



INTERPRETATION: IIAR SC 2021-4, IIAR 2-2021 – Eyewash/Safety Shower/Drenching

FINALIZED: November 23, 2021

SUBJECT: Requirements for Eyewash/Flushing in Areas Other than a Machinery Room.

BACKGROUND: IIAR 2-2021 section 7.2.9 states:
“A permanent or portable means shall be provided for the provision of quick drenching or flushing of the eyes and body within or directly adjacent to the work area for immediate emergency use when maintenance occurs that involves the deliberate opening of an ammonia refrigeration system. Such means shall be indicated in the design documents, and shall comply with the temperature, flow and duration specifications of ANSI/ISEA Z358.1.”

Additionally, the informative appendix (A.7.2.9) states:
“...Quick drenching or flushing can be accomplished using eyewash/safety shower units installed within 55 ft. of the work area, drench hoses connected to a tepid water supply, portable eyewash/safety shower units or other supplemental equipment that is suitable for the purpose. The use of supplemental equipment such as drench hoses and personal wash units is intended to provide immediate flushing to support permanently plumbed or self-contained emergency eyewash and shower equipment, but not replace them...”

The portion of a typical ammonia refrigeration system where this would impose the most burden on the end user would be the example of a large roof with evenly spaced valve groups. These valve groups would have strainers that are deliberately opened for the purpose of cleaning, necessitating Eyewash/Safety Shower/Supplemental Drenching/Flushing directly adjacent to the work. The easiest item to implement would be the drench hose mentioned in A.7.2.9. This seems to refer to ANSI/ISEA Z358.1 Section 8.2 “Drench Hoses”. Section 8.2.1 states: “Drench hoses shall be designed to provide a controlled flow of flushing fluid to a portion of the body at a velocity low enough to be non-injurious to the user. NOTE: A drench hose may be considered an eyewash or eye/face wash if the device meets the performance requirements of Section 5 and/or Section 6.”



1001 N. Fairfax St., Suite 503 • Alexandria, VA 22314
703-312-4200 • F: 703-312-0065

www.iiar.org

QUESTION 1:

Is it the IIAR's position that a drench hose capable of providing 0.4 gpm of tepid water for 15 minutes (for a total of 6 gallons) located within 55 feet of the work area would meet the requirements of IIAR 2-2021 section 7.2.10 (and ANSI/ISEA Z358.1 Section 8.2 "Drench Hoses" section 8.2.1) and therefore OSHA's requirement for Medical Services and First Aid at 1910.151(c)?

ANSWER 1:

No. IIAR-2 specifies that "means shall be provided for the provision of quick drenching or flushing of the eyes and body within or directly adjacent to the work area for immediate emergency use when maintenance occurs that involves the deliberate opening of an ammonia refrigeration system." The latest version of ANSI/ISEA Z358.1 addresses the question of how much flow for what period of time is required based on the expected hazards and the equipment design and location. IIAR recognizes that every system is unique, that owners and employees should evaluate the circumstances and level of effort needed to meet the requirements of ANSI/ISEA Z358.1. IIAR cannot provide interpretation of ANSI/ISEA Z358.1 nor can we determine whether this alone satisfies OSHA requirements.