First Revision No. 1-NFPA 10-2019 [Global Input]

Remove ANSI from in front of all UL standards referenced in NFPA 10.

Submitter Information Verification

Committee:

Submittal Date: Tue Sep 24 09:42:03 EDT 2019

Committee Statement

Committee Statement: Many years ago, UL preferred the ANSI/UL reference because there was a transition of traditional UL standards towards an ANSI standards development process.

Now, years later, a large majority of UL Standards are ANSI approved and follow the ANSI development and maintenance process. However, sometimes readers are confused because they don't understand the standards are actually UL standards, not developed by ANSI. There are many other references to standards promulgated by other standards development organizations where they are considered ANSI approved but do not include ANSI in the reference.

Response Message: FR-1-NFPA 10-2019

Public Input No. 52-NFPA 10-2019 [Global Input]

First Revision No. 17-NFPA 10-2019 [Global Input]

The committee instructs staff to add metric units per NFPA manual of style. Please see attached for updates to Tables 6.2.1.1, E.3.5, E.3.6, E.3.7, and H.2.

Supplemental Information

File Name	Description Approved
10_Global_FR-17_metrics_BOC.docx	For ballot

Submitter Information Verification

Committee:

Submittal Date: Wed Sep 25 11:28:07 EDT 2019

Committee Statement

Committee Statement: Metric units should be included per NFPA MOS

Response Message: FR-17-NFPA 10-2019

Public Input No. 51-NFPA 10-2019 [Section No. 6.2.1.1]

6.2.1.1

Minimal sizes of fire extinguishers for the listed grades of hazards shall be provided on the basis of Table 6.2.1.1, except as modified by 6.2.1.3.1 and 6.2.1.4.

Table 6.2.1.1 Fire Extinguisher Size and Placement for Class A Hazards

Criteria	Light Hazard Occupancy	Ordinary Hazard Occupancy	Extra Hazard Occupancy
Minimum rated single extinguisher	2-A	2-A	4-A
Maximum floor area per unit of A	3000 ft^2 (279 m^2)	1500 ft^2 (139 m^2)	1000 ft^2 (92.9 m^2)
Maximum floor area per extinguisher	11,250 ft^2 (1045 m^2)	11,250 ft^2 (1045 m^2)	11,250 ft^2 (1045 m^2)
Maximum travel distance to extinguisher	75 ft (22.9 m)	75 ft (22.9 m)	75 ft (22.9 m)

For SI units, 1 ft = 0.305 m; 1 ft^2 = 0.0929 m^2.
Note: For maximum floor area explanations, see E.3.3.

E.3.5

The area that can be protected by one fire extinguisher with a given A rating is shown in Table E.3.5. These values are determined by multiplying the maximum floor area per unit of A, shown in Table 6.2.1.1, by the various A ratings until a value of 11,250 ft^2 (1045 m^2) is exceeded.

Table E.3.5 Maximum Area in Square Feet (Square Meters) to Be Protected per Extinguisher

Class A Rating Shown on Extinguisher	Light Hazard Occupancy	Ordinary Hazard Occupancy	Extra Hazard Occupancy
1-A	—	—	—
2-A	6,000 (557)	3,000 (279)	—
3-A	9,000 (836)	4,500 (418)	—
4-A	11,250 (1045)	6,000 (557)	4,000 (372)
6-A	11,250 (1045)	9,000 (836)	6,000 (557)

Class A Rating Shown on Extinguisher	Light Hazard Occupancy	Ordinary Hazard Occupancy	Extra Hazard Occupancy
10-A	11,250 (1045)	11,250 (1045)	10,000 (929)
20-A	11,250 (1045)	11,250 (1045)	11,250 (1045)
30-A	11,250 (1045)	11,250 (1045)	11,250 (1045)
40-A	11,250 (1045)	11,250 (1045)	11,250 (1045)

For SI units, 1 ft^2 = 0.0929 m^2.

Note: 11,250 ft^2 is considered a practical limit.

E.3.6

The quantity of extinguishers for buildings of 10,000 ft^2 to 500,000 ft^2 (929 m^2 to 46,452 m^2) is shown in Table E.3.6. The table was developed based on the calculations required by 6.2.1.2.1. Exact quantities can be determined by interpolating between floor sizes shown in the table or by using the calculation method in 6.2.1.2.1.

Table E.3.6 Quantity of Extinguishers for Class A Hazards

Area (ft²)	Area (m²)	Light Hazard			Ordinary Hazard					Extra Ha		
		2-A	3-A	4-A and up	2-A	3-A	4-A	6-A	10-A and up	4-A	6-A	10
		6000	9000	11,250	3000	4500	6000	9000	11,250	4000	6000	10,
10,000	929	2	2	1	4	3	2	2	1	3	2	
20,000	1858	4	3	2	7	5	4	3	2	5	4	
30,000	2787	5	4	3	10	7	5	4	3	8	5	
40,000	3716	7	5	4	14	9	7	5	4	10	7	
50,000	4645	9	6	5	17	12	9	6	5	13	9	
60,000	5574	10	7	6	20	14	10	7	6	15	10	
70,000	6503	12	8	7	24	16	12	8	7	18	12	

