

# DOSH DIRECTIVE

Department of Labor and Industries  
Division of Occupational Safety and Health  
*Keeping Washington Safe and Working*

## 13.00

# Emergency Washing Facilities

**Date: April 16, 2024**

### I. Purpose

This directive updates DOSH enforcement policy related to the emergency washing requirements contained in WAC 296-800-150, First Aid, and Chapter 296-307 WAC, Part B, Accident Prevention Program, First-Aid Requirements. This directive update includes changes to align with the International Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

### II. Scope and Application

This directive applies to DOSH operations statewide. It replaces all previous instructions on this issue, whether formal or informal. It does not supersede emergency washing requirements contained in other standards.

### III. Definitions

**Emergency Washing Facilities** – Are emergency showers, eyewashes, eye/face washes, hand-held drench hoses, or other similar units.

**Corrosive** - A substance that, upon contact, causes destruction of living tissue by chemical action, including but not limited to acids with a pH of 2.5 or below, or caustics with a pH of 11.0 or above.

**Strong irritant** - A substance that will induce a local inflammatory reaction upon immediate, prolonged, or repeated contact with normal living tissue. It is **not** corrosive, but causes a reversible inflammatory effect on living tissue by chemical action at the contact site.

**Toxic Substance** - A chemical that has the inherent capacity to produce personal injury or illness to individuals by absorption through any body surface.

**Tepid** – Temperatures between 60 and 100 degrees Fahrenheit.

### IV. References

- WAC 296-800-15030 through 15040, Emergency Washing

- Chapter 296-307 WAC, Part B, Accident Prevention Program, First-Aid Requirements
- Chapter 296-901 WAC, Globally Harmonized System for Hazard Communication
- WAC 296-800-160, Personal Protective Equipment
- DOSH Compliance Manual
- DOSH Consultation Manual
- ANSI Z358.1-1998, Emergency Eyewash and Shower Equipment
- ANSI Z358.1-2009, Emergency Eyewash and Shower Equipment
- 29 CFR 1910.151(c), OSHA Emergency Washing Requirements

## V. Background

The Emergency Washing rule (WAC 296-800-15030), requires employers to provide emergency washing facilities for employees exposed to corrosives, strong irritants, or toxic chemicals. The DOSH Emergency Washing requirements are based on the requirements of the American National Standards Institute (ANSI) publication Z358.1-1998. Emergency washing facilities that are designed to meet the requirements of ANSI Z358.1-1998 or later revisions also meet the requirements of WAC 296-800-15030. The DOSH Emergency Washing requirements are more specific and more inclusive than the Federal OSHA requirements.

A large variety of emergency washing equipment is commercially available, but only some of it meets DOSH requirements. This Directive specifies how DOSH will enforce the emergency washing requirements.

The presence of an emergency washing facility does not preclude or eliminate the need for proper personal protective equipment (PPE) such as eye protection. **It is essential that adequate eye and body protection is used when exposed to hazardous materials.**

## VI. Enforcement Policy

### A. **Emergency Washing Facilities.**

When there is potential for an employee's eyes and/or major portions of the body to contact corrosives, strong irritants, or toxic chemicals, the employer must provide emergency washing facilities, including emergency eyewashes and emergency showers in accordance with WAC 296-800-15030. If major portions of an employee's body could be exposed to hazardous substances, then emergency showers **and** emergency eyewashes must be provided.

Requirements for emergency washing include both emergency showers **and** emergency eyewashes, unless otherwise stated.

Compliance and Consultation staff should be mindful of the presence of hazardous substances on all visits. The list of hazardous chemicals required as part of the written Chemical Hazard Communication (HazCom) program should be thoroughly reviewed and compared to chemicals found during the walk-around.

To determine if emergency washing facilities are required, consider whether there is a hazard, per section B below, and whether there is exposure, per section C below.

## B. Hazard Determination

### 1. Using the SDS to determine the hazard.

The best way to determine whether a chemical in the workplace is corrosive, a serious irritant, or toxic is to refer to the product's Safety Data Sheet (SDS).

Most SDSs contain a first-aid statement about flushing the skin or eyes with water for 15 minutes after contact with the material. This first-aid statement does not determine whether emergency washing facilities are required.







Emergency washing facilities are required when the SDS specifically states the material is corrosive, a serious (strong) irritant, or toxic, **and** employees are exposed (see section C. Employee Exposure). The hazard class and category (section 2 of the SDS) gives a straightforward indicator of the potential for skin or eye damage.

