

WVU DESIGN GUIDELINES & CONSTRUCTION STANDARDS
DIVISION 22 – PLUMBING

SECTION 224500 – EMERGENCY PLUMBING FIXTURES

PART 1 - GENERAL

- 1.1. Any deviance from the following requirements must be approved during design by WVU Facilities Management personnel.
- 1.2. 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.
- 1.3. Emergency showers and eyewashes must be installed within 10 seconds walking time from the location of a hazard or within 55 feet.
- 1.4. 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.
- 1.5. Floor drains shall **not** be provided for emergency showers.

PART 2 – PRODUCTS

- 2.1. Emergency Eyewash, Shower and Drench Hose installations shall comply with all of ANSI Z358.1. Drench Hose units support emergency eyewash and shower stations, but cannot replace them. Drench hoses are intended solely as supplemental units providing additional protection to personnel.
- 2.2. Copper piping shall be used for emergency showers and eyewash stations.

PART 3 – EXECUTION

- 3.1. Emergency showers and eyewash stations are required in laboratories and shop areas in which the following substances are used:
 - A. Anhydrous Ammonia – 29 CFR 1910.111(b)(10)(iii)
 - B. Batteries/Battery Charging – 29 CFR 1926.441(a)(6)
 - C. Carcinogens – 29 CFR 1910.1003(d)(2)(iv)
 - D. Corrosives – 29 CFR 1910.151(c)
 - E. Formaldehyde – 29 CFR 1910.1048(i)(2)
 - F. Methylene Chloride – 29 CFR 1910.1052(i)
- 3.2. The WVU Facilities Management Project Manager and WVU Environmental Health and Safety (EHS) shall be notified in advance of the schedule for testing emergency eyewash, shower, and drench hose equipment.
- 3.3. 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.

- 3.4. 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. ANSI Z 358.1 Sections 4.5.3, 5.4.3, 6.4.3, 7.4.3, 8.2.3.2.
- 3.5. 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.
- A. 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.
 - B. Test methods shall be provided to WVU Facilities Management Project Manager and WVU Environmental Health and Safety (EHS) in advance of testing.
 - C. The WVU Facilities Management Project Manager and WVU Environmental Health and Safety (EHS) shall be notified in advance of the schedule for testing emergency eyewash, shower, and drench hose equipment.
 - D. Quantitative and qualitative test results shall be recorded for each unit by building and WVU room number. If construction room numbers are used, the corresponding occupancy room numbers shall be provided.
 - E. Results shall be provided to WVU Facilities Management Project Manager and WVU Environmental Health and Safety (EHS).
 - F. All units must comply with ANSI Z 358.1 and written results received by WVU Environmental Health and Safety prior to occupancy.

END OF SECTION 224500