

Workplace Safety **Answer** Manual



J. J. Keller
& Associates, Inc.[®]
Since 1953

This publication updates in
March/September

167-M (18825)



Workplace Safety Answer Manual

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J. J. Keller & Associates, Inc.
3003 Breezewood Lane
P.O. Box 368
Neenah, Wisconsin 54957-0368
Phone: (800) 327-6868
Fax: (800) 727-7516
JJKeller.com

Library of Congress Catalog Card Number: 2011946151

ISBN: 978-1-61099-147-6

Canadian Goods and Services Tax (GST) Number: R123-317687

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Printed in the U.S.A.

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Published & Printed by

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3003 Breezewood Lane, P.O. Box 368

Neenah, Wisconsin 54957-0368

Phone: (800) 327-6868

Fax: (800) 727-7516

JJKeller.com

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Introduction

More than 90 million Americans spend their day on the job. For years, no uniform and comprehensive provision existed for their protection against safety and health hazards. Finally, the Occupational Safety and Health Act (OSH Act) of 1970 was passed “...to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources.”

Under the Act, the Occupational Safety and Health Administration (OSHA) was created within the Department of Labor to:

- Encourage employers and employees to reduce workplace hazards and to implement new or improve existing safety and health programs;
- Provide for research in occupational safety and health to develop innovative ways of dealing with occupational safety and health problems;
- Establish separate but dependent responsibilities and rights for employers and employees for the achievement of better safety and health conditions;
- Maintain a reporting and recordkeeping system to monitor job-related injuries and illnesses;
- Establish training programs to increase the number and competence of occupational safety and health personnel;
- Develop mandatory job safety and health standards and enforce them effectively; and
- Provide for the development, analysis, evaluation, and approval of state occupational safety and health programs.

Since OSHA’s creation, the agency’s mission has been to save lives, prevent injuries, and protect the health of America’s workers. To accomplish this, OSHA establishes and enforces protective standards. Under these standards, employers must provide employees with jobs and a place of employment free from recognized hazards that are causing, or are likely to cause, death or serious physical harm.

In light of the many detailed and often complex regulatory requirements with which an employer must comply, it is not surprising that questions arise and can lead to instances of non-compliance. Unfortunately, non-compliance may mean employees are at risk. For this reason, OSHA is authorized under the OSH Act to conduct inspections and take enforcement actions.

OSHA considers inspection one of its primary tools for determining whether or not an employer is in compliance with laws and regulations. As such, the agency inspects nearly 40,000 workplaces in the United States each year. This often results in citations and fines of thousands of dollars against employers.

While avoiding an OSHA inspection may not be possible, employers can avoid OSHA citations. The best way to do this, in part, is ensuring that applicable regulatory requirements are clearly understood. This is essential if employers are to effectively implement those requirements.

How to Use This Manual

The regulations governing general industry employers are often very detailed and complex. The purpose of this manual, therefore, is to provide detail and insight into those requirements and offer assistance for mastering compliance.

FAQs

The frequently asked questions (FAQs) format of this manual highlights specific questions most often asked about OSHA general industry standards. The FAQs are divided into topics that cover a variety of workplace safety issues, including powered industrial trucks, emergency eyewashes and showers, exit routes, etc. This is intended to allow the user to quickly locate information that may be relevant to their operations. These FAQs are not to be considered complete and do not relieve employers from complying with all applicable federal, state, and local regulations.

Reference

Guidance such as Letters of Interpretation, OSHA contact information, a glossary, and an index are provided for reference purposes. While this information does not mandate requirements, it nonetheless provides vital information should additional guidance be necessary. This will help ensure continued compliance with regulatory requirements.

Still Have a Question?

While numerous compliance questions have been addressed in this manual, it is not possible to answer all questions an employer may have. However, because compliance is paramount, employers are encouraged to contact the workplace safety experts at J. J. Keller & Associates, Inc. for additional assistance. This may be done by logging in with a username and password at the following website:

www.jjkellerpublications.com

Employers may ask any OSHA-related compliance question via the “Personal Assistant” feature and receive an answer via email within one business day.

A Word of Caution

While many requirements are provided in substantial detail, this manual is not intended to take the place of the regulations found in the Code of Federal Regulations (CFR) at 29 CFR 1910, "Occupational Safety and Health Standards." Due to the constantly changing nature of these regulations, it is impossible to guarantee absolute accuracy of the material contained herein. The Publisher and Editors, therefore, cannot assume any responsibility for omissions, errors, misprinting, or ambiguity contained within this publication and shall not be held liable in any degree for any loss or injury caused by such omission, error, misprinting, or ambiguity presented in this publication.

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Emergency Eyewashes and Showers

Access

What is considered an obstructed path of travel to an eyewash or shower station?

If an employee is hindered in some way from either getting to or using an eyewash or shower station, it would be considered obstructed access under American National Standards Institute (ANSI) Z358.1-2014, “Emergency Eyewash and Shower Equipment,” standard. Specifically, the ANSI standard states that “a door is considered to be an obstruction.