### 2. SDS Hazard Class, Categories, and Pictograms

Under GHS, section 2 of the SDS contains information on the hazard of the product, including:

- Hazard class (e.g. skin corrosion/irritation, serious eye damage/eye irritation, acute toxicity etc.)
- Hazard category (e.g. 1, 1A, 2A, etc)
- Pictograms (e.g. corrosion, exclamation mark, skull & crossbones, health hazard, etc.)

The following table may be used to assist in the determination of whether emergency washing facilities would be required.

Category	1	2	3	1A, 1B, 1C	1	2A	2B
<b>Symbol</b>							No symbol
<b>Signal Word</b>	Danger	Danger	Danger	Danger	Danger	Warning	Warning
<b>Hazard Statement</b>	Fatal in contact with skin	Fatal in contact with skin	Toxic in contact with skin	Causes severe skin burns & eye damage	Causes serious eye damage	Causes serious eye irritation	Causes eye irritation
<b>If exposure, emergency washing facilities required</b>	<b>Yes, eyewash &amp; shower</b>	<b>Yes, eyewash &amp; shower</b>	<b>Yes, eyewash &amp; shower</b>	<b>Yes, eyewash &amp; shower</b>	<b>Yes, eyewash</b>	<b>Yes, eyewash</b>	<b>No eyewash needed</b>

If a substance is listed as a category 2 eye irritant, the CSHO will need to make a hazard determination regarding the need for an eyewash using the information in Section B.3. below.

In addition to the classifications listed above, a material is considered toxic if it produces serious injury or illness when absorbed through any body surface. Substances that are classified as "health hazards" may create systemic toxicity if absorbed through the skin. Look for what is called a "skin notation" or "skin" or

“s” by the chemicals listed on the SDS. Chemicals with a “skin notation” should be considered toxic.

If questions arise regarding the hazard of a product that has missing or misleading information on the SDS, see section E.3.

### 3. *Classifying the Hazard without an accurate SDS.*

If the product is made or imported by an employer and a SDS is not available, and the chemical is suspected of being corrosive, a strong irritant, or toxic, then further research is needed. The CSHO should look for information on the specifications and individual chemical components of the product. The internet can be a valuable tool in conducting this research, but care needs to be taken to ensure that only reliable sources of information are referenced. Good reference materials include:

- Toxicology of the Eye, by Grant and Schuman
- NIOSH Pocket Guide to Chemical Hazards
- Threshold Limit Value (TLV) booklet by ACGIH
- Peer reviewed toxicological studies

The CSHO should look for specific documentation that the material is hazardous to the skin and eyes.

A good indicator of corrosivity of a material is a pH below 2.5 or above 11.0; however, pH in and of itself is not always definitive. The definition of *corrosive* found in Chapter 296-800 WAC is: *A substance that, upon contact, causes destruction of living tissue by chemical action, including acids with a pH of 2.5 or below or caustics with a pH of 11.0 or above.* The emphasis should be placed on the substance being “destructive to living tissue”.

There are substances that are corrosive not due to an extreme pH. For example, some organic chemicals (e.g. formaldehyde) are corrosive given their effects on living tissue. Measuring pH of a formaldehyde solution would only give variable and misleading information regarding corrosivity. The manufacturer or importer that generates the SDS must appropriately follow GHS guidelines to determine whether the product is corrosive or serious eye irritant. If the irritation score indicates it is a moderate irritant or less, emergency washing facilities are not required. **Note:** *Some corrosive material may not have a pH because it is not water soluble.*

## **C. Employee Exposure.**

Employees are considered to be exposed if there is potential that the material can get on their skin or into their eyes, regardless of the use of personal protective equipment. For example, even if a small drop of a hazardous chemical could be flicked or splashed into an employee’s eyes, the employee would be considered to have exposure to this material, and an emergency eyewash would be required.

An emergency shower is required when there is potential for major portions of an employee’s body to contact corrosive, strong irritant, or toxic substances. If the

exposed body part cannot be easily rinsed in the available facilities, an emergency shower is required.

Employee exposure includes, but is not limited to:

- Working with concentrated chemicals
- Diluting chemicals
- Adding or removing a chemical pickup tube (wand)
- Attaching dispensing valves
- Cleaning up spills and other similar activities.

