

# Interpretatiebesluit 2021-01

Betreft  
Low-Piled Storage volgens NFPA 13:2019

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## Interpretatievraag:

De toepassing van “low-piled storage” volgens NFPA 13:2019 levert in de praktijk onderstaand probleem op.

De definitie van low-piled storage in NFPA 13:2019 luidt:

**3.3.118\*** Low-Piled Storage. Solid-piled, palletized, rack storage, bin box, and shelf storage up to 12 ft (3.7 m) in height.

Via het sterretje volgt de aanwijzing:

**A.3.3.118 Low-Piled Storage.** This definition is not intended to address allowable design approaches and protection schemes.

Vervolgens valt *low-piled storage* net als *miscellaneous storage* onder **4.3 classification of hazard**.

De paragraaf over low-piled storage daarbinnen is beperkt:

### **4.3.1.5 Low-Piled Storage.**

**4.3.1.5.1** For storage of Class I through Class IV commodities 12 ft (3.7 m) or less in height that do not meet the definition of *Miscellaneous Storage* that is on solid shelf racks, in-rack sprinklers shall be provided in accordance with 25.6.1, and ceiling sprinkler protection shall be provided in accordance with this chapter for the applicable occupancy hazard criteria.

**4.3.1.5.2** For storage of Group A plastic commodities 5 ft (1.5 m) or less in height that do not meet the definition of *Miscellaneous Storage* that is on solid shelf racks, in-rack sprinklers shall be provided in accordance with 25.6.1, and ceiling sprinkler protection shall be provided in accordance with this chapter for the applicable occupancy hazard criteria.

Clausule 4.3.1.5 geeft dus alleen een “oplossing” voor *low-piled storage* die niet aan de definitie voldoet van *miscellaneous storage* indien er sprake is van een opslag in stellingen met gesloten legborden.

Bovendien is deze oplossing weinig praktisch, want er wordt verwezen naar clausule **25.6.1** voor stellingsprinklers en dit *chapter 4* voor de daksprinklers.

**Conclusie:** Op basis van NFPA 13:2019 blijkt dus dat, afgezien van de onpraktische oplossing in clausule 4.3.1.5, alle *low-piled storage* moet voldoen aan de definitie van *miscellaneous storage*. En die definitie kent belangrijke beperkingen:

**3.3.123\*** *Miscellaneous Storage.* Storage that does not exceed 12 ft (3.66 m) in height, is incidental to another occupancy use group, does not constitute more than 10 percent of the building area or 4000 ft<sup>2</sup> (370 m<sup>2</sup>) of the sprinklered area, whichever is greater, does not exceed 1000 ft<sup>2</sup> (93 m<sup>2</sup>) in one pile or area, and is separated from other storage areas by at least 25 ft (7.62 m).

Bovenstaande problemen met *low-piled storage* leidt tot de volgende interpretatievraag:

Hoe moet volgens NFPA 13:2019 worden omgegaan met *low-piled storage* in die situaties waarbij *niet* aan de randvoorwaarden van *miscellaneous storage* kan worden voldaan?

### **Antwoord:**

Op basis van mailwisselingen met NFPA is onderstaand antwoord samengesteld.

Van belang is te beseffen dat het hier een fout in NFPA 13:2019 betreft, getuige de finale reactie van NFPA:

“The 2019 edition of NFPA 13 is missing criteria for low-piled storage. This will be corrected in the 2022 edition of the standard.

Certain low-piled storage is directed to use Table 4.3.1.7.1.

The 2016 edition might be easier to follow since the information is located in Chapter 13. If you have access to the handbook, the workflow provided provides a very nice visual to help determine how to protect certain commodities.”

Dat betekent dat NFPA 13:2016 inclusief het bijbehorend handboek moet worden gevolgd. Dat vereist wel zorgvuldigheid, omdat met de 2019 versie van NFPA 13 de opbouw van hoofdstukken en paragrafen volledig op de schop is gegaan en het dus niet een kwestie is: lees voor clause X uit de 2019 versie dezelfde clause X uit de 2016 versie. Daarom wordt de schijnbaar eenvoudige interpretatie (“hanteer NFPA 13: 2016”) onderstaand uitgewerkt.

De basis is NFPA 13:2016 hoofdstuk 13 Protection of Miscellaneous and Low-Piled Storage

Op basis van uitsneden uit het *handbook NFPA 13:2016* (waarbij de tekst op witte achtergrond de normtekst is en de ingekaderde tekst op gele achtergrond de handboek toevoeging) is onderstaand de route aangegeven hoe om te gaan met low-piled storage.

#### **13.1 General.**

##### **13.1.1**

This chapter shall apply to any of the following situations:

- (1) Miscellaneous storage of Class I through Class IV commodities up to 12 ft (3.7 m) in height
- (2) Miscellaneous storage of Group A plastics up to 12 ft (3.7 m) in height
- (3) Miscellaneous storage of rubber tires up to 12 ft (3.7 m) in height
- (4) Miscellaneous storage of rolled paper up to 12 ft (3.7 m) in height
- (5) Storage of Class I through Class IV commodities up to 12 ft (3.7 m) in height as directed by [14.2.3.1](#) and [16.2.1.2.1](#)
- (6) Storage of Group A plastics up to 5 ft (1.5 m) in height as directed by [15.2.1](#) and [17.2.1.1](#)

As designated by the new title for this chapter, the protection criteria in [Table 13.2.1](#) are permitted to be used with a number of storage situations as outlined in 13.1.1(1) through 13.1.1(6), which include both miscellaneous storage and certain low-piled storage configurations.

