

NFPA 13-Proposed 2025 Edition

Standard for the Installation of Sprinkler Systems

TIA Log No.: 1782

Reference: Table 23.3.1 and Footnote c

Comment Closing Date: July 24, 2024

Submitter: Cary Webber, The Reliable Automatic Sprinkler Company, Inc.

www.nfpa.org/13

1. Revise Table 23.3.1, and revise footnote “c” to read as follows:

Table 23.3.1 ESFR Sprinkler Ceiling-Only Options for Solid Pile; Palletized; and Single-, Double-, and Multiple-Row Rack Storage

Commodity ^a	Maximum Ceiling/Roof Height		Maximum Storage Height		ESFR Sprinklers – Pendent Orientation Minimum Operating Pressure psi (bar)				ESFR Sprinklers – Upright Orientation Minimum Operating Pressure psi (bar)	
					Nominal K-Factors				Nominal K-Factors	
	ft	m	ft	m	14 (20 0)	16.8 (240)	22.4 (320)	25.2 (360)	14 (200)	16.8 (240)
...	...	...	...	...	...	...	...	...	...	...
Exposed expanded Group A plastics	25	7.6	20	6.1	—	—	—	30 (2.0) ^{b,c} or 60 (4.1) ^d	—	—
	30	9.1	25	7.6	—	—	—	30 (2.0) ^c or 60 (4.1) ^d	—	—
	—	—	—	—	—	—	—	—	—	—
	35	10.7	30	9.1	—	—	—	60 (4.1) ^{b,c,d}	—	—
	<u>40</u>	<u>12.2</u>	<u>25</u>	<u>7.6</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>60</u> <u>(4.1)^d</u>	<u>—</u>	<u>—</u>
	40	12.2	35	10.7	—	—	—	60 (4.1) ^{c,d}	—	—
	45	13.7	40	12.2	—	—	—	—	—	—

^aSee 20.3.2 for information regarding protection of lower hazard commodities with higher hazard criteria.

^bThese options are based on the testing criteria of the higher hazard and have not been specifically tested.

^cThese options apply to in-rack storage when all requirements in Section 23.4 are applied including vertical barriers.

^dThis option applies to palletized and solid pile storage in a closed array.

Substantiation: Revise table 23.3.1 criteria for Exposed Expanded Plastic Storage:

- (Existing) Row 1: Add footnote callout “b” to 30 psi K25.2 option for 25’ max ceiling/20’ storage.
- (Existing) Row 2: No changes.
- (Existing) Row 3: Delete existing blank row.
- (Existing) Row 4: Change current footnote callout from “c, d” to be “b, c”.
- Add new row for 40 max ceiling/25’ storage with 60 psi, K25.2 option with footnote “d.”
- (Existing) Row 5: Remove footnote “d” from 60 psi, K25.2 option.
- (Existing) Row 6: Delete row since it contains no protection options.

Revise footnote “c” to read: “These options apply to **in-rack storage** when all requirements in Section 23.4 are applied including vertical barriers.

The max 25’ storage/40’ building limit for solid pile/palletized EEP has been in the standard beginning with the 2007 edition. When requirements for ESFR protection of solid-piled and rack storage were consolidated to a single table in 2022, the storage heights were not included and the 25 ft (7.6 m) limit for solid piled EEP was lost. In 2025 the storage heights are being added back, but the 25’ limit for solid pile EEP was overlooked.

Emergency Nature: The standard contains an error or an omission that was overlooked during the regular revision process.

There is currently no ESFR protection criteria available for solid-pile storage of exposed expanded plastic over 25 ft (7.6 m); without this correction to the table, that is not apparent and substandard installations could result.

Anyone may submit a comment by the closing date indicated above. Please identify the TIA number, state whether you SUPPORT or OPPOSE the TIA along with your comment, and forward to the Secretary, Standards Council. [SUBMIT A COMMENT](#)