Area (ft²)	Area (m²)	Light Hazard			Ordinary Hazard					Extra Ha		
		2-A	3-A	4-A and up	2-A	3-A	4-A	6-A	10-A and up	4-A	6-A	10
		6000	9000	11,250	3000	4500	6000	9000	11,250	4000	6000	10,
80,000	7432	14	9	8	27	18	14	9	8	20	14	
90,000	8361	15	10	8	30	20	15	10	8	23	15	
100,000	9290	17	12	9	34	23	17	12	9	25	17	1
110,000	10,219	19	13	10	37	25	19	13	10	28	19	1
120,000	11,148	20	14	11	40	27	20	14	11	30	20	1
130,000	12,077	22	15	12	44	29	22	15	12	33	22	1
140,000	13,006	24	16	13	47	32	24	16	13	35	24	1
150,000	13,935	25	17	14	50	34	25	17	14	38	25	1
160,000	14,864	27	18	15	54	36	27	18	15	40	27	1
170,000	15,794	29	19	16	57	38	29	19	16	43	29	1
180,000	16,723	30	20	16	60	40	30	20	16	45	30	1
190,000	17,652	32	22	17	64	43	32	22	17	48	32	1
200,000	18,581	34	23	18	67	45	34	23	18	50	34	2
210,000	19,510	35	24	19	70	47	35	24	19	53	35	2
220,000	20,439	37	25	20	74	49	37	25	20	55	37	2
230,000	21,368	39	26	21	77	52	39	26	21	58	39	2
240,000	22,297	40	27	22	80	54	40	27	22	60	40	2
250,000	23,226	42	28	23	84	56	42	28	23	63	42	2
260,000	24,155	44	29	24	87	58	44	29	24	65	44	2

Area (ft²)	Area (m²)	Light Hazard			Ordinary Hazard					Extra Ha		
		2-A	3-A	4-A and up	2-A	3-A	4-A	6-A	10-A and up	4-A	6-A	10
		6000	9000	11,250	3000	4500	6000	9000	11,250	4000	6000	10,
270,000	25,084	45	30	24	90	60	45	30	24	68	45	2
280,000	26,013	47	32	25	94	63	47	32	25	70	47	2
290,000	26,942	49	33	26	97	65	49	33	26	73	49	2
300,000	27,871	50	34	27	100	67	50	34	27	75	50	3
310,000	28,800	52	35	28	104	69	52	35	28	78	52	3
320,000	29,729	54	36	29	107	72	54	36	29	80	54	3
330,000	30,658	55	37	30	110	74	55	37	30	83	55	3
340,000	31,587	57	38	31	114	76	57	38	31	85	57	3
350,000	32,516	59	39	32	117	78	59	39	32	88	59	3
360,000	33,445	60	40	32	120	80	60	40	32	90	60	3
370,000	34,374	62	42	33	124	83	62	42	33	93	62	3
380,000	35,303	64	43	34	127	85	64	43	34	95	64	3
390,000	36,232	65	44	35	130	87	65	44	35	98	65	3
400,000	37,161	67	45	36	134	89	67	45	36	100	67	4
410,000	38,090	69	46	37	137	92	69	46	37	103	69	4
420,000	39,019	70	47	38	140	94	70	47	38	105	70	4
430,000	39,948	72	48	39	144	96	72	48	39	108	72	4
440,000	40,877	74	49	40	147	98	74	49	40	110	74	4
450,000	41,806	75	50	40	150	100	75	50	40	113	75	4

Area (ft²)	Area (m²)	Light Hazard			Ordinary Hazard					Extra Ha		
		2-A	3-A	4-A and up	2-A	3-A	4-A	6-A	10-A and up	4-A	6-A	10
		6000	9000	11,250	3000	4500	6000	9000	11,250	4000	6000	10,
460,000	42,735	77	52	41	154	103	77	52	41	115	77	4
470,000	43,664	79	53	42	157	105	79	53	42	118	79	4
480,000	44,593	80	54	43	160	107	80	54	43	120	80	4
490,000	45,522	82	55	44	164	109	82	55	44	123	82	4
500,000	46,452	84	56	45	167	112	84	56	45	125	84	5

For SI units, 1 ft^2 = 0.0929 m^2.

E.3.7

Table E.3.6 provides a breakdown of extinguisher quantities by floor. Extinguisher quantities must be determined on a floor-by-floor basis, and Table E.3.6 should not be used for determining extinguisher quantities based on the total square footage of all floors in multistory buildings. Table E.3.7 provides a comparison of the quantities of extinguishers for two 90,000 ft^2 (8361 m^2) buildings.

Table E.3.7 Comparison of Extinguishers for One-Story vs. Multistory Buildings

Building Type	Area of Coverage	2-A Light	3-A Light	4-A Light
Single story	90,000 ft^2 (8361 m^2)	15	10	8
Three stories	30,000 ft^2 (2787 m^2) × 3 floors	15 (5 × 3)	12 (4 × 3)	9 (3 × 3)

Table H.2 Characteristics of Extinguishers

Extinguishing Agent	Method of Operation	Capacity	Horizontal Range of Stream	Approximate Time of Discharge	Protection Required Below 40°F (4°C)	UL or ULC Classifications[a]
Water	Stored-pressure	6 L	30 to 40 ft (9.1 to 12.2 m)	40 sec	Yes	1-A
	Stored-pressure or pump	2 **1/2** gal (9.5 L)	30 to 40 ft (9.1 to 12.2 m)	1 min	Yes	2-A
	Pump	4 gal (15.1 L)	30 to 40 ft (9.1 to 12.2 m)	2 min	Yes	3-A
	Pump	5 gal (19.0 L)	30 to 40 ft (9.1 to 12.2 m)	2 to 3 min	Yes	4-A
Water (wetting agent)	Stored-pressure	1 **1/2** gal (5.7 L)	20 ft (6.1 m)	30 sec	Yes	2-A
	Stored-pressure	25 gal (95 L) (wheeled)	35 ft (10.7 m)	1 **1/2** min	Yes	10-A
	Stored-pressure	45 gal (170 L) (wheeled)	35 ft (10.7 m)	2 min	Yes	30-A
	Stored-pressure	60 gal (227 L) (wheeled)	35 ft (10.7 m)	2 **1/2** min	Yes	40-A
Loaded stream	Stored-pressure	2 **1/2** gal (9.5 L)	30 to 40 ft (9.1 to 12.2 m)	1 min	No	2-A