Where the hazard is **not corrosive**, one intervening door can be present so long as it opens in the same direction of travel as the person attempting to reach the emergency eyewash and shower equipment and the door is equipped with a closing mechanism that cannot be locked or impede access to the equipment.”

OSHA also says that a door is an obstruction in a February 27, 2007 Letter of Interpretation. Other obstructions could include stairs, machinery (e.g., a conveyor that must be lifted), stored materials, etc. Also, the ANSI standard says that eyewash and shower stations should not be located near potential hazards that may be adjacent to the path of travel that might cause further injury.

How much space must be left clear around eyewashes and showers?

The OSHA standard only says that emergency eyewashes/showers, “be provided within the work area for immediate emergency use.” And the ANSI standard says that the path of travel to an emergency eyewash and shower must be “free of obstructions that may inhibit its immediate use.” Obviously, if any items or equipment are placed around a unit, it would likely impede *immediate* use.

Applicability

When is an eyewash and/or shower required?

The OSHA eyewash/shower requirement at 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.” [bold emphasis added]

OSHA further addresses this issue in Letter of Interpretation (LOI) dated April 14, 2008 which says, “.....the employer must determine if employees can or will be exposed

during the course of their duties to hazardous materials in such a way that the protections of an eyewash or emergency shower would be necessary. If hazardous materials are present at a worksite in such a way that exposure **could not** occur (for example, in sealed containers that will not be opened, or caustic materials in building piping), then an eyewash or emergency shower would not be necessary. However, if the building piping containing caustic materials has, at certain locations, a spigot or tap from which the contents are to be sampled or withdrawn and employees are expected to perform such tasks, then, certainly, an eyewash and/or emergency shower would be needed where this task is to occur.”

Ask:

1. Are injurious corrosive materials present onsite? (Refer to the SDS for guidance)
2. Are employees exposed?

If the answer to both of these questions is ‘yes,’ then an emergency eyewash and/or shower is required. If the answer is ‘no’ to either of those questions, then a unit would not need to be provided.

Ultimately, OSHA expects the employer to determine the level of potential risk to employees and provide protection accordingly.

When is an emergency shower required as opposed to just an eyewash?

Whether an emergency shower is needed in addition to an eyewash is dependent upon several factors, including what the Safety Data Sheet (SDS) says about eye vs. bodily injury. The need for one or the other is sometimes specified. Also, what is the possibility that the chemical could splash or spill onto the employee’s body vs. just the eyes? How much chemical are employees being exposed to, etc.? These are all questions employers need to ask during a hazard assessment. Based on the answers, an employer then must decide what the level of exposure and risk is, and provide the necessary protection accordingly.

Should an eyewash be made available to remove metal fragments, wood chips, etc.?

OSHA says that eyewashes (and showers) are intended to be used for strong acids and alkalis. That doesn’t mean, however, that they wouldn’t be useful under other circumstances. In these cases, employers should consult with a medical professional regarding the best course of treatment when workers are exposed to potential eye hazards.

Is an eyewash or shower required for small amounts of corrosive chemicals?

The OSHA standard requires that an emergency eyewash or shower be provided if the eyes or body is exposed to **any** amount of injurious corrosive material.

Battery Charging

Is an eyewash or shower required in a battery charging area?

OSHA specifically addresses battery charging areas in a number of Letters of Interpretation, including a July 26, 1994 letter which states, “At locations where hazardous chemicals are **handled** by employees (e.g. battery servicing facility), proper eyewash and body drenching equipment must be available.”

In other words, if maintenance is being done, suitable facilities for quick drenching or flushing of the eyes and body are required per 1910.151(c). On the other hand, **no** eyewash or shower is required if no maintenance is performed on powered industrial truck batteries; that is, when batteries are being charged *only*. This enforcement policy was affirmed in an Occupational Safety and Health Review Commission decision.

It would still be considered a “best practice” to have an eyewash or shower station in the charging area, and an employer’s liability insurance carrier may require one in these areas.

Capacity

Does it matter whether a 16 gallon flow station vs. a plumbed eyewash unit is used? Are both in compliance?

OSHA permits the use of a self-contained eyewash unit IF that unit can supply 15 minutes of flushing fluid, but it also must provide the required flow rate of .4 gallons per minute. A 16 gallon self-contained unit would likely be able to provide 15 minutes of flushing at the required flow rate, but must be verified through testing. It would be compliant provided all other eyewash requirements were met.

Enforcement

Is ANSI Z358.1 enforced by OSHA?

Yes, OSHA does use ANSI Z358.1-2014 in enforcement. Under 1910.151(c), OSHA requires that “suitable” facilities for the quick drenching of the eyes and body be provided where employees may be exposed to injurious corrosive materials. The Agency says in a November 1, 2002 LOI that, “If OSHA inspects a workplace and finds unsuitable facilities for quick drenching or flushing of the eyes and body, a citation under 29 CFR 1910.151(c) would be issued. When determining whether the eyewash or shower

facilities are **suitable** given the circumstances of a particular worksite, **OSHA may refer to the most recent consensus standard regarding eyewash or shower equipment...**” Without the ANSI standard, employers would find it difficult to demonstrate to OSHA exactly how their eyewash and/or shower units were “suitable” exclusive to the regulatory language under 1910.151(c) since it is limited and vague.

