

MISCELLANEOUS COMBUSTIBLE MATERIAL STORAGE INSIDE AND OUTSIDE

CODE SECTIONS

International Fire Code 2006 Edition

MISCELLANEOUS COMBUSTIBLE MATERIALS STORAGE

315.1 General. Storage, use and handling of miscellaneous combustible materials shall be in accordance with this section. A permit shall be obtained in accordance with Section 105.6.

315.2 Storage in buildings. Storage of combustible materials in buildings shall be orderly. Storage shall be separated from heaters or heating devices by distance or shielding so that ignition cannot occur.

315.2.1 Ceiling clearance. Storage shall be maintained 2 feet (610 mm) or more below the ceiling in non-sprinklered areas of buildings or a minimum of 18 inches (457 mm) below sprinkler head deflectors in sprinklered areas of buildings.

315.2.2 Means of egress. Combustible materials shall not be stored in exits or exit enclosures.

315.2.3 Equipment rooms. Combustible material shall not be stored in boiler rooms, mechanical rooms or electrical equipment rooms.

315.2.4 Attic, under-floor and concealed spaces. Attic, under-floor and concealed spaces used for storage of combustible materials shall be protected on the storage side as required for 1-hour fire-resistance-rated construction. Openings shall be protected by assemblies that are self-closing and are of noncombustible construction or solid wood core not less than 1.75 inches (44.5 mm) in thickness. Storage shall not be placed on exposed joists.

Exceptions:

1. Areas protected by approved automatic sprinkler systems.
2. Group R-3 and Group U occupancies.

315.3 Outside storage. Outside storage of combustible materials shall not be located within 10 feet (3048 mm) of a property line.

Exceptions:

1. The separation distance is allowed to be reduced to 3 feet (914 mm) for storage not exceeding 6 feet (1829 mm) in height.
2. The separation distance is allowed to be reduced when the fire code official determines that no hazard to the adjoining property exists.

EXPLANATION

No storage is allowed underneath a stairway unless one of two measures is taken to ensure the stairwell will not burn and collapse. The first is to completely enclose the underneath section of the stairway utilizing one-hour fire-resistive construction. A typical one-hour rated fire construction consists of a minimum of two sheets of 5/8 inch thick Type "X" sheetrock, separated by an air gap, and a forty-five minute fire rated door. The second means of protecting the stairway is to install automatic fire sprinklers under the stairway.

No storage is allowed underneath stairways in an exit enclosure in any circumstance.

RATIONALE

In the event of a fire, occupants must be able to proceed down the stairway to an exit. Without any combustible storage under the stairway, no fires should start, as there is nothing to burn. However, if combustibles are stored under the stairway, a fire could start underneath a stairway causing the stairway to collapse thus destroying the means of escape. If however, by either enclosing the underneath of the stairway with one-hour fire-resistive construction or by installing automatic fire sprinklers, the fire should be held in check thus allowing sufficient time for the occupants to escape.

If the stairway is located inside an exit enclosure, no storage what so ever is allowed under the stairs. The intent here is that the exit enclosure is constructed to maintain a smoke-free exiting environment for the occupants. If we allow storage under the stairs, and a fire occurred in this storage, smoke could quickly envelope the enclosure thus creating a hazardous exit path.