Extinguishing Agent	Method of Operation	Capacity	Horizontal Range of Stream	Approximate Time of Discharge	Protection Required Below 40°F (4°C)	UL or ULC Classifications[a]
	Stored-pressure	33 gal (125 L) (wheeled)	50 ft (15.2 m)	3 min	No	20-A
Water mist	Stored-pressure	1.8 to 2.5 gal (6.8 to 9.5 L)	5 to 12 ft (1.5 to 3.7 m)	50 to 80 sec	Yes	2-A:C
AFFF, FFFP	Stored-pressure	2 **1/2** gal (9.5 L)	20 to 25 ft (6.1 to 7.6 m)	50 sec	Yes	3-A:20 to 40-B
	Stored-pressure	6 L	20 to 25 ft (6.1 to 7.6 m)	50 sec	Yes	2-A:10-B
	Nitrogen cylinder	33 gal (125 L)	30 ft (9.1 m)	1 min	Yes	20-A:160-B
Carbon dioxide[b]	Self-expelling	2 **1/2** to 5 lb (9.5 L)	3 to 8 ft (0.9 to 2.4 m)	8 to 30 sec	No	1 to 5-B:C
	Self-expelling	10 to 15 lb (4.5 to 6.8 kg)	3 to 8 ft (0.9 to 2.4 m)	8 to 30 sec	No	2 to 10-B:C
	Self-expelling	20 lb (9 kg)	3 to 8 ft (0.9 to 2.4 m)	10 to 30 sec	No	10-B:C
	Self-expelling	50 to 100 lb (23 to 45 kg) (wheeled)	3 to 10 ft (0.9 to 3 m)	10 to 30 sec	No	10 to 20-B:C
Regular dry chemical (sodium bicarbonate)	Stored-pressure	1 to 2 **1/2** lb (0.45 to 1.1 kg)	5 to 8 ft (1.5 to 2.4 m)	8 to 12 sec	No	2 to 10-B:C
	Cartridge or stored-pressure	2 **3/4** to 5 lb (1.2 to 2.3 kg)	5 to 20 ft (1.5 to 6.1 m)	8 to 25 sec	No	5 to 20-B:C

Extinguishing Agent	Method of Operation	Capacity	Horizontal Range of Stream	Approximate Time of Discharge	Protection Required Below 40°F (4°C)	UL or ULC Classifications[a]
	Cartridge or stored-pressure	6 to 30 lb (2.7 to 13 kg)	5 to 20 ft (1.5 to 6.1 m)	10 to 25 sec	No	10 to 160-B:C
	Stored-pressure	50 lb (23 kg) (wheeled)	20 ft (6.1 m)	35 sec	No	160-B:C
	Nitrogen cylinder or stored-pressure	75 to 350 lb (34 to 159 kg) (wheeled)	15 to 45 ft (4.6 to 13.7 m)	20 to 105 sec	No	40 to 320-B:C
Purple K dry chemical (potassium bicarbonate)	Cartridge or stored-pressure	2 to 5 lb (0.9 to 2.3 kg)	5 to 12 ft (1.5 to 3.7 m)	8 to 10 sec	No	5 to 30-B:C
	Cartridge or stored-pressure	5 **1/2** to 10 lb (2.5 to 4.5 kg)	5 to 20 ft (1.5 to 6.1 m)	8 to 20 sec	No	10 to 80-B:C
	Cartridge or stored-pressure	16 to 30 lb (7.3 to 14 kg)	10 to 20 ft (3 to 6.1 m)	8 to 25 sec	No	40 to 120-B:C
	Cartridge or stored-pressure	48 to 50 lb (22 to 23 kg) (wheeled)	20 ft (6.1 m)	30 to 35 sec	No	120 to 160-B:C
	Nitrogen cylinder or stored-pressure	125 to 315 lb (57 to 143 kg)(wheeled)	15 to 45 ft (4.6 to 14 m)	30 to 80 sec	No	80 to 640-B:C
Multipurpose/ABC dry chemical (ammonium phosphate)	Stored-pressure	1 to 5 lb (0.5 to 2.3 kg)	5 to 12 ft (1.5 to 3.7 m)	8 to 10 sec	No	1 to 3-A[c] and 2 to 10-B:C

Extinguishing Agent	Method of Operation	Capacity	Horizontal Range of Stream	Approximate Time of Discharge	Protection Required Below 40°F (4°C)	UL or ULC Classifications[a]
	Stored-pressure or cartridge	2 **1/2** to 9 lb (1.1 to 4.1 kg)	5 to 12 ft (1.5 to 3.7 m)	8 to 15 sec	No	1 to 4-A and 10 to 40-B:C
	Stored-pressure or cartridge	9 to 17 lb (4.1 to 7.7 kg)	5 to 20 ft (1.5 to 6.1 m)	10 to 25 sec	No	2 to 20-A and 10 to 80-B:C
	Stored-pressure or cartridge	17 to 30 lb (7.7 to 14 kg)	5 to 20 ft (1.5 to 6.1 m)	10 to 25 sec	No	3 to 20-A and 30 to 120-B:C
	Stored-pressure or cartridge	45 to 50 lb (20 to 22.7 kg) (wheeled)	20 ft (6.1 m)	25 to 35 sec	No	20 to 30-A and 80 to 160-B:C
	Nitrogen cylinder or stored-pressure	125 to 350 lb (57 to 159 kg) (wheeled)	15 to 45 ft (4.6 to 14 m)	30 to 60 sec	No	20 to 40-A and 60 to 320-B:C
Dry chemical (foam compatible)	Cartridge or stored-pressure	4 **3/4** to 9 lb (2.1 to 4.1 kg)	5 to 20 ft (4.6 to 14 m)	8 to 10 sec	No	10 to 20-B:C
	Cartridge or stored-pressure	9 to 27 lb (4.1 to 12 kg)	5 to 20 ft (4.6 to 14 m)	10 to 25 sec	No	20 to 30-B:C
	Cartridge or stored-pressure	18 to 30 lb (8.2 to 14 kg)	5 to 20 ft (4.6 to 14 m)	10 to 25 sec	No	40 to 60-B:C
	Nitrogen cylinder or	150 to 350 lb (68 to	15 to 45 ft (4.6 to 14 m)	20 to 150 sec	No	80 to 240-B:C