If the hazardous material is completely contained in a closed loop system and only “non-drip” connectors are used, the employee would **not** be considered exposed. CSHOs should document how employees are using the chemical to show there is a potential exposure. For example, the employee pours the concentrated chemical from a gallon bottle into a 500 mL spray bottle then sprays it onto countertops. Additionally, the CSHO should note the consistency of the chemical to explain the potential exposure. For example, a material that is in a wax form might not present a potential exposure to the eyes depending on how it is being used.

#### **D. Requirements for Emergency Washing Facilities.**

##### *1. Location of Emergency Washing Facilities*

WAC 296-800-15030 requires the emergency washing facility to be located so that it takes no more than 10 seconds to reach and the travel distance should be no more than 50 feet. It also states that the emergency washing facility must be kept free of obstacles blocking their use. An employee must be able to reach the emergency eyewash facility even when material in the eyes causes temporary blindness and confusion.

A door between the exposure area and the emergency wash is considered an obstacle, regardless of the presence of a doorstop, because there is no positive control that the door will always be open during an emergency. However, if a door has a “panic bar” on the exposure side that can easily be pushed open it is not considered an obstacle. Items that block the path to the emergency washing unit should be cited as obstacles to the unit. Protective covers such as plastic caps and shower caps are only considered obstacles if the water pressure will not easily push the cover out of the way once the unit has been activated.

If possible, the emergency washing facility should not be located so close to the exposure area that the employee could continue being contaminated during the washing procedure.

##### *2. Emergency Washing Equipment that meets DOSH Requirements*

If emergency washing equipment meets the requirements of ANSI Z358.1-1998 (or later editions), it is acceptable to DOSH. Hand held squeeze bottles, some drench hoses, and many faucet-mounted devices do not meet the minimum

requirements, and are only considered supplementary equipment. CSHOs should consult the ANSI Z358.1 standard if there is ambiguity.

Faucet-mounted eyewash devices that require emergency activation of two or more valves do not meet the minimum requirements, as the two-valve activation cannot easily be done in one second or less. Additionally, ANSI Z358.1- 1998 requires the valve operation to be “simple” to activate, and a multiple-valve activation process is not considered simple. The affected person must be able to quickly activate the eyewash when distressed and temporally blinded with chemicals in both eyes.

With regard to faucet mounted devices, ANSI indicates that they will accept the findings of an independent testing lab if the Z358.1 test procedures are followed. If the manufacturer claims that the device meets the ANSI requirements they must have documentation that it has been tested.

Acceptable devices include the type that uses a two-channel faucet pipe or gooseneck where the normal faucet water and the emergency eyewash water are each delivered through a separate channel (see Appendix A, Figure 3, Example 1). Another acceptable type, if tested to ensure it meets ANSI Z358.1 requirements, is a device with two valves attached to the end of the faucet pipe (in addition to the normal faucet valve). On this device one valve (sometimes called an eliminator valve) moves side-to-side to provide water to the sink and the other valve when pulled or pushed will activate the emergency eyewash feature (see Figure 3, Examples 2 and 3). The emergency wash valve overrides the other valve to provide a single valve operation. Figure 3 includes an example of an eliminator valve. Normally the two-valve type device requires a written procedure and training to ensure the unit is ready to go when needed.

The written procedure and training are required for the ANSI compliant, faucet mounted device when the normal faucet valve (counter-mounted valve) could inadvertently be turned or adjusted. A written procedure may not be needed where the counter-mounted faucet handles are removed after presetting the proper temperature and flow rate for the hot and cold water (see Appendix A, Figure 3, Example 3). The written procedures may not be required if the hot water supply has been disconnected as recommended by some manufacturers.

The written procedures and training must cover the information required to ensure the emergency washing device is fully functional when needed. For example, if the emergency eyewash is only needed every 2 weeks when the corrosive material is diluted, the written procedures must include the steps that need to be taken to ensure the eyewash is fully functional. These steps include presetting of the water temperature and water flow in addition to what precautions are required to ensure that no one disturbs the settings until after the dilution procedure is complete.

The required temperature for flushing fluid is not specifically stated in the WISHA rule. The WISHA rule requires the quality and quantity of water that is satisfactory for emergency washing purposes. Non-potable water is allowed if it is not harmful to the employee and is labeled as “not fit for drinking”. It is recommended by ANSI Z358.1 that the flushing fluid be tepid within a range of

60 to 100 degrees F. The CSHO should cite WAC 296-800-15030 if the washing fluid is above 100 degrees F, or below 60 degrees F.

