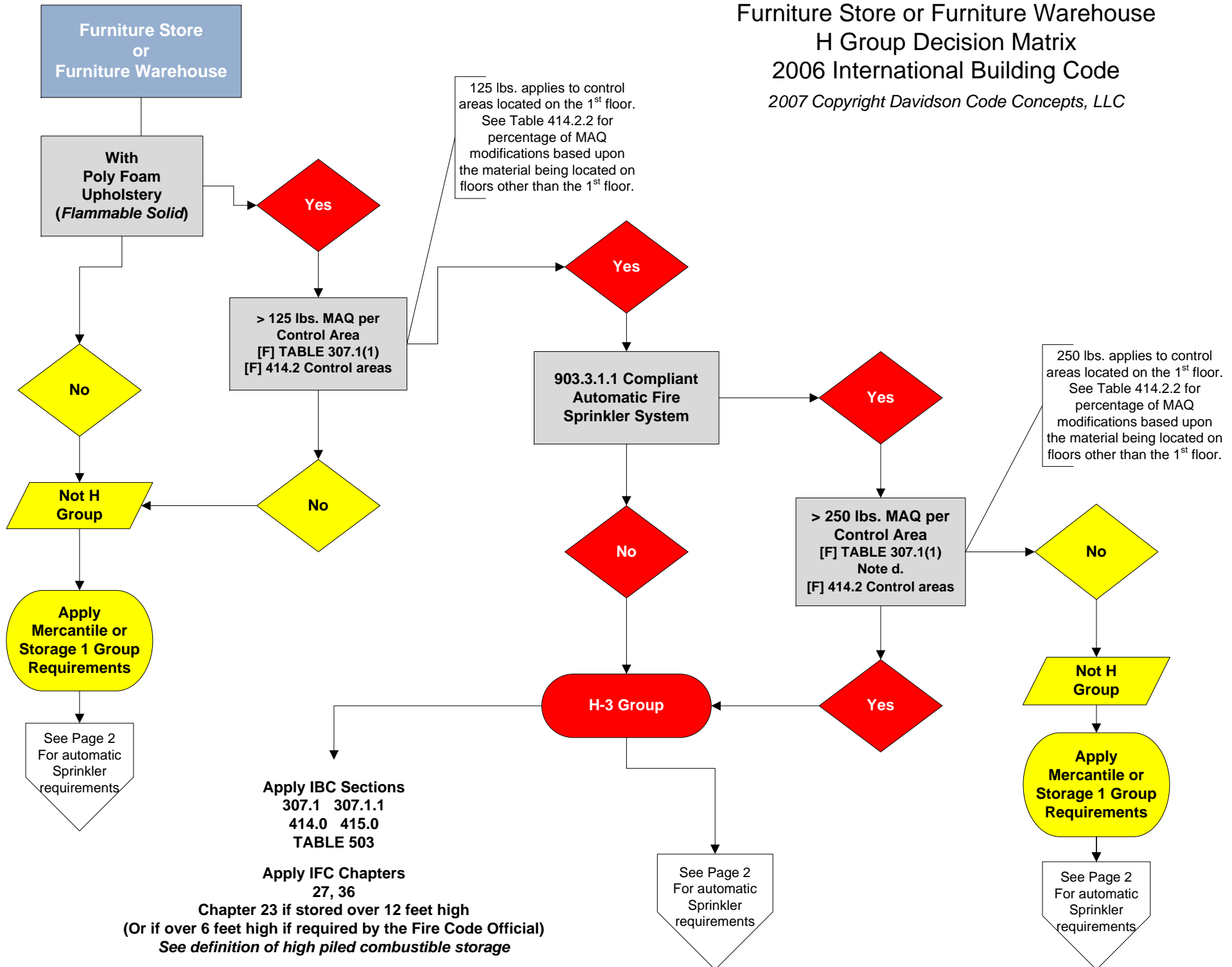


Furniture Store or Furniture Warehouse  
H Group Decision Matrix  
2006 International Building Code  
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## Automatic Sprinkler System Requirements

Group H  
Group M  
Group S-1

### NFPA 13 Design Criteria

#### IBC

##### [F] 903.2.4 Group H.

Automatic sprinkler systems shall be provided in high-hazard occupancies as required in Sections 903.2.4.1 through 903.2.4.3.

##### [F] 903.2.4.1 General.

An automatic sprinkler system shall be installed in Group H occupancies.

#### IBC

##### [F] 903.2.6 Group M.

An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy where one of the following conditions exists:

1. Where a Group M fire area exceeds 12,000 square feet (1115 m<sup>2</sup>);
2. Where a Group M fire area is located more than three stories above grade plane; or
3. Where the combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m<sup>2</sup>).

##### [F] 903.2.6.1 High-piled storage.

An automatic sprinkler system shall be provided in accordance with the International Fire Code in all buildings of Group M where storage of merchandise is in high-piled or rack storage arrays.

#### IBC

##### [F] 903.2.8 Group S-1.

An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy where one of the following conditions exists:

1. A Group S-1 fire area exceeds 12,000 square feet (1115 m<sup>2</sup>);
2. A Group S-1 fire area is located more than three stories above grade plane; or
3. The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m<sup>2</sup>).

#### IBC

##### 413.1 General.

High-piled stock or rack storage in any occupancy group shall comply with the International Fire Code.

#### IFC

##### CHAPTER 23

##### HIGH-PILED COMBUSTIBLE STORAGE

##### 2306.4 Automatic sprinklers.

Automatic sprinkler systems shall be provided in accordance with Sections 2307, 2308 and 2309.

# Furniture Store or Furniture Warehouse H Group Decision Matrix 2006 International Building Code

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## AUTOMATIC SPRINKLER SYSTEM DESIGN

NFPA 13- 2002 edition classifies upholstered furniture as a Group A plastics material (See Section 5.6.3 and Table A.5.6.3 and Table A.5.6.4.1).

The minimum water supply and sprinkler discharge requirements for mercantile showrooms are found in Section 11.2.3 for general occupancies which shall be Ordinary Hazard Group 2 (OH-2) Density.

For storage occupancies the water flow design requirements are in Section 12.3.3 for rack storage up to 25 feet, Section 12.3.5 for rack storage over 25 feet, and Section 12.1.10 for solid pile up to 12 feet in height

**CHECK WITH THE MANUFACTURER, HIGHER DENSITIES SUCH AS THOSE FOR EXTRA HAZARD MAY BE RECOMMENDED**  
(<http://www.pennfoam.com/products/products05.html>)

### \*\* IMPORTANT NOTE

**If the storage is being regulated as HIGH PILED COMBUSTIBLE STORAGE as per Chapter 23 of the International Fire Code:**

**“HIGH-PILED COMBUSTIBLE STORAGE.** Storage of combustible materials in closely packed piles or combustible materials on pallets, in racks or on shelves where the top of storage is greater than 12 feet (3658 mm) in height. When required by the fire code official, high-piled combustible storage also includes certain high-hazard commodities, such as rubber tires, Group A plastics, flammable liquids, idle pallets and similar commodities, where the top of storage is greater than 6 feet (1829 mm) in height.”

**You must apply the automatic sprinkler system design requirements from IFC Chapter 23 in addition to and/or in replace of the requirements found in NFPA 13.**