Extinguishing Agent	Method of Operation	Capacity	Horizontal Range of Stream	Approximate Time of Discharge	Protection Required Below 40°F (4°C)	UL or ULC Classifications[a]
	stored-pressure	159 kg) (wheeled)				
Wet chemical	Stored-pressure	3 L	8 to 12 ft (2.4 to 3.7 m)	30 sec	No	K
	Stored-pressure	6 L	8 to 12 ft (2.4 to 3.7 m)	35 to 45 sec	No	K
	Stored-pressure	2 **1/2** gal (9.5 L)	8 to 12 ft (2.4 to 3.7 m)	75 to 85 sec	No	K
Halon 1211 (bromochloro-difluoromethane)	Stored-pressure	0.9 to 2 lb	6 to 10 ft (1.8 to 3 m)	8 to 10 sec	No	1 to 2-B:C
	Stored-pressure	2 to 3 lb	6 to 10 ft (1.8 to 3 m)	8 to 10 sec	No	5-B:C
	Stored-pressure	5 **1/2** to 9 lb	9 to 15 ft (2.7 to 4.6 m)	8 to 15 sec	No	1-A:10-B:C
	Stored-pressure	13 to 22 lb	14 to 16 ft (4.3 to 4.9 m)	10 to 18 sec	No	2 to 4-A and 20 to 80-B:C
	Stored-pressure	50 lb	35 ft (11 m)	30 sec	No	10-A:120-B:C
	Stored-pressure	150 lb (wheeled)	20 to 35 ft (6.1 to 11 m)	30 to 44 sec	No	30-A:160 to 240-B:C
Halon 1211/1301 (bromochloro-difluoromethane bromotrifluoro-methane) mixtures	Stored-pressure or self-expelling	0.9 to 5 lb (0.41 to 2.3 kg)	3 to 12 ft (0.9 to 3.7 m)	8 to 10 sec	No	1 to 10-B:C
	Stored-pressure	9 to 20 lb (4.1 to 9 kg)	10 to 18 ft (3.0 to 5.5 m)	10 to 22 sec	No	1-A:10-B:C to 4-A:80-B:C

Extinguishing Agent	Method of Operation	Capacity	Horizontal Range of Stream	Approximate Time of Discharge	Protection Required Below 40°F (4°C)	UL or ULC Classifications[a]
Halocarbon type	Stored-pressure	1.4 to 150 lb (0.6 to 68 kg)	6 to 35 ft (1.8 to 10.7 m)	9 to 38 sec	No	1-B:C to 10-A:120-B:C

For SI units: 1 gal = 3.79 L; 1 lb = 2.2 kg; 1 ft = 0.305 m.
Note: Halon should be used only where its unique properties are deemed necessary.
[a]Readers concerned with specific ratings should review the pertinent lists issued by these laboratories: Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096, or Underwriters' Laboratories of Canada, 7 Underwriters Road, Toronto, ON, M1R 3B4, Canada.
[b]Carbon dioxide extinguishers with metal horns do not carry a C classification.
[c]Some small extinguishers containing ammonium phosphate–based dry chemical do not carry an A classification.

First Revision No. 53-NFPA 10-2019 [Global Input]

Add new section:

7.10 Cabinets.

Missing breaker bars or hammers and broken, damaged, or missing break-front panels on fire extinguisher cabinets shall be replaced.

Submitter Information Verification

Committee:

Submittal Date: Thu Sep 26 13:33:54 EDT 2019

Committee Statement

Committee Statement: all of these parts are essential to the cabinet and need to be replaced when broken or missing.

Response Message: FR-53-NFPA 10-2019

First Revision No. 63-NFPA 10-2019 [Global Input]

See attached file for reoganization and changes in Chapter 5.

Supplemental Information

File Name	Description	Approved
10_5.5_mini-reorg.docx	Reorganization of part of chapter 5. For staff use	
10_Global_FR-63_5.5_reorg.pdf	For ballot	

Submitter Information Verification

Committee:

Submittal Date: Thu Oct 17 15:06:27 EDT 2019

Committee Statement

Committee Statement: A.5.5 was relocated from A.5.4.2 to the main heading as the annex material encompasses the intent of this overall section.

5.5.1 applies to all fire extinguisher selection and therefore should be located at the beginning, not under occupancy hazard selection

5.5.2 was rewritten to use the term “selected” in lieu of “provided” as this section relates to selection not installation and clarifies the intent to select building wide extinguisher for Class A hazards.

5.4.2.1 was moved to 5.5.1 and rewritten

5.5.3 This section is under selection, not installation. Therefore, the selection should be based on the anticipated hazards but the final installation would be based on the actual hazards present when installed.

