



## Hazmat Safety Storage Lockers and Buildings




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### Minimum Specifications for Hazmat Storage

Provide and deliver one pre-engineered, portable hazardous material storage building to selected location. This building shall be FM approved and suitable for storage of combustible, flammable liquids and other hazardous materials. Building shall not require specific foundations or supports. All materials used in construction must be new and unused. Use of wood in construction is unacceptable. Manufacturing quality compliance shall be in accordance with ASTM, AISI, and AWS materials and fabrication standards. The building must meet the model building codes, model fire codes, safety and environmental regulations:

- Uniform Building Code
  - BOCA National Building Code
  - Standard Building Code
  - Uniform Fire Code
  - BOCA National Fire Prevention Code
  - Standard Fire Prevention Code
  - BOCA Building Officials and Code Administrators
  - National Electric Code (NEC/NFPA 70)
  - OSHA (29 CFR)
  - EPA (40 CFR)
  - California Administrative Code
  - NFPA - National Fire Protection Assoc.
  - AWS - American Welding Society
  - AISC – American Institute of Steel Construction
  - ANSI - American National Standards Institute
  - ASTM - American Society For Testing and Material
  - USPC – United States Product Code
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- Factory Mutual (FM) – All standard chemical storage buildings from SECURALL® are FM Approved (#6049).
    - Walls are Non-Fire Rated, 2-Hour Fire Rated, or 4-Hour Fire Rated (Check with Local Authority having Jurisdiction for correct wall rating needed).
    - Roof to be FM Approved Non-Fire Rated, 1.5-Hour Fire Rated, or 3-Hour Fire Rated.
  - Underwriters Laboratories (UL) – SECURALL® fire doors and window frames are UL Listed (#R18951). SECURALL® swinging doors are UL Listed (#R18828) and certified in Canada.
  - Intertek Tested and FM Approved Fire Rated Roof and Wall Design.
  -  **SMaRT Certified** (Sustainable Materials Rating Technology)  
What are SMaRT Sustainable Products?  
They are independently certified products deemed to be the best option for the overall sustainability of the environment.

## Structural Features

Building must be labeled for the storage of combustible and flammable liquids. Building must include structural warranty.

### Standard Design Loads

Roof Snow Load: 70 psf

Wind Load: Min 90 mph (B1200 and smaller), Min 170 mph (B1600 and larger)

Live Floor Load: 250 psf standard – 500 psf available

Seismic Condition: Zone 4

### **Exterior Wall Construction for B200-B1200**

Provide noncombustible walls constructed from 16-gauge steel to provide maximum durability, weather resistance, and rigidity.

### **Exterior Wall Construction for B1600-B8000**

Provide noncombustible walls constructed from 12-gauge steel to provide maximum durability, weather resistance, and rigidity.

### **Roof/ceiling Construction for All**

Provide noncombustible roof/ceiling constructed from steel to provide maximum durability, weather resistance, and rigidity. Roof must be sloped to facilitate rainwater runoff. Roof/ceiling must be permanently attached to exterior walls. *Fire rated building should include a FM Approved and Intertek Tested 1.5-Fire Rated Roof for a 2-Hour Fire Rated Building, and a 3-Hour Fire Rated Roof on a 4-Hour Fire Rated Building.*

### **Door for B200-B400**

Provide one 42" wide x 62.5" high door to facilitate the unloading and loading of hazardous material within the building. Installed with a UL Classified commercial grade keyed lockset. The door shall serve as personnel entrance and exit.

### **Door for B600-B1200**

Provide one 42" wide x 80" high door to facilitate the unloading and loading of hazardous material within the building. Installed with a UL Classified commercial grade keyed lockset. The door shall serve as personnel entrance and exit.

### **Door for B1600-B8000**

Provide one 60" wide x 80" high double door to facilitate the unloading and loading of hazardous material within the building. Installed with a UL Classified commercial grade keyed lockset. The double door shall have one active leaf to serve as personnel entrance and exit. The active leaf must be equipped with a door closer. Available on B600-B1200 upgrade.

### **Sump Containment**

Provide built-in 7-inch high spill containment sump with chemical resistant coating. Sump construction to be weather proof, noncombustible utilizing continuously welded steel sheets for maximum spill containment protection. Mechanical fastener penetrations cannot be used on sump wall skins. Sump capacity to be a minimum 25% of total storage capacity of the building.

### **Steel Floor Planking**

Floor planking above sump area shall be galvanized steel for maximum corrosion resistance. Floor planking must be designed to sustain a minimum uniformly distributed load of 250 pounds per square foot (psf). Floor planking supports must be removable to facilitate sump cleaning in the event of a spill. Permanent or welded in place floor supports are unacceptable.

**Building Base**

Provide open channel design to allow visual inspection under building. Crane/forklift opening to be provided for ease in off loading and relocation.

**Interior Finish**

Finish on ceiling, walls, and sump floor with a two-part chemical resistant gray aliphatic polyurethane. Able to withstand salt spray/chemical rub and durable to impact damage.