De items (5) en (6) slaan op *low-piled storage*. Daarmee zijn de doorverwijzingen naar [14.2.3.1](#), [16.2.1.2.1](#), [15.2.1](#) en [17.2.1.1](#) relevant en onderstaand weergegeven.

### Class I t/m IV commodities

#### 14.2.3.1

The protection criteria for storage up to and including 12 ft (3.7 m) shall be the same as for miscellaneous storage selected from Chapter 13.

Deze clausule hoort bij *Chapter 14 Protection for Palletized, Solid-Piled, Bin Box, Shelf, or Back-to-Back Shelf Storage of Class I through Class IV Commodities.*

#### 16.2.1.2.1

The protection criteria for storage up to and including 12 ft (3.7 m) shall be the same as miscellaneous storage from Chapter 13.

Deze clausule hoort bij *Chapter 16 Protection of Rack Storage of Class I Through Class IV Commodities.*

Duidelijke conclusie: voor *Class I t/m IV commodities* zijn de sprinkler prestatie-eisen voor low-piled storage t/m 3,7 m dezelfde als die voor *miscellaneous storage*, maar de randvoorwaarden behorende bij *miscellaneous storage* gelden niet. De sprinkler prestatie-eisen voor *miscellaneous storage* zoals weergegeven in de 2019 versie van NFPA 13 mogen dus worden gevolgd.

### Group A plastics

#### 15.2.1 Storage 5 ft (1.5 m) or Less in Height.

For the storage of Group A plastics stored 5 ft (1.5 m) or less in height, the sprinkler design criteria for miscellaneous storage specified in Chapter 13 shall be used. The protection criteria in Chapter 13 shall be acceptable for storage of Group A plastic commodities up to and including 5 ft (1.5 m) in height. (See [Table 13.2.1](#) for specific Group A plastic storage height protection criteria.)

Although [Chapter 13](#) provides criteria for Group A plastic storage up to 12 ft (3.7 m) in height in [Table 13.2.1](#), the table only applies to the types of storage that meet the definition of "miscellaneous" for Group A plastic storage that is greater than 5 ft (1.5 m) up to 12 ft (3.7 m) in height. For a true storage warehouse, the criteria of [Chapter 15](#) need to be followed, even if the storage is only 6 ft (1.8 m) or 10 ft (3.0 m) in height. The requirement in 15.2.1 only refers the user to [Chapter 13](#) for storage that is 5 ft (1.5 m) or less in height. This storage of 5 ft (1.5 m) or less in height does not have to meet the definition of miscellaneous storage as it relates to pile size or area limits. Sending the user back to [Chapter 13](#) is critical, not only for discharge criteria but for sprinkler spacing rules and allowable adjustments as well. For example, for storage 5 ft (1.5 m) and under, the user is allowed to space sprinklers at 130 ft<sup>2</sup> (12.1 m<sup>2</sup>) per sprinkler with 15 ft (4.6 m) between sprinklers for situations where [Chapter 13](#) allows ordinary hazard (Group 2) protection.

Deze clausule hoort bij *Chapter 15 Protection for Palletized, Solid-Piled, Bin Box, Shelf, or Back-to-Back Shelf Storage of Plastic and Rubber Commodities*

#### 17.2.1.1 \* Storage 5 ft (1.5 m) or Less in Height.

For the storage of Group A plastics stored 5 ft (1.5 m) or less in height, the sprinkler design criteria for miscellaneous storage specified in Chapter 13 shall be used.

Group A plastics stored 5 ft (1.5 m) or less in height are allowed to be protected using the requirements of [Chapter 13](#), regardless of whether or not the storage meets the definition of miscellaneous storage. Only when the storage exceeds 5 ft (1.5 m) does it matter whether or not the storage meets all the criteria for miscellaneous storage. For any rack storage of Group A plastics 5 ft (1.5 m) or less in height and for miscellaneous rack storage of Group A plastics up to 12 ft (3.7 m) in height, [Chapter 12](#) and the remaining sections of [Chapter 17](#) do not apply. See [Chapter 13](#) for the design criteria. For rack storage of Group A plastics greater than 5 ft (1.5 m) in height that does not meet the definition of miscellaneous storage, all the rules of [Chapter 12](#) and the rest of [Chapter 17](#) apply.

Deze clausule hoort bij *Chapter 17 Protection of Rack Storage of Plastic and Rubber Commodities*

Duidelijke conclusie: voor *Group A plastics* zijn de sprinkler prestatie-eisen voor low-piled storage t/m 1,5 m dezelfde als die voor *miscellaneous storage*, maar de randvoorwaarden behorende bij *miscellaneous storage* gelden niet. De sprinkler prestatie-eisen voor *miscellaneous storage* zoals weergegeven in de 2019 versie van NFPA 13 mogen dus worden gevolgd.

**Toepassing interpretatiebesluit:**

Dit interpretatiebesluit geldt voor alle sprinklerbeveiligingen waarvan de prestatie-eisen zijn gebaseerd op NFPA 13:2019.