5.4.2.4 appears to be an attempt to combine the requirements of 5.4.2.2 and 5.4.2.3. In addition, 5.4.2.5 answers the question as to whether we can have combined extinguishers so this section has been deleted since it is not needed.

The more appropriate term is “selected” since this is under the selection section of this standard.

List of examples should be included in the annex per NFPA manual of style.

restructuring section since the selection for specific location falls under the selection of fire extinguishers 5.5 heading.

Response Message: FR-63-NFPA 10-2019

Public Input No. 111-NFPA 10-2019 [Section No. 5.5.1.1]

Public Input No. 110-NFPA 10-2019 [Section No. 5.4.2.5]

Public Input No. 109-NFPA 10-2019 [Section No. 5.4.2.4]

Public Input No. 113-NFPA 10-2019 [Section No. 5.5.4]

Public Input No. 138-NFPA 10-2019 [Section No. 5.5.4]

Public Input No. 82-NFPA 10-2019 [Section No. 5.5.4]

Public Input No. 107-NFPA 10-2019 [Section No. 5.4.2.2]

Public Input No. 136-NFPA 10-2019 [Section No. 5.5.1.1]

Public Input No. 81-NFPA 10-2019 [Section No. 5.5.4]

Public Input No. 137-NFPA 10-2019 [Section No. 5.5.2]

Public Input No. 112-NFPA 10-2019 [Section No. 5.5.2]

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5.5* Selection of Fire Extinguishers.

5.5.1 General.

Where fire extinguishers have more than one letter classification (such as 2-A:20-B:C), they shall be permitted to satisfy the requirements of each letter class.

5.5.2 Selection for Building Protection.

Fire extinguishers for building protection shall be selected for Class A fires, regardless of the presence of any fixed fire suppression systems.

5.4.2* Selection ~~by~~ for Occupancy Hazards. [move to 5.5.3]

Fire extinguishers shall be ~~provided~~ selected for the ~~protection of both the building structure and the~~ occupancy hazards contained therein regardless of the presence of any fixed fire suppression systems.

> **A.5.4.2 [Reassociate to new 5.5]**
> All buildings have Class A fire hazards. In any occupancy, there could be a predominant hazard as well as special hazard areas requiring extinguishers with ratings to match those hazards. For example, a hospital will have need for Class A fire extinguishers covering patient rooms, corridors, offices, ~~and so forth~~etc., but will need Class B fire extinguishers in laboratories and where flammable anesthetics are stored or handled, Class C fire extinguishers in electrical switch gear or generator rooms, and Class K extinguishers in kitchens.

~~**5.4.2.1**~~

~~Required building protection shall be provided by fire extinguishers for Class A fires.~~

5.4.2.2~~*~~ [move to 5.5.3.1]

Fire Extinguishers for ~~Occupancy~~ occupancy hazard protection shall be provided by fire extinguishers for ~~such~~ Class A, B, C, D, or K fire ~~potentials as might~~hazards present or reasonably anticipated to be present.

> **A.5.4.2.2 [Reassociate to 5.5.3]**
> If fire extinguishers intended for different classes of fires are grouped, their intended use should be marked conspicuously to aid in the choice of the proper fire extinguisher at the time of a fire. In an emergency, the tendency is to reach for the closest fire extinguisher. If this fire extinguisher is of the wrong type, users could endanger themselves and the property they are endeavoring to protect. Wherever possible, it is preferable to have only those fire extinguishers available that can be safely used on any type of fire in the immediate vicinity.

5.4.2.3 [move to 5.5.3.2]

Fire extinguishers ~~provided~~ selected for building protection shall be permitted to also be considered for ~~the protection of occupancies having a Class A fire potential~~occupancy hazard protection.

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~~5.4.2.4~~
~~Buildings having an occupancy hazard subject to Class B or Class C fires, or both, shall have a standard complement of Class A fire extinguishers for building protection, plus additional Class B or Class C fire extinguishers, or both.~~

~~5.4.2.5~~
~~Where fire extinguishers have more than one letter classification (such as 2-A:20-B:C), they shall be permitted to satisfy the requirements of each letter class.~~

5.5 Selection for Specific Hazards. **[move to 5.5.4]**

5.5.1 Class B Fires. **[5.5.4.1]**

5.5.1.1* Extinguishers for Pressurized Flammable Liquids and Pressurized Gas Fires. **[5.5.4.1.1*]**

Large-capacity dry chemical extinguishers of 10 lb (4.54 kg) or greater and with a discharge rate of 1 lb/sec (0.45 kg/sec) or more shall be ~~used~~ selected to protect these hazards.

5.5.2* Three-Dimensional Fires. **[5.5.4.2*]**

Large-capacity dry chemical extinguishers of 10 lb (4.54 kg) or greater and having a discharge rate of 1 lb/sec (0.45 kg/sec) or more shall be ~~used~~ selected to protect these hazards.

5.5.3 Obstacle Fires. **[5.5.4.3]**

Selection of a fire extinguisher for this type of hazard shall be based on one of the following:

(1) Extinguisher containing a vapor-suppressing foam agent

(2) *Multiple extinguishers containing non-vapor-suppressing Class B agents intended for simultaneous application

(3) Larger capacity extinguishers of 10 lb (4.54 kg) or greater and a minimum discharge rate of 1 lb/sec (0.45 kg/sec)

5.5.4 Water-Soluble Flammable Liquid Fires (Polar Solvents). **[5.5.4.4*]**
Aqueous film-forming foam (AFFF) and film-forming fluoroprotein (FFFP) foam ~~(FFFP)~~ types of fire extinguishers shall not be ~~used~~ selected for the protection of water-soluble flammable liquids, ~~such as alcohols, acetone, esters, ketones, and so forth,~~ unless specifically referenced on the fire extinguisher's nameplate.

