

## 4 HR Fire Rated Bi-Directional – Safety Storage 4FR Series





*Safety Storage 4FR and 4FRE Series* hazardous material storage buildings utilize UL Approved 4-hour Bi-directional design for added protection for the storage of drums, totes, compressed gas cylinders, bottles, and other packages containing hazardous materials. 4FR Series is required for the storage of flammable materials where the storage building

is located very close to other buildings and/or property lines or when the storage building is placed within another plant structure.

***Safety Storage 4FR and 4FRE*** buildings are designed to meet or exceed the current building code requirements in the jurisdiction in which it is delivered.

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#### 4 Hour Fire Rated Bi-Directional Construction

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##### ***4 Hour Fire Rated Bi-Directional Construction – 4FR Series***

***Exterior Wall Construction:*** Weatherproof, bi-directional 4-hour fire rated non-combustible construction, per Underwriter Laboratories (“UL”) Fire Resistance Rating Design Number U490, with two (2) layers of ¾” UL Classified Ultracode fire-resistive gypsum wallboard fastened to the interior & exterior sides of load-bearing steel studs. Mineral wool batts, nominally 3” thick, minimum 4pcf, friction fit between the studs. The interior & exterior surfaces clad with corrosion resistant galvanealed steel sheets for maximum durability, weather resistance & rigidity.

***Sump Wall Construction:*** Weatherproof 4-hour fire-rated non-combustible construction, utilizing interior & exterior continuously welded heavy gauge steel sheets for maximum spill containment protection.

***Roof/Ceiling Construction:*** Weatherproof one hour fire resistive ceiling membrane construction, same as exterior walls, utilizing interior galvannealed steel sheets & continuously welded heavy gauge steel roof sheets for maximum durability and weather resistance. Roof/ceiling permanently attached to exterior walls.

##### ***4 Hour Fire Rated Bi-Directional Construction with Explosion Relief Panels – 4FRE Series***

***Explosion Relief Construction:*** Includes vent panel(s) located on back wall per NFPA 68 requirements.

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Safety Storage 4FR and 4FRE Series - Standard Features

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All *Safety Storage 4FR and 4FRE Series* Fire Rated buildings are free-standing, relocatable chemical storage and containment structure. *Safety Storage 4FR and 4FRE Series* Fire Rated structures are designed to meet critical storage, dispensing, or process applications. Each structure includes the following components for storage of flammable or combustible liquids and other hazardous materials.

- **Factory Mutual System (FM):** Approved & Labeled.
- **Three-hour fire-rated double door(s):** 60"W x 80"H, UL Classified & Labeled, equipped with UL Listed self-closer(s) and UL Listed exterior security lock(s) with keyless interior safety release lever(s).
- **Screened Air Vent(s):** Air inlet vent(s) equipped with UL Classified & Labeled 3-hour rated fire dampers with louvers & screens to provide air flow. Dampers have a galvanized steel frame, curtain-type galvanized steel blades, and a UL Listed 165°F fusible link.
- **Building Base:** Open channel construction for forklift and/or crane slings and under building inspections.
- **Internal Spill Containment Capacity:** Minimum 30% of total storage capacity. Surpasses regulatory and Factory Mutual requirements for spill containment.
- **Interior Finish:** High solids, chemical-resistant epoxy coating with a white aliphatic polyurethane topcoat.
- **Exterior Finish:** High solids, chemical-resistant epoxy undercoat with a heat reflective white aliphatic polyurethane topcoat.
- **Hold-down Brackets (4):** Structural steel angles for bolting to purchaser's foundation for seismic and wind load anchoring.
- **Static Grounding System:** One (1) exterior grounding connection, one (1) 10-foot long 5/8" diameter copper-clad steel grounding rod, one (1) #6AWG copper conductor, and grounding lug(s).
- **Signage:** D.O.T. hazard classification placard with rust-proof aluminum holder & stainless steel clips; and pressure sensitive NFPA 704 Hazard Rating Sign(s).
- **UL Classified & Labeled:** Equipped with UL Listed self-closer(s) and UL Listed exterior security lock(s) with keyless interior safety release lever(s).
- **Warranty:** 15-year structural and 1-year for options

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Safety Storage 4FR and 4FRE Series - Standard Exterior Dimensions

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*Safety Storage* hazardous material storage buildings are available in a variety of standard sizes to meet your storage capacity requirements. Our standard sizes are listed below.

- *Actual Height:* 104” – 120” (Over Height Options Available)
- *Exterior Nominal Width:* 6’, 8’, 10’, 12’, 14’
- *Exterior Nominal Length:* 8’ – 52’ (2’ Increments)

If you have a unique application or layout configuration requirement Safety Storage will utilize their Custom Modular Construction designs to fit your specific needs that are easily assembled on sight.

*\*\*\* Customize your Hazardous Material Storage Building \*\*\**