DUQUESNE UNIVERSITY

PORTABLE FIRE EXTINGUISHERS:
PROGRAM AND PROCEDURES

Prepared by: Environmental Health and Safety Department

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PURPOSE

Portable extinguishers are intended as a first line of defense to extinguish incipient stage fires. They are needed even when a facility is equipped with automatic sprinklers, standpipe and hose, or other fixed protection equipment. The purposes of this program apply to the selection and distribution, inspection, maintenance and testing of portable extinguishing equipment as well as training and education for potential fire extinguisher users. The requirements given herein are minimums.

SCOPE

This program applies to all employees and contracted/sub-contracted that are trained on the proper use of a fire extinguisher. Appropriate employees include Mellon Hall/Bayer Learning Center faculty and staff, Facilities Management, Public Safety and campus-wide floor marshals.

RESPONSIBILITIES

Administration - Duquesne University has the overall responsibility for providing a place of employment free of recognized hazards and unsafe conditions, as well as complying with federal, state, and local standards and regulations.

The Deans, Directors or Department Heads - Have the overall responsibility of ensuring that all pertinent personnel are provided with the required equipment and resources to conduct safe work operations. They must also ensure that proper safety equipment and training are made available to each worker involved in the use of a portable fire extinguisher.
Environmental, Health and Safety - Has the responsibility of ensuring local, state, federal and insurance company compliance and the responsibility for guidance and technical expertise needed to oversee the program. Responsibilities also include providing training for affected personnel.

Department Supervisor - Ensure that all employees are trained in the use of a portable fire extinguisher upon initial hiring and refresher training on an as needed basis.

University Employee(s) (engaged in potentially use of a portable fire extinguisher) - Are responsible for following this Program and implementing controls that will eliminate or greatly reduce the hazards generated by their work for the protection of themselves, University employees, students and visitors.

Project Supervisor(s) for Outside Contractor(s) - Are responsible for ensuring outside contractors and sub-contractors involved in work with potential for fire (hot work, Red eTag) comply with the provisions of this Program.

APPLICABLE STANDARDS AND REGULATIONS

The campus fire safety program is governed by:
- Occupational Safety and Health Administration under 29 CFR 1910.157 “Portable Fire Extinguishers,”
- National Fire Protection Association under NFPA 10 Standard for Portable Fire Extinguishers and

DEFINITIONS

- **Class A Fire Hazard** - Ordinary combustibles: wood, cloth, paper, rubber, trash and many plastics.
- **Class B Fire Hazard** - Flammable and combustible liquids: gasoline, oil, grease and solvents.
- **Class C Fire Hazard** - Energized electrical equipment: anything “plugged in.”
- **Class D Fire Hazard** - Combustible metals: magnesium, titanium, aluminum, sodium, and potassium.
- **Class K Fire Hazard** - Cooking Appliance/Media: vegetable or animal oils and fats.

SELECTION AND DISTRIBUTION

The selection of extinguishers for a given situation is determined by the classification of anticipated workplace fires and on the size and degree of the hazard, which would affect their use. Fire extinguishers shall be provided for the protection of the building and for the occupancy hazard contained therein:

Required building protection shall be provided by fire extinguishers suitable for Class A. Protection against occupancy hazard shall be provided by fire extinguishers suitable for such Class A, B, C, or D fire potentials as may be present.

DISTANCES

The distance between extinguishers and the associated hazard depends on the fire hazard classes present:

- Class A: 75 feet
- Class B: 50 feet
- Class C: 75 to 50 feet, based on appropriate A or B hazard
- Class D: 75 feet
- Class K: 30 feet

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MOUNTING

Extinguishers shall be conspicuously located where they will be readily accessible in the event of fire. They shall be located along normal paths of travel, including exits from an area. For situations where extinguishers are mounted within a cabinet or recess and are not readily visible, locations with be indicated by a light above the cabinet location. Additional signage may also be warranted. Fire protection and fire detection equipment shall not be obstructed in any situation.

Height of mounting depends on the weight of the extinguisher as follows:

- Less than 40 pounds: top no more than 5ft off floor
- Greater than 40 pounds: top no more than 3.5ft off floor
  - 2-wheel hand trucks may be provided if greater than 40 pounds (i.e. class D in laboratories)
- 4” minimum distance from floor for all

INSPECTION, MAINTENANCE AND TESTING

Extinguishers are to be visually inspected on a monthly basis. Monthly inspections will include a check of the following items:

- Located in designated place
- No obstruction to access or visibility, signs for extinguishers if needed
- Safety seals and tamper indicators not broken or missing
- Operating instructions shall be clearly visible and facing outward
- Fullness determined by weighing or “hefting”
- Examination for obvious physical damage, corrosion, leakage, or clogged nozzle
- Pressure gauge reading or indicator in the operable range or position
- Condition of tires, wheels, carriage, hose, and nozzle checked (for wheel units)
- Mounted in accordance with NFPA Standard No. 10
- HMIS label in place

Monthly inspection records will be kept for at least one year.

Extinguishers will also be inspected annually, tested periodically, and recharged when necessary by a certified contractor. The qualifying credentials of these outside contractors will be kept on file in the EHS office and Facilities Management.

Extinguishers needing to be recharged due to use or pressure leakage will be coordinated through EHS and Facilities Management at no cost to the department or building to which the extinguisher was assigned.

The employer shall assure that stored pressure dry chemical extinguishers that require a 12-year hydrostatic test are emptied and subjected to applicable maintenance procedures every 6 years. Dry chemical extinguishers having non-refillable disposable containers are exempt from this requirement. When recharging or hydrostatic testing is performed, the 6-year requirement begins from that date.

Fire extinguisher models requiring hydrostatic testing will be tested at intervals as determined by 29 CFR 1910.157(f)(3) Table L-1. Records of hydrostatic testing, which will include the date of the test, signature of

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the person who performed the test and serial number or other identifier of the fire extinguisher will be kept until retesting.

**TRAINING AND EDUCATION**

Portable fire extinguisher training will be provided to appropriate University employees upon initial employment with annual refresher training thereafter. Appropriate employees include Mellon Hall/Bayer Learning Center faculty and staff, Facilities Management, Public Safety and campus-wide floor marshals.

Initial training will consist of a lecture and a hands-on simulation exercise. Annual refresher training will include an in-class lecture only. Employees will be trained in basic fire safety principles, proper fire extinguisher use and incipient stage firefighting.

Alternately, the lecture portion of initial and annual refresher training will be internet-based, provided through the Environmental Health and Safety organization site on Blackboard. Initial training will also include a hands-on simulation. Employees will be trained in basic fire safety principles, proper fire extinguisher use and incipient stage firefighting.

**NEW INSTALLATION**

EHS will review plans and determine the types and number of fire extinguishers required for new buildings. The purchase of fire extinguishers and fire hoses for new buildings will normally be funded from the Capital Improvements budget for the new building. The building's using department must reserve sufficient funds in the budget to cover all costs of initial outfitting for fire extinguishers. EHS will designate the placement of fire extinguishers and will coordinate with Facilities Management for installation.

Each department will be responsible for funding additional extinguishers required by changes in the type of occupancy (e.g., conversion of space from office to laboratory). EHS will determine the type and location of extinguishers and will coordinate with Facilities Management for installation.

It is the responsibility of the using department to institute security measures to prevent losses due to theft. EHS will replace missing extinguishers, billing them to the department responsible for the area.

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