A.5.5.4.4

Examples of water-soluble flammable liquids include alcohols, acetone, esters, and ketones.

5.5.5* Class K Cooking Media Fires. **[5.5.4.5*]**

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Fire extinguishers provided for the protection of cooking appliances that use combustible cooking media (e.g., vegetable or animal oils and fats) shall be listed and labeled for Class K fires.

5.5.5.1 **[5.5.4.5.1]**

Class K fire extinguishers manufactured after January 1, 2002, shall not be equipped with extended wand-type discharge devices.

5.5.5.2 **[5.5.4.5.2]**

Fire extinguishers installed specifically for the protection of cooking appliances that use combustible cooking media (animal or vegetable oils and fats) without a Class K rating shall be removed from service.

5.5.5.3* **[5.5.4.5.3*]**

Where a hazard is protected by an automatic fire protection system, a placard shall be ~~conspicuously~~ placed near the extinguisher that states that the fire protection system shall be actuated prior to using the fire extinguisher.

5.5.6* Electronic Equipment Fires. **[5.5.4.6*]**

[5.5.4.6.1] Fire extinguishers for the protection of delicate electronic equipment shall be selected from types specifically listed and labeled for Class C hazards. *(See 5.3.2.3.)*

5.5.6.1* **[5.5.4.6.2*]**

Dry chemical fire extinguishers shall not be installed for the protection of delicate electronic equipment.

5.5.7* Areas Containing Oxidizers. **[5.5.4.7*]**

5.5.7.1 **[5.5.4.7.1]**

Only water or foam extinguishers shall be installed in areas where pool chemicals containing chlorine or bromine are stored.

5.5.7.2 **[5.5.4.7.2]**

Multipurpose dry chemical fire extinguishers shall not be installed in areas where pool chemicals containing chlorine or bromine are stored.

5.5.7.3 **[5.5.4.7.3]**

Fire extinguishers intended for use where oxidizers are stored or used shall be selected and installed based on the specific recommendations contained within the material's safety data sheet (SDS) for the oxidizer, surrounding conditions, and NFPA 400.

5.5.8 Class D Combustible Metal Fires. **[5.5.4.8]**

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[5.5.4.8.1] Fire extinguishers or containers of Class D extinguishing agents provided for the protection of Class D fires shall be listed and labeled for Class D fires.

5.5.8.1* **[5.5.4.8.2*]**

Class D fire extinguishers and agents shall be compatible with the specific metal for which protection is provided.

5.6 Selection for Specific Locations. **[move to 5.5.5]**

5.6.1* **[5.5.5.1*]**
Where portable fire extinguishers are required to be installed, the following documents shall be reviewed for the occupancies outlined in their respective scopes:

(1) NFPA 1~~, *Fire Code*~~

(2) NFPA 2~~, *Hydrogen Technologies Code*~~

(3) NFPA 22~~, *Standard for Water Tanks for Private Fire Protection*~~

(4) NFPA 30~~, *Flammable and Combustible Liquids Code*~~

(5) NFPA 30A~~, *Code for Motor Fuel Dispensing Facilities and Repair Garages*~~

(6) NFPA 33~~, *Standard for Spray Application Using Flammable or Combustible Materials*~~

(7) NFPA 40 ~~, *Standard for the Storage and Handling of Cellulose Nitrate Film*~~

(8) NFPA 45 ~~, *Standard on Fire Protection for Laboratories Using Chemicals*~~

(9) NFPA 51~~, *Standard for the Design and Installation of Oxygen-Fuel Gas Systems for Welding, Cutting, and Allied Processes*~~

(10) NFPA 51B~~, *Standard for Fire Prevention During Welding, Cutting, and Other Hot Work*~~

(11) NFPA 52~~, *Vehicular Natural Gas Fuel Systems Code*~~

(12) NFPA 58 ~~, *Liquefied Petroleum Gas Code*~~

(13) NFPA 59~~, *Utility LP-Gas Plant Code*~~

(14) NFPA 59A~~, *Standard for the Production, Storage, and Handling of Liquefied Natural Gas (LNG)*~~

(15) *NFPA 72* ~~, *National Fire Alarm and Signaling Code*~~

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(16) NFPA 75~~, *Standard for the Fire Protection of Information Technology Equipment*~~

(17) NFPA 76 ~~, *Standard for the Fire Protection of Telecommunications Facilities*~~

(18) NFPA 96~~, *Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations*~~

(19) NFPA 99~~, *Health Care Facilities Code*~~

(20) NFPA 99B ~~, *Standard for Hypobaric Facilities*~~

(21) NFPA *101*~~, *Life Safety Code*~~

(22) NFPA 102~~, *Standard for Grandstands, Folding and Telescopic Seating, Tents, and Membrane Structures*~~

(23) NFPA 115 ~~, *Standard for Laser Fire Protection*~~

(24) NFPA 120~~, *Standard for Fire Prevention and Control in Coal Mines*~~

(25) NFPA 122 ~~, *Standard for Fire Prevention and Control in Metal/Nonmetal Mining and Metal Mineral Processing Facilities*~~

(26) NFPA 130 ~~, *Standard for Fixed Guideway Transit and Passenger Rail Systems*~~

(27) NFPA 140~~, *Standard on Motion Picture and Television Production Studio Soundstages, Approved Production Facilities, and Production Locations*~~

(28) NFPA 150~~, *Standard on Fire and Life Safety in Animal Housing Facilities*~~

(29) NFPA 160 ~~, *Standard for the Use of Flame Effects Before an Audience*~~

(30) NFPA 232 ~~, *Standard for the Protection of Records*~~

(31) NFPA 241~~, *Standard for Safeguarding Construction, Alteration, and Demolition Operations*~~

