should include a “hands-on” drill on how to find equipment.

FINAL WORD

It is impossible to predict when an injury will harm a worker’s eyes, face or body, but it is possible to take proactive preventive measures by supplying the appropriate emergency response equipment for maximum victim comfort and response.