

# Storage Rack and Solid Pile Permit Requirements



## Permits

A [building permit](#) is required for storage racks that exceed 5 feet 9 inches in height (measured to the top shelf). This permit is only for installation of the racks and is separate from any other permits for work taking place.

A [fire permit](#) is required for any alterations to fire protection systems (sprinkler, alarm, etc.).

## Drawings

- Building Floor Plan
  - Rack and storage area outlines with dimensioned aisles
  - Evacuation plan showing required exits and fire access doors
  - Portable fire extinguisher locations (IFC Section 906)
- Elevation(s) or Section(s) from Floor to Roof
  - Shelf heights & maximum height of commodities to be stored
  - Clearance to roof structure and sprinkler heads
- Structural Plans & Details (PE Stamp required for racks 8 feet or taller)
  - [Design criteria](#)
  - Rack elevations
  - Connection details
  - Anchorage details
  - Statement of special inspection (8 feet or taller)
  - Plaque requirements (ANSI MH16.1-2011 Section 1.4.2)

## Documents

- Signed Application Form (CMI Tenant Improvement)
- Combustible Stock Storage Questionnaire (Page 2)
- Structural calculations for racks & anchorage (8 feet or taller)
- Manufacturer's specifications & installation instructions
- Detailed evaluation of existing sprinkler features including: system type, system basis of design, sprinkler information (type, k-factor, temperature) (when required)

## Project Close-Out

- Submit special inspection final summary letter (8 feet or taller)
- A [fire code operational permit](#) is required for High Piled Storage after completion of work (WSFC 105.6.23)
- Provide certificate of compliance to owner (8 feet or taller)

## Additional Information

Racks 8 feet tall or greater require site-specific structural engineering, owner-provided third party Special Inspection and a certificate of compliance (WSBC 1705.13.7 and 2209).

Racks less than 8 feet tall (measured to the top shelf) may be installed per manufacturer's specifications & installation instructions.

Reuse of existing storage racks in a new location must meet current IBC loading criteria and may require new engineering.

High-Piled Combustible Storage is storage of combustible materials in closely packed piles or pallets, in racks or on shelves where top of storage is greater than 12 feet in height (to top of material). For High Hazard commodities, High-Piled Storage occurs at 6 feet in height.

High-piled storage generally requires sprinklers, depending on the size of storage and type of materials being stored. See WSFC Chapter 32 and Table 3206.2 for additional information. Buildings built prior to 1995 typically do not have Early Suppression Fast Response (ESFR) Sprinkler heads.

High-piled storage may require fire department access doors based on area and commodity class (IFC 3206). If required, access doors shall have markings provided every 125 linear feet on exterior walls that face required fire apparatus access roads. Existing buildings with no occupancy change allows up to 200 feet spacing.

## For more information, contact us:

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# Combustible Stock Storage Questionnaire



Business Name: \_\_\_\_\_

Business Address: \_\_\_\_\_

Form Completed By (Name, Firm & Job Title): \_\_\_\_\_

Signature: \_\_\_\_\_

*This questionnaire is to assist in determining the Fire Code requirements for the storage of \*High Piled Combustible Stock\* at your facility. These requirements will be based on WSFC Chapter 32 and NFPA 13. This form should be completed by a qualified person having the necessary code knowledge required for Combustible Stock Storage, for example an architect or engineer of record, code consultant, insurance underwriter or fire protection engineer.*

**1. Description of storage:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**2. Commodity Class:** \_\_\_\_\_

Source: WSFC \_\_\_\_\_ NFPA \_\_\_\_\_

Aerosol Level III:  Yes  No

Class I, II, III, IV, High Hazard (V): \_\_\_\_\_

**3. Storage area is open to:**

Public (customers)  Private (staff only)

**4. Total Area of storage:**

- 0 - 500 sq ft  100,001 - 300,000 sq ft  
 501 - 2,500 sq ft  300,001 - 500,000 sq ft  
 2,501 - 12,000 sq ft  500,001 sq ft and over  
 12,000 - 20,000 sq ft  2 hour separation

**5. Method of storage (check all that apply)**

- Encapsulated in plastic
- Non-encapsulated
- Wooden pallets
- Plastic pallets (type)
- On racks with shelves (check one)
  - solid  not solid
- Bin box made of: (check one)
  - metal  wood  plastic
- Solid pile that is: (check one)
  - stable  unstable

**For rack storage complete sections 6-8:**

**6. Types of racks: (check all that apply)**

single-row  double-row  multiple rows

**7. Aisle width between racks and storage:** \_\_\_\_\_ feet

**8. Maximum height of top shelf:** \_\_\_\_\_ feet

If 8'-0" or greater, provide name of third-party special inspection agency: \_\_\_\_\_

**For solid pile storage complete section 9:**

**9. Maximum cubic feet per pile:**

- 0 - 50,000 cu ft  50,001 - 100,000 cu ft  
 100,001 - 200,000 cu ft  200,001 - 400,000 cu ft

**10. Sprinkler information:**

- a. Ceiling sprinklers:  Existing  Added  None
- b. Ceiling sprinkler density: \_\_\_\_\_
- c. Ceiling height in storage area: \_\_\_\_\_ feet
- d. Rack sprinklers:  Yes  No
- e. Temperature rating of sprinkler head in:
  - Ceiling \_\_\_\_\_  Racks \_\_\_\_\_
- f. Distance from top of storage to fire sprinkler deflector: \_\_\_\_\_ feet

**11. Maximum height of product being stored:** \_\_\_\_\_ feet

**12. High piled combustible storage:**  Yes  No

**If yes, complete sections 13-19:**

**13. Smoke/heat vents:**  Yes  No  
Ratio: \_\_\_\_\_ square feet

**14. Draft curtains:**  Yes  No  
Section size: \_\_\_\_\_ sq ft  
Depth:  4 feet  6 feet  8 feet

**15. Column/wall fire protection required:**  
 Yes  No  Rating: \_\_\_\_\_ hour(s)  
Listed/tested assembly, if rated: \_\_\_\_\_

**16. Smoke detection system:**  Yes  No

**17. Access roadways within 150 feet of all portions of exterior walls:**  Yes  No

**18. Access doors provided every 125 lineal feet on exterior walls facing access roadways:**  Yes  No

**19. Automated or specialty storage present:**

- Automated Storage (WSFC 3209)
- Specialty Storage (WSFC 3210)
- Neither

**20. Alternate materials and methods requested:**

Yes  No