(32) NFPA 301 ~~, *Code for Safety to Life from Fire on Merchant Vessels*~~

(33) NFPA 302 ~~, *Fire Protection Standard for Pleasure and Commercial Motor Craft*~~

(34) NFPA 303 ~~, *Fire Protection Standard for Marinas and Boatyards*~~

(35) NFPA 307~~, *Standard for the Construction and Fire Protection of Marine Terminals, Piers, and Wharves*~~

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(36) NFPA 326~~, *Standard for the Safeguarding of Tanks and Containers for Entry, Cleaning, or Repair*~~

(37) NFPA 385 ~~, *Standard for Tank Vehicles for Flammable and Combustible Liquids*~~

(38) NFPA 400~~, *Hazardous Materials Code*~~

(39) NFPA 403 ~~, *Standard for Aircraft Rescue and Fire-Fighting Services at Airports*~~

(40) NFPA 407 ~~, *Standard for Aircraft Fuel Servicing*~~

(41) NFPA 408~~, *Standard for Aircraft Hand Portable Fire Extinguishers*~~

(42) NFPA 409 ~~, *Standard on Aircraft Hangars*~~

(43) NFPA 410 ~~, *Standard on Aircraft Maintenance*~~

(44) NFPA 418~~, *Standard for Heliports*~~

(45) NFPA 423 ~~, *Standard for Construction and Protection of Aircraft Engine Test Facilities*~~

(46) NFPA 484~~, *Standard for Combustible Metals*~~

(47) NFPA 495~~, *Explosive Materials Code*~~

(48) NFPA 498~~, *Standard for Safe Havens and Interchange Lots for Vehicles Transporting Explosives*~~

(49) NFPA 501A~~, *Standard for Fire Safety Criteria for Manufactured Home Installations, Sites, and Communities*~~

(50) NFPA 502 ~~, *Standard for Road Tunnels, Bridges, and Other Limited Access Highways*~~

(51) NFPA 505 ~~, *Fire Safety Standard for Powered Industrial Trucks Including Type Designations, Areas of Use, Conversions, Maintenance, and Operations*~~

(52) NFPA 655~~, *Standard for Prevention of Sulfur Fires and Explosions*~~

(53) NFPA 731 ~~, *Standard for the Installation of Electronic Premises Security Systems*~~

(54) NFPA 801 ~~, *Standard for Fire Protection for Facilities Handling Radioactive Materials*~~

(55) NFPA 804~~, *Standard for Fire Protection for Advanced Light Water Reactor Electric Generating Plants*~~

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(56) NFPA 805~~, *Performance-Based Standard for Fire Protection for Light Water Reactor Electric Generating Plants*~~

(57) NFPA 820~~, *Standard for Fire Protection in Wastewater Treatment and Collection Facilities*~~

(58) NFPA 909~~, *Code for the Protection of Cultural Resource Properties — Museums, Libraries, and Places of Worship*~~

(59) NFPA 914~~, *Code for Fire Protection of Historic Structures*~~

(60) NFPA 1123 ~~, *Code for Fireworks Display*~~

(61) NFPA 1125 ~~, *Code for the Manufacture of Model Rocket and High Power Rocket Motors*~~

(62) NFPA 1126 ~~, *Standard for the Use of Pyrotechnics Before a Proximate Audience*~~

(63) NFPA 1141~~, *Standard for Fire Protection Infrastructure for Land Development in Wildland, Rural, and Suburban Areas*~~

(64) NFPA 1192 ~~, *Standard on Recreational Vehicles*~~

(65) NFPA 1194 ~~, *Standard for Recreational Vehicle Parks and Campgrounds*~~

(66) NFPA 1221 ~~, *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*~~

(67) NFPA 1901 ~~, *Standard for Automotive Fire Apparatus*~~

(68) NFPA 1906 ~~, *Standard for Wildland Fire Apparatus*~~

(69) NFPA 1925~~, *Standard on Marine Fire-Fighting Vessels*~~

(70) *NFPA 5000*~~, *Building Construction and Safety Code*~~

5.6.2 **[5.5.5.2]**

In no case shall the requirements of the documents in 5.6.1 be less than those specified in this standard.

First Revision No. 24-NFPA 10-2019 [Detail]

Add new section:

7.6.2.1

Where used in conjunction with non-fire alarm systems, fire extinguisher electronic monitoring devices shall be inspected and maintained as required in 7.6.1 through 7.6.1.2 and the manufacturer's installation and maintenance manual(s).

Submitter Information Verification

Committee:

Submittal Date: Wed Sep 25 16:40:54 EDT 2019

Committee Statement

Committee Statement: Use substantiation from PI 175 and 68

Response Message: FR-24-NFPA 10-2019

Public Input No. 68-NFPA 10-2019 [New Section after 7.6.2]

Public Input No. 175-NFPA 10-2019 [New Section after 7.6.2]

First Revision No. 60-NFPA 10-2019 [Detail]

Add annex to 8.1 General.

A.8.1

Since pump-type fire extinguishers do not utilize a pressure vessel, hydrostatic testing of the agent container is not required.

Submitter Information Verification

Committee:

Submittal Date: Thu Oct 17 08:24:17 EDT 2019

Committee Statement

Committee Statement: This change is to clarify that since pump type fire extinguishers do not have a pressure vessel a hydrostatic test is not required.

Response Message: FR-60-NFPA 10-2019

Public Input No. 48-NFPA 10-2019 [Section No. 8.1]

First Revision No. 9-NFPA 10-2019 [Detail]

The committee would like to change the title of section 6.1.3.3 to "Visibility".

