
Fire Safety Assessment for Mercantile Occupancies

The fire exposures for mercantile occupancies vary based on the type of building construction, the size of the facility, the goods in storage, and the operations involved. The loss of life, equipment, stock, and buildings are the primary fire-loss concerns. The following information can assist in assessing the common fire exposures of mercantile occupancies.

Facility Design and Construction

- Is the facility in compliance with local building and fire prevention codes?
- What is the date of the last inspection of the facility by the local fire department?
- Have any renovations and/or alterations been made since the last inspection?
- Are concealed spaces properly fire stopped, or otherwise protected?
- Are there fire exposures from adjacent buildings or structures?
- Are stairways, elevator shafts, or other vertical openings enclosed with fire walls or protected with approved automatic sprinkler systems?
- Do the walls separating the store from parking structures have a fire resistance rating of not less than two hours?
- Are boiler rooms and storage rooms separated from each other and all other spaces by firewalls or fire barriers?
- Are aisles a minimum of 36 in (91 cm) wide, with at least one-half of the fire exits accessible without traveling through checkout aisles?
- Are fire exits readily accessible?
- In retail areas, is the travel distance to a fire exit or a separate smoke compartment not more than 150 ft (46 m) or 250 ft (76.2 m) for areas protected by an automatic sprinkler system?
- Are furnishings and decorations fire retardant?

Building Services

- Does the electrical system appear to be in good working condition?
- Is the electrical system adequate to handle the expected loads?
- Are electrical equipment that is used in wet areas, such as restrooms, provided with ground fault protection?
- Are gas- and oil-fired equipment maintained according to the manufacturers' recommendations?

Storage Areas

- Does the storage of commodities comply with the applicable requirements of NFPA 230, *Standard for Fire Protection for Storage*, published by the National Fire Protection Association (NFPA)?
- Are commodities in storage segregated based on their hazard classification?
- Are accumulations of combustible materials, such as paper, cardboard, or waste paper, removed from storage areas on a daily basis?

- Are flammables stored in a protected area that is separated from the rest of the facility?
- Are flammable liquids stored in containers that are listed/approved for such use?
- Are aerosols stored separately from flammable liquids?
- Are Level 2 and Level 3 aerosols stored in accordance with NFPA 30B, *Code for the Manufacture and Storage of Aerosol Products*, published by the National Fire Protection Association (NFPA)?
- Are walk-in coolers used?
- Are refrigeration systems, having more than 110 lb (50 kg) of refrigerant, provided with signage that indicates the type of refrigerant used?

Fire Suppression and Alarm Systems

- Is the building protected by a fire alarm system that provides both manual and automatic initiation devices?
- Are smoke detection and fire alarm systems provided for each enclosed room or area?
- Are fire suppression and alarm systems covered by maintenance and service contracts?
- Does the building have a sprinkler system that is installed and maintained in conformance with NFPA 13, *Standard for Installation of Sprinkler Systems*?
- Is there a sufficient number of listed/approved portable fire extinguishers and are they properly located and maintained, as required in NFPA 10, *Standard for Portable Fire Extinguishers*?
- Are employees trained in the use of portable fire extinguishers?
- Are walk-in coolers equipped with a refrigerant leak detection system?
- Are commercial-grade ranges, fryers, and related equipment protected by automatic extinguishing system systems that are listed for the exposure?

Operations

- If smoking is allowed on the premises, is it restricted to certain areas?
- Are sales areas divided into groups of similar commodities with main egress aisles separating each commodity group?
- Is there at least a 36-in (91.4-cm) separation between ignition sources (e.g., heaters) and retail displays?
- Is the display of aerosols limited in accordance with NFPA 30B for mercantile occupancies?
- Are regular testing and maintenance of refrigeration control devices, exhausters, fans, circulation, and leak detection equipment performed by a qualified refrigeration service technician?

Emergency Preparedness

- Is there an emergency action plan for the facility?
- Do employees check the exit doors and exit paths on a daily basis to ensure egress during an emergency?
- Are employees assigned to assist with the evacuation of customers?

Incendiarism and Arson

- Are all exterior areas of the business property illuminated?

- ❑ Are exterior doors and windows of the business property secured from unauthorized entry?