

Store your idle pallets according to NFPA standards



Many businesses that store and ship goods or supplies use pallets at their facilities. These pallets are often stored when not in use, but stockpiling them could present a fire hazard. That's because wood pallets often dry out, and their edges become frayed and splintered.

When stacked wood pallets become dry, even a small ignition source can spark a quickly spreading fire that may cause a devastating loss. However, you can help reduce this risk by strictly limiting the number of pallets you store indoors, or by employing a sprinkler system when it's called for. There's also the option of moving idle pallets outside and away from your building.



The NFPA is the recognized authority on how to prevent fires involving idle wood and plastic pallets.

The National Fire Protection Association (NFPA) is a recognized authority on how to help prevent fires involving idle wood and plastic pallets, and Nationwide® encourages you to familiarize yourself with NFPA guidelines. The tables featured in this brochure are reprinted with permission from NFPA 13-2016, Standard for the Installation of Sprinkler Systems, Copyright © 2015, and NFPA 1-2018, Fire Code, Copyright © 2017, National Fire Protection Association, Quincy, MA. This reprinted material is not the complete and official position of the NFPA on the referenced subject, which is represented only by the standards in their entirety which can be obtained through [NFPA](https://www.nfpa.org).

General storage tips

The NFPA Fire Code states that pallet storage arrangements should be either outside, in a detached structure, or in a properly sprinklered facility.

There are exceptions to the sprinklering requirement, however, as detailed on Page 2, in the section titled "When storing wood pallets indoors."

In general, the NFPA advises that you:

- Store idle pallets flat, arranged in stable piles and in an orderly fashion
- Immediately remove and scrap any pallets found to be damaged
- Choose an area for pallet storage that's separate from other storage areas
- Locate pallet storage away from compressed gas cylinder or propane tank storage
- Store pallets away from your building's structural supports
- Never allow piles of pallets to block a means of egress

Table 12.12.1.2(b) Control Mode Special Applications (CMSA) Sprinkler Protection for Indoor Storage of Idle Wood Pallets

Storage arrangement	Maximum storage height (feet)	Maximum ceiling/roof height (feet)	K-factor/ orientation	Type of system	Number of design sprinklers	Minimum operating pressure	
						psi	bar
On floor	20	30	11.2 (160) Upright	Wet	15	25	1.7
				Dry	25	25	1.7
			16.8 (240) Upright	Wet	15	15	1.0
				Dry	25	15	1.0
			19.6 (280) Pendent	Wet	15	16	1.1
		35	19.6 (280) Pendent	Wet	15	25	1.7
		40	19.6 (280) Pendent	Wet	15	30	2.1

Table 12.12.1.2(c) ESFR Sprinkler Protection for Indoor Storage of Idle Wood Pallets

Type of sprinkler (orientation)	Location of storage	Nominal k-factor	Maximum storage height (feet)	Maximum ceiling/roof height (feet)	Minimum operating pressure	
					psi	bar
ESFR (pendent)	On floor or rack without solid shelves	14.0 (200)	25	30	50	3.4
			25	32	60	4.1
		16.8 (240)	25	30	35	2.4
			25	32	42	2.9
			35	40	52	3.6
		22.4 (320)	25	30	25	1.7
			30	35	35	2.4
			35	40	40	2.7
			25	30	15	1.0
		25.2 (360)	30	35	20	1.4
35	40		25	1.7		
ESFR (upright)	On floor		14.0 (200)	20	30	50
		20		35	75	5.2
		16.8 (240)	20	30	35	2.4
			20	35	52	3.6

Designating an outdoor pallet storage area

When designating an outside storage area for your pallets, make sure the location is protected from unauthorized access and that it's clean and well-maintained. Idle pallet stacks should not exceed 15 feet in height or cover an area greater than 400 square feet. A minimum distance of 8 feet should be maintained between separate stacks of wood pallets, and stacks should be no closer than 8 feet to any property line.

NFPA guidance for safe outdoor pallet storage

Refer to the tables below and at the top of p. 4 from NFPA 1-2018, *Fire Code*, to understand the required clearances for stacking pallets in their outdoor storage area.

Table 34.10.3.2(a) Required Clearance Between Outside Idle Pallet Storage and Other Yard Storage

Pile Size	Under 50 pallets	50 - 200 pallets	Over 200 pallets
Minimum Distance (Feet)	20	30	50

