



***Text Correction of CAM showing footnotes “b”, “c”, “d”, and “e” deleted (footnotes “f” and “g” re-lettered as appropriate with deletion of “b”, “c”, “d” and “e”)**

Certified Amending Motion to Reject Second Revision No. 1162

Recommended Text if Motion Passes:

23.3.1

Protection of palletized, solid-piled, or rack storage of Class I through Class IV and Group A commodities shall be in accordance with Table 23.3.1.

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		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	K14 (200)	K16.8 (240)	K22.4 (320)	K25.2 (360)	28 (400) ^b	33.6 (480) ^b	K14 (200)	K16.8 (240)
Class I through Class IV and cartoned nonexpanded Group A plastics	25	7.6	50 (3.4)	35 (2.4)	25 (1.7)	15 (1.0)	40 (2.8) ^e	55 (3.8) ^d	50 (3.4)	35 (2.4)
	30	9.1	50 (3.4)	35 (2.4)	25 (1.7)	15 (1.0)	40 (2.8) ^e	55 (3.8) ^d	50 (3.4)	35 (2.4)
	35	10.7	75 (5.2)	52 (3.6)	35 (2.4)	20 (1.4)	40 (2.8) ^e	55 (3.8) ^d	75 (5.2)	52 (3.6)
	40	12.2	—	52 (3.6)	—	25 (1.7)	40 (2.8) ^e	55 (3.8) ^d	—	—
	45	13.7	—	—	40 (2.8)	40 (2.72.8)	40 (2.8) ^e	55 (3.8) ^d	—	—
	50	15.2	—	—	—	—	40 (2.8) ^e	55 (3.8) ^d	—	—
	55	16.8	—	—	—	—	80 (5.5) ^e	55 (3.8) ^d	—	—
Cartoned expanded Group A plastics	25	7.6	50 (3.4)	35 (2.4)	—	—	—	—	50 (3.4)	35 (2.4)
	30	9.1	50 (3.4)	35 (2.4)	—	—	—	—	50 (3.4)	35 (2.4)
	35	10.7	—	—	—	—	—	—	—	—
	40	12.2	—	—	—	—	—	—	—	—
	45	13.7	—	—	—	—	—	—	—	—

13-34

Exposed nonexpanded, Group A plastics	25	7.6	50 (3.4)	35 (2.4)	—	—	—	—	—	—	
	30	9.1	50 (3.4)	35 (2.4)	—	—	—	—	—	—	
	35	10.7	—	—	—	—	—	—	—	—	
	40	12.2	—	—	75 (5.2)	60 (4.1)	—	—	—	—	
			In-rack sprinklers required. See Chapter 25.								
	45	13.7	—	—	—	—	—	—	—	—	
Exposed expanded Group A plastics	25	7.6	—	—	—	—	—	—	—	—	
	30	9.1	—	—	—	30 (2.0) ^{bf}	—	—	—	—	
	32	9.8	—	—	—	—	—	—	—	—	
	35	10.7	—	—	—	—	—	—	—	—	
	40	12.2	—	—	—	60 (4.1) ^{b,c,f,g}	—	—	—	—	
	45	13.7	—	—	—	—	—	—	—	—	

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

^bLimited to single and double row rack storage without solid shelves.

^cThe number of design sprinklers is 12 and the aisle width is 6 ft (1.8 m).

^dThe number of design sprinklers is 12 and the aisle width is 6 ft (1.8 m). The maximum vertical distance from ceiling to sprinkler thermal element is 17 in. (425 mm).

^eThe number of design sprinklers is 12 and the aisle width is 8 ft (2.4 m).

^{bf}These options apply when all requirements in Section 27.4 are applied including vertical barriers.

^{cg}This option applies to palletized and solid pile ~~solid piled~~ storage in a closed array.

Recommended Text if Motion Fails:

23.3.1

Protection of palletized, solid-piled, or rack storage of Class I through Class IV and Group A commodities shall be in accordance with Table 23.3.1.

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		ESFR Sprinklers — Pendent Orientation Minimum Operating Pressure						ESFR Sprinklers — Upright Orientation Minimum Operating Pressure	
			psi (bar)						psi (bar)	
	ft	m	Nominal K-Factors						Nominal K-Factors	
			K14 (200)	K16.8 (240)	K22.4 (320)	K25.2 (360)	28 (400) ^b	33.6 (480) ^b	K14 (200)	K16.8 (240)
Class I through Class IV and cartoned nonexpanded Group A plastics	25	7.6	50 (3.4)	35 (2.4)	25 (1.7)	15 (1.0)	40 (2.8) ^c	55 (3.8) ^d	50 (3.4)	35 (2.4)
	30	9.1	50 (3.4)	35 (2.4)	25 (1.7)	15 (1.0)	40 (2.8) ^c	55 (3.8) ^d	50 (3.4)	35 (2.4)

	35	10.7	75 (5.2)	52 (3.6)	35 (2.4)	20 (1.4)	40 (2.8) ^c	55 (3.8) ^d	75 (5.2)	52 (3.6)
	40	12.2	—	52 (3.6)	—	25 (1.7)	40 (2.8) ^c	55 (3.8) ^d	—	—
	45	13.7	—	—	40 (2.8)	40 (2.72.8)	40 (2.8) ^c	55 (3.8) ^d	—	—
	50	15.2	—	—	—	—	40 (2.8) ^c	55 (3.8) ^d	—	—
	55	16.8	—	—	—	—	80 (5.5) ^e	55 (3.8) ^d	—	—
Cartoned expanded Group A plastics	25	7.6	50 (3.4)	35 (2.4)	—	—	—	—	50 (3.4)	35 (2.4)
	30	9.1	50 (3.4)	35 (2.4)	—	—	—	—	50 (3.4)	35 (2.4)
	35	10.7	—	—	—	—	—	—	—	—
	40	12.2	—	—	—	—	—	—	—	—
	45	13.7	—	—	—	—	—	—	—	—
Exposed nonexpanded, Group A plastics	25	7.6	50 (3.4)	35 (2.4)	—	—	—	—	—	—
	30	9.1	50 (3.4)	35 (2.4)	—	—	—	—	—	—
	35	10.7	—	—	—	—	—	—	—	—
	40	12.2	—	—	75 (5.2)	60 (4.1)	—	—	—	—
	45	13.7	In-rack sprinklers required. See Chapter 25.	—	—	—	—	—	—	—
Exposed expanded Group A plastics	25	7.6	—	—	—	—	—	—	—	—
	30	9.1	—	—	—	30 (2.0) ^{bf}	—	—	—	—
	32	9.8	—	—	—	—	—	—	—	—
	35	10.7	—	—	—	—	—	—	—	—
	40	12.2	—	—	—	60 (4.1) ^{b,c,f,g}	—	—	—	—
	45	13.7	—	—	—	—	—	—	—	—

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

^bLimited to single- and double-row rack storage without solid shelves.

^cThe number of design sprinklers is 12 and the aisle width is 6 ft (1.8 m).

^dThe number of design sprinklers is 12 and the aisle width is 6 ft (1.8 m). The maximum vertical distance from ceiling to sprinkler thermal element is 17 in. (425 mm).

^eThe number of design sprinklers is 12 and the aisle width is 8 ft (2.4 m).

^fThese options apply when all requirements in Section 27.4 are applied including vertical barriers.

^gThis option applies to palletized and solid-piled storage in a closed array.