**Exterior Finish**

Finish on roof, walls, and doors surfaces with a two-part chemical resistant gray aliphatic polyurethane. UV protection. Able to withstand salt spray/chemical rub and durable to impact damage.

**Signs/Labeling**

Provide one permanent all metal DOT hazard classification placard with rustproof aluminum holder and one pressure sensitive NFPA 704 hazard rating sign on door.

**Anchoring**

7 gauge angle with 7/8" hole welded to building for wind and seismic anchoring.

**Air Inlet Vents**

Provide air inlet vents for natural ventilation. Natural ventilation shall provide a rate of 1 cubic foot per min per square foot of floor space. Each vent to be equipped with an exterior louver for optimum airflow and preclusion of bird and animal entry.

**Explosion Relief Construction**

Non-relieving portions of the building must be designed to resist an internal pressure of 100 pounds per square feet (psf). (If Required) A minimum of one explosion relief panel to be located on rear wall of the building to mitigate structural damage. Panel to be designed to release at a maximum internal pressure of 20 pounds per square foot (psf). Total panel vent open area to be minimum of one square foot per each 50 cubic feet of interior volume of the building. Vent opening to be equipped with expanded metal to preclude unauthorized entry. Tethered to building to prevent projection during explosion. *The determination of the need for damage limiting construction shall be in accordance with the Authority Having Jurisdiction.*

**Fire Rating**

*If a fire rated building is required, it must have an FM Approved Fire Rated Wall and Roof Design.* Wall and Roof should be Tested at Intertek Testing Laboratories. Wall ratings are either 2 or 4 hour fire Rated (Check with your local authority having jurisdiction for correct wall/roof rating needed). Roof ratings are either 1.5 or 3 hour fire rated. Building will consist of multiple layers of 3/4" Gypsum Ultracode Wallboard. Air inlet vents will have UL Listed and labeled fire dampers with louvers. Dampers have a galvanized steel frame, curtain-type galvanized steels blades and a UL Listed 165 Degree Fusible Link.

**Electrical System**

Provide Pre-wired electrical system including necessary breaker panel, relays, and switches. All interior electrical components must be rated for Class I, Division I, Division 2 Hazardous Locations. Pre-wired electrical systems to include one exterior NEMA 3R load center with appropriate circuit breakers.

**Grounding**

Provide interior and exterior grounding lugs to building. Exterior optional – grounding kit with 1/2" dia. X 8' long copper plated ground rod, 1/2" dia. Copper alloy rod clamp, and 10' - #6 bare copper wire. Conforms to OSHA requirements 1910.106.

**Interior Lighting (Optional)**

Provide interior hazardous location ceiling mount incandescent light fixture with a 150-watt lamp rated for Class I Groups C & D, Division I. Light to have heavy-duty glass with seated heavy aluminum housing and equipped with protective metal guard. Light to be activated by one exterior light switch suitable for outdoor locations. 120 volt, 1.25 amps UL Listed.

**Fire Suppression Systems (Optional)****Fire Sprinkler Assembly**

Provide fire sprinkler piping subassembly equipped with a minimum of one sprinkler head with guard and an exterior 1 ½" NPT fitting with cap.

**Dry Chemical Fire Suppression System**

Provide one pre-engineered dry chemical fire suppression system rated for Class A, B, and C fires. Systems to include fusible link detection for automatic actuation, audible alarm, and exterior manual activation. System to include interior nozzle system for total flooding application. Dry chemical agent tank and releasing device must be housed inside an exterior tamperproof enclosure per the requirements of NFPA 17. System to be equipped with automatic ventilation system shutdown upon system actuation. SECURALL® is a certified Ansul installer.

**Heating, Ventilating, and Air Conditioning System (Optional)****Heating System**

Provide explosion proof convection heater and interior mounted thermostats rated for Class I, Groups B, C, and D, Division I hazardous locations. Thermostat to have user adjustable temperature settings from 50° F to 90° F. The heater is to have a NEC Operating Temperature Code of T2A and rated for hazardous atmospheres with auto ignition temperatures at or above 536° F. UL Listed

**Explosion Proof Ventilation System**

Ventilation system to include one enclosed explosion-proof motor (120 V, 4.5 A, 60 Hz, 1-phase) rated for Class I, Division I, Hazardous Locations with non-static and non-sparking cast aluminum fan blade to preclude the ignition of hazardous vapors. Interior fan to be constructed of heavy gauge steel. Interior exhaust vent to be located within 12 inches of the floor facilitating the extraction of heavier than air vapors. Ventilation system to shutdown automatically if fire occurs. Ventilation system to be activated by one exterior switch suitable for outdoor locations. Ventilation system to provide 1 cubic foot of exhaust ventilation per square foot of floor area. UL Listed

**Air Conditioning System**

Provide explosion proof convection air conditioner rated for Class I, Groups B, C, and D, Division II hazardous locations. Air conditioning unit to be equipped with one interior thermostat bulb and one exterior temperature controller with user adjustable temperature setting from 70° F to 100° F. Protective coating to be applied to finned tube coils (evaporator and condenser), compressor and all other exposed surfaces. UL Listed

**Other options available, please ask sales associate.**