



Agri-Chemical Safety Storage Lockers and Buildings




Phone: 888-326-7890

Fax: 888-324-3780

5122 North State Rd 39, LaPorte, IN 46350

Minimum Specifications for Agri-Chemical Storage

Provide and deliver pre-engineered, portable storage building to selected location. All materials used in construction must be new and unused. Use of wood in construction is unacceptable. This building shall be FM approved and suitable for storage of Agri-chemicals. 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.
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- Underwriters Laboratories (UL) – SECURALL® fire doors and window frames are UL Listed (#R18951). SECURALL® swinging doors are UL Listed (#R18828) and certified in Canada.
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- Intertek Tested and FM Approved Fire Rated Roof and Wall Design.
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-  **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 (AG1200 and smaller), Min 170 mph (AG1600 and larger)

Live Floor Load: 250 psf standard – 500 psf available

Seismic Condition: Zone 4

Exterior Wall Construction for AG200-AG1200

Provide noncombustible walls constructed from 16-gauge steel to provide maximum durability, weather resistance, and rigidity. R-11 insulation placed in stud cavity of the wall.

Exterior Wall Construction for AG1600-AG8000

Provide noncombustible walls constructed from 12-gauge steel to provide maximum durability, weather resistance, and rigidity. R-11 insulation placed in stud cavity of the wall.

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 AG200-AG400

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

Door for AG600-AG1200

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

Door for AG1600-AG8000

Provide one 60" wide x 80" high double door to facilitate the unloading and loading of chemicals 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 AG600-AG1200 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 white 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 white aliphatic polyurethane. UV protection. Able to withstand salt spray/chemical rub and durable to impact damage.

Signs/Labeling

Provide permanent aluminum DOT placard holder, NFPA 704 hazard rating sign, Danger Pesticide Storage Area Sign, and No Smoking/No Open Flames label on front of building.

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.

Fire Rating

If a fire rated building is required, it must have an FM Approved Fire Rated Wall and Roof Design. 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 steel blades and a UL Listed 165 Degree Fusible Link.

Electrical System

Provide Pre-wired electrical system including necessary breaker panel, relays, and switches. Pre-wired electrical systems to include one exterior NEMA 3R load center with appropriate circuit breakers.

Grounding

Provide interior grounding connection 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

Provide dust/vapor resistant fluorescent light(s) ceiling mount type and rated for wet locations. Light fixture to be activated by one exterior light switch suitable for outdoor locations. Electrical requirements are 120 volt, single phase, .73 amps, 40 watt, UL listed.

Exterior Lighting

Provide one exterior vapor resistant light fixture with photocell rated for outdoor locations. Light fixture shall be fully enclosed with a gasket between the die-cast aluminum housing and lens. A lens guard shall protect the lens. Electrical requirements are 120 volt, single phase,

1.25 amps, 150 Watt, UL listed.

Receptacles

Provide one exterior GFI receptacle located in close proximity to load center. Electrical requirements are 120 volt, single phase, 20 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

Exhaust System

Ventilation system includes one UL listed through the wall 200 CFM ventilator. Exhaust blower is an industrial centrifugal type fan. Interior exhaust openings shall be located within 12 inches of the floor facilitating the extraction of heavier than air vapors. Electrical requirements are 120 volt, single phase, 2.1 amps, 1/80 HP, 1050-1550 RPM.

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.