The emergency washing nozzles must be protected from contaminants. Whatever means is used to afford such protection, its removal shall not require a separate motion by the operator when activating the unit. If the protection, such as a dust cover, does not automatically come off when the device is activated, it should be cited as an obstacle blocking the use of the emergency washing device.

#### **E. Citations and Penalties.**







##### *1. Classifying probability*

Probability is determined by the frequency and likelihood of being injured by the chemical in use. Pouring one cap full of bleach into a bottle of water each day will have a very low probability whereas working all day with a caustic dip tank would have a high probability. Additional guidance is found in the DOSH Compliance Manual.

##### *2. Classifying severity*

In calculating the severity, the CSHO should look at the nature of the chemical, strength of the chemical, and any other injury-causing characteristics of the chemical. The SDS should be consulted in making this determination.

The following table may be used to assist in making this determination:

Category	1	2	3	1A, 1B, 1C	1	2A
Symbol						
Signal Word	Danger	Danger	Danger	Danger	Danger	Warning
Hazard Statement	Fatal in contact with skin	Fatal in contact with skin	Toxic in contact with skin	Causes severe skin burns & eye damage	Causes serious eye damage	Causes serious eye irritation
Skin contact severity (showers)	3	3	2 or 3	3	N/A	N/A
Eye contact severity (eyewash)	3	3	2 or 3	3	2 or 3	1

### 3. *Incorrect information in SDS*

Be aware that not all SDSs contain accurate information. Occasionally there will be missing or misleading information. If the employer has the most updated SDS and uses the information in the SDS in good faith, but the CSHO discovers there is missing or misleading information, any violations related to the SDS should be considered de minimis, and the correct information will be given to the employer in a message on the Citation & Notice (C&N). After the employer has been notified of the correct chemical hazard information (by a message on the C&N), any related violation in the future can be cited.

If a CSHO suspects that an SDS contains incorrect information, CSHOs should contact their supervisor, manager, or DOSH Compliance Operations, as appropriate, to determine whether an inspection is to be initiated with the manufacturer or importer that generated the inaccurate SDS, or if it is to be referred to Federal OSHA or other State plans.

### F. **Technical Assistance**

For technical assistance, contact DOSH Technical Services.

### VII. **Review and Expiration**

DOSH will review this Directive for applicability on an “as needed” basis, and it will remain effective until superseded or canceled

Approved: \_\_\_\_\_



Craig Blackwood, L&I Assistant Director  
Division of Occupational Safety and Health



## Appendix A – Examples of Emergency Washing Equipment

Figure 1

Example of Squeeze Bottles That Do Not Meet the Requirement for an Eyewash



[http://nwmedicalsolutions.com/cat\\_personal\\_eyewash.cfm](http://nwmedicalsolutions.com/cat_personal_eyewash.cfm)  
[http://nwmedicalsolutions.com/cat\\_eye\\_wash.cfm](http://nwmedicalsolutions.com/cat_eye_wash.cfm)

Figure 2

Example of Approved Emergency Eyewash Equipment



**Figure 3**  
**Three Examples of**  
**Faucet-Mounted Devices That Meet the Requirements for Emergency Eyewash**

**(Example 1)**



(1) This is essentially two devices in one with separate water channels for the faucet and the eyewash. The eyewash can be activated by the black bar marked “PULL” whether the faucet is on or off and thus meets ANSI Z358.1 requirements.

**Figure 3 (Example 2)**



(2) This is an example of a faucet mounted device with two valves on the device, only one of which must be engaged to activate the eyewash. A written procedure and training are important with this type of device to ensure safe emergency washing is available when needed.

**Figure 3 (Example 3)**



(3) Normal faucet valve handles preset for flow and temperature before being removed. Single activation valve on gooseneck allows this unit to meet ANSI Z358.1-1998 requirements.

**Figure 4**

**Example of a Counter-Mounted Eyewash That Meets DOSH Requirements**



**Figure 5**

**Example of a Drench Hose That Meets DOSH and ANSI Z358.1 Requirements**



**Figure 6**

**Examples of Portable Eyewash Units That Meet ANSI Z358.1 Requirements**



**ANSI**  
American National  
Standards Institute  
Certified: ANSI Z358.1-2014