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Flammable & Combustible Liquids Storage Room

Flammable and combustible liquids are used in many business operations and due to the extreme fire hazard of these liquids, special storage and handling precautions must be followed.

A separate storage room is required when the quantities exceed an amount considered incidental to the daily operations and exceed the quantities permitted in safety containers and storage cabinets. The storage room can either be an inside room or cut-off room. Cut-off rooms have at least one exterior wall.

Design and Construction Requirements

Interior storage rooms have design and construction features that are outlined in detail in the NFPA 30 standard Flammable and Combustible Liquid Code. Please consult this standard for complete details.

General Requirements For An Inside Storage Room

- Interior walls and ceilings must have a two-hour rating for rooms larger than 28 m² (300 sq. ft.) and a one-hour rating for rooms 28 m² (300 sq. ft.) or less.
- An exterior wall that exposes other portions of the building or other properties requires a 2-hour fire rating.
- Each interior door must be an automatic closing fire door with a fire rating of 1 ½ hours or 2 hours if the walls are greater than 2 hours.
- Each doorsill must be raised four inches with a double ramp or grate-covered trench connected to a safe location.
- The room must be able to contain a spill, be liquid tight where the floor and walls join and pitched to drain to a safe location.

- Cut-off rooms must be equipped with automatic opening vents designed to relieve pressure created by an explosion.
- If Class I liquids are stored, the room must have explosion proof Class I Division 2 electrical components and switches. Controlling equipment should be located outside the room. If Class II and III liquids are stored, the electrical components can be suitable for general purpose.
- Either gravity or continuous mechanical ventilation is required. If Class I liquids are dispensed, mechanical ventilation is required. All air intakes and exhausts should be within 12 inches of the floor.
- Heating systems must be approved for the location.

General Flammable & Combustible Liquid Handling

- Dispensing of flammable and combustible liquids must be done by an approved pump or self-closing faucet, and have a metal catch pan for drippings.
- Drums and containers being filled must be bonded and grounded to control static electricity.



Knowing your business matters.

Ignition Sources

Sources of ignition including heat producing equipment such as welding, open flame cutting torches, grinding, and smoking materials, must be kept out of, and at least 20 feet away from, the storage room.

Housekeeping And General Storage Requirements

The area should be neat and clean, free of general storage, flammable liquid residues etc. When racking is used, 1.2m (4ft.) wide aisles are required between racking and a 2.4 m (8ft.) wide main aisle is required to reduce the potential for spilling or damaging the containers.

The quantity and storage height requirements depend on the classification of the flammable and combustible liquid. Please consult the NFPA 30 standard and the National Fire Code of Canada for complete details.

Partners In Prevention

At Federated Insurance, we believe Loss Prevention is a critical component of your Risk Management Program. Your Risk Services Coordinator and our Loss Prevention Team are available to assist you in reviewing your specific business needs and providing recommendations for loss prevention programs that will benefit you. Working together to reduce your loss exposures, ultimately impacts your bottom line!

For more information, contact your Risk Services Coordinator, our Loss Prevention Department at 1-800-665-1934, or visit our website at www.federated.ca

Federated Insurance provides this Loss Prevention Bulletin as a service to our policyholders and their business advisors. The information provided is intended to be general in nature, and may not apply in your province. The advice of independent legal or other business advisors should be obtained in developing forms and procedures for your business. The recommendations in this bulletin are designed to reduce the risk of loss, but should not be construed as eliminating any risk or loss.