Flushing Fluid

What type of flushing fluid must be used for eyewashes and showers?

While OSHA does not address this issue, ANSI standard Z358.1-2014 for emergency eyewash and shower equipment defines acceptable flushing fluid as one of the following:

- Potable water,
- Preserved water,
- Preserved buffered saline solution, or
- Other medically acceptable solution manufactured and labeled in accordance with applicable government regulations.

Any of these are acceptable, but a fluid that is appropriate for the type of decontamination treatment must be chosen.

What does “potable” mean?

Potable means “safe to drink.” If water used for eyewash and showers is from a municipality, then it meets the definition of flushing fluid per the ANSI standard because it’s treated and tested to meet Environmental Protection Agency (EPA) drinking water standards. If, however, well water is used it’s suitability must be confirmed via adequate testing to ensure it meets the same EPA requirements and can thus be used for emergency eyewashes and showers.

What temperature must flushing fluid be?

OSHA does not specify a water temperature for eyewashes or showers under 1910.151(c), but addresses the issue in an April 18, 2002 Letter of Interpretation by saying, “it is the employer’s responsibility to assess the particular conditions related to the eyewash/shower unit, such as water temperature, to ensure that the eyewash/shower unit provides suitable protection against caustic chemicals/materials to which employees may be exposed.”

OSHA also says that water which is too hot or too cold will prevent the affected person from flushing the eyes for the full 15 minutes recommended in emergency situations or on most MSDSs. ANSI Z358.1-2009 provides more specific guidance by recommending a temperature range of 16-38 degrees Celcius (60-100 degrees Fahrenheit) for flushing fluid used in all eyewashes and showers.

Inspection

How often must eyewashes and showers be inspected and tested?

OSHA does not prescribe eyewash or shower inspections under 1910.151(c). However, ANSI Z358.1- 2009 says that all eyewash and shower units be inspected and maintained in accordance with the manufacturer's instructions. If the manufacturer does not prescribe a testing frequency, ANSI says that self-contained units should be visually inspected weekly to determine if the fluid needs to be changed or more should be added. Plumbed units should be tested weekly. Running units for at least three minutes is suggested to reduce microbial contamination.

Do eyewash and shower inspections need to be documented?

There are no recordkeeping requirements with regard to eyewash and shower inspections. As such, it would be up to an employer to establish a best practice based on the circumstances found in the workplace and how long other and similar records are kept.

How often do eyewash bottles need to be replaced?

OSHA does not address this issue; therefore, they should be replaced in accordance with the manufacturer's instructions.

For combination units, must both the eyewash and shower be functional for use?

ANSI Z358.1-2009 says that components of combination units must operate individually and simultaneously.

Installation

Is there a specific height at which a plumbed eyewash station must be mounted?

While the OSHA standard is silent, ANSI Z358.1-2014 states that plumbed eyewashes shall "be positioned with the nozzle(s) not less than 83.8 cm (33 in.) and no greater than 134.6 cm (53 in.) from the level on which the user stands and 15.3 cm (6 in.) minimum from the wall or nearest obstruction." Employers should also follow the manufacturer's recommended guidelines if provided.

Must eyewashes and showers have a floor drain?

Neither OSHA or ANSI requires that an eyewash or shower be positioned adjacent to adequate drainage. As such, an employer must evaluate and abate any hazards which may result. These could include slip, trip, and fall hazards from slippery conditions and pools of water, environmental contamination depending on the nature of the chemical being flushed, electrical hazards depending on the location in relation to the eyewash or shower, etc.

Do older units that don't meet the requirements in ANSI Z358.1-2014 need to be replaced?

Yes. OSHA uses the newest version of the ANSI emergency eyewash and shower standard as an enforcement tool to determine a unit's "suitability" as required under 1910.151(c). If a unit does not meet the standards outlined by ANSI, then OSHA may consider the unit to be "unsuitable," and therefore; in violation of the OSHA standard.

Location

How many eyewashes or showers must an employer have in the workplace?

OSHA does not specify where either an eyewash or shower is needed in a facility. Rather, the standard requires that, "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." Essentially, OSHA expects an employer to determine the level of potential risk to employees and provide the necessary protection accordingly. What protection is appropriate should be based on a hazard assessment and the recommendations outlined in ANSI standard Z358.1-2014.

Where must an eyewash or shower be located ?

OSHA requires under 1910.151(c) that emergency eyewashes and showers must be provided "within the work area for immediate emergency use." The agency provides no further details. However, ANSI Z358.1-2014 says that emergency eyewashes and showers be in accessible locations that require no more than 10 seconds to reach and located on the same level as the hazard and that the path of travel be "free of obstructions that may inhibit its immediate use." ANSI further states that an average person covers a distance of approximately 55 feet in 10 seconds when walking at a normal pace.

Of note, ANSI previously has said that for a strong acid or caustic an eyewash or shower should be *immediately* adjacent to the hazard. However, the 2014 version of Z358.1 states that emergency equipment should be "located adjacent to the hazard, but situated in such a manner that exposure to the splash hazard or other hazards (e.g.,

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