

224500 EMERGENCY PLUMBING FIXTURES

Part 1 – GENERAL

1.1 Description

A. This section details the guidelines and expectations for the design and installation of emergency eyewash, shower and drench hose installations on Johns Hopkins University Homewood Campus. Project conditions and requirements vary, thus precluding the absolute adherence to the items identified herein in all cases. However, unless there is adequate written justification, it is expected that these guidelines will govern the design and specifications.

1.2 Submittals

A. Emergency showers and eyewash stations are required in laboratories and shop areas in which the following substances are used:

1. Anhydrous Ammonia – 29 CFR 1910.111(b)(10)(iii)
2. Batteries/Battery Charging – 29 CFR 1926.441(a)(6)
3. Carcinogens – 29 CFR 1910.1003(d)(2)(iv)
4. Corrosives – 29 CFR 1910.151(c)
5. Formaldehyde – 29 CFR 1910.1048(i)(2)
6. Methylene Chloride – 29 CFR 1910.1052(i)

1.3 Quality Assurance

A. Installation of emergency eyewash stations, safety showers, and drench hoses in new and renovated buildings shall adhere to the current regulations in 29 CFR and ANSI Standard Z358.1.

B. Each eyewash, shower and drench hose shall be tested for flow rate, pressure and clarity to ensure compliance with ANSI Z358.1 has been achieved.

1. The entire facility's plumbing system shall be substantially complete and all piping shall be flushed with clean potable water with sufficient velocity to flush all visible debris and discolored water from the plumbing system prior to conducting testing procedures.

2. Test methods shall be provided to JHFRE in advance of testing.

3. JHFRE shall be notified in advance of the schedule for testing emergency eyewash, shower, and drench hose equipment.

4. Quantitative and qualitative test results shall be recorded for each unit by building and JHU room number. If construction room numbers are used, the corresponding occupancy room numbers shall be provided.

5. Results in a written report shall be provided to JHFRE prior to occupancy.

1.4 Delivery and storage

- A. Material deliveries and storage areas to be approved by Owner.
- B. Material storage to comply with manufacturer's recommendations.

Part 2 – PRODUCTS

2.1 Emergency fixtures shall be provided in accordance with HSE requirements. All emergency fixtures shall be supplied with either a dedicated mixing valve or tied into a building/floor tepid water system.

2.2 Emergency eyewash stations shall be installed at a sink. If sink is unavailable, eyewash stations shall be installed so that the water can be collected in a bucket during bump testing.

2.3 Emergency eyewashes shall be deck-mounted, hand-held hose type, dual angled spray heads with device to hold flow on.

2.4 Emergency fixtures shall be installed with backflow preventers on supplies.

2.5 Copper piping shall be used for emergency showers and eyewash stations.

2.6 Floor drains shall not be provided for emergency showers.

Part 3 – EXECUTION

3.1 Emergency showers and eyewashes must be installed on the same level as the hazard and should be free of obstructions (doors are considered obstructions). The path should also be as straight as possible.

3.3 Emergency showers and eyewashes must be installed within 10 seconds walking time from the location of a hazard or within 55'.

3.3 In an emergency situation one's vision may be impaired and therefore emergency equipment requires what ANSI describes as a "highly visible sign". This signage must be in close proximity to the emergency equipment for quick identification. Adequate lighting must also be provided in the area surrounding emergency equipment.