6.1.3.3 Visibility.

Submitter Information Verification

Committee:

Submittal Date: Tue Sep 24 17:12:56 EDT 2019

Committee Statement

Committee Statement:	The title of this section has been clarified to no longer include the term "Obstruction" which could be interpreted as a physical obstruction.
Response Message:	FR-9-NFPA 10-2019

First Revision No. 2-NFPA 10-2019 [Section No. 2.3]

2.3 Other Publications.

2.3.1 ACA Publications.

American Coatings Association, 1500 Rhode Island Avenue, NW, Washington, DC 20005.

Hazardous Materials Identification System (HMIS), Implementational Manual, 4th edition.

2.3.2 ASTM Publications.

ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959.

ASTM D5391, *Standard Test for Electrical Conductivity and Resistivity of a Flowing High Purity Water Sample*, 2014.

2.3.3 CGA Publications.

Compressed Gas Association, 14501 George Carter Way, Suite 103, Chantilly, VA 20151-1788.

CGA C-1, *Methods for Pressure Testing Compressed Gas Cylinders*, 2016.

CGA G-10.1, *Commodity Specification for Nitrogen*, ~~2008~~ 2016 .

2.3.4 UL Publications.

Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096.

UL 1093, *Standard for Halogenated Agent Fire Extinguishers*, 1995, revised 2008.

UL 1803, *Standard for Factory Follow-Up on Third Party Certified Portable Fire Extinguishers*, 2012, revised 2017 .

2.3.5 ULC Publications.

~~Underwriters' Laboratories of Canada, 7 Underwriters Road, Toronto, ON M1R 3A9, Canada.~~ ULC Standards, 171 Nepean Street, Suite 400, Ottawa, Ontario K2P 0B4 Canada.

~~CAN/ULC~~ ULC CAN -S512, *Standard for Halogenated Agent Hand and Wheeled Fire Extinguishers*, 2005, reaffirmed 2007.

2.3.6 UL/ULC Publications.

The following publications are bi-nationally harmonized standards for Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096, and ~~Underwriters' Laboratories of Canada, 7 Underwriters Road, Toronto, ON M1R 3A9~~ ULC Standards, 171 Nepean Street, Suite 400, Ottawa, Ontario K2P 0B4 , Canada.

~~ANSI/~~ UL 8, CAN/ULC-S554, *Water Based Agent Fire Extinguishers*, ~~2011~~ 2016 .

~~ANSI/~~ UL 154, CAN/ULC-S503, *Standard for Carbon-Dioxide Fire Extinguishers*, ~~2014~~ 2005, revised 2018 .

~~ANSI/~~ UL 299, CAN/ULC-S504, *Standard for Dry Chemical Fire Extinguishers*, 2012, revised 2018 .

~~ANSI/~~ UL 626, CAN/ULC-S507, *Standard for Water Fire Extinguishers*, ~~2012~~ 2005, revised 2018 .

~~ANSI/~~ UL 711, CAN/ULC-S508, *Standard for Rating and Fire Testing of Fire Extinguishers*, ~~2013~~ 2018 .

~~ANSI/~~ UL 2129, CAN/ULC-S566, *Standard for Halocarbon Clean Agent Fire Extinguishers*, ~~2014~~ 2017 .

2.3.7 UN Publications.

United Nations, Publications Customer Service, PO Box 960, Herndon, VA 20172.

GHS, *Globally Harmonized System of Classification and Labeling of Chemicals*, ST/SG/AC.10/30/Rev. 6, 2015.

2.3.8 U.S. Government Publications.

U.S. Government Publishing Office, 732 North Capitol Street, NW, Washington, DC 20401-0001.

Title 49, Code of Federal Regulations, Part 180.209, "Requirements for Requalification of Specification Cylinders," 2015.

Title 49, Code of Federal Regulations, Part 180.213, "Requalification Markings," 2015.

2.3.9 Other Publications.

Merriam-Webster's Collegiate Dictionary, 11th edition, Merriam-Webster, Inc., Springfield, MA, 2003.

Submitter Information Verification

Committee: PFE-AAA
Submittal Date: Tue Sep 24 09:54:18 EDT 2019

Committee Statement

Committee Statement: Referenced current national consensus standard editions.

Location of ULC corrected.

Response Message: FR-2-NFPA 10-2019

Public Input No. 29-NFPA 10-2018 [Section No. 2.3]

Public Input No. 55-NFPA 10-2019 [Section No. 2.3.6]

Public Input No. 54-NFPA 10-2019 [Section No. 2.3.5]

First Revision No. 62-NFPA 10-2019 [Section No. 2.4]

2.4 References for Extracts in Mandatory Sections.

NFPA 17, *Standard for Dry Chemical Extinguishing Systems,* 2017 edition.

NFPA 17A, *Standard for Wet Chemical Extinguishing Systems,* 2017 edition.

NFPA 18, *Standard on Wetting Agents,* 2017 edition.

NFPA 52, *Vehicular Natural Gas Fuel Systems Code,* ~~2016~~ 2019 edition.

Submitter Information Verification

Committee: PFE-AAA
Submittal Date: Thu Oct 17 09:47:41 EDT 2019

Committee Statement

Committee Statement: Updating NFPA 52 to most current edition.
Response Message: FR-62-NFPA 10-2019

First Revision No. 42-NFPA 10-2019 [Section No. 3.3.6.2]

3.3.6.2* Halogenated Closed Recovery System.

A system that provides for the transfer of halogenated agents between fire extinguishers, supply containers, and recharge and recovery containers so that none of the halogenated agent escapes to the atmosphere. ~~Closed recovery systems for halogenated agents with an ozone depleting potential (ODP) of 0.2 or greater should be listed for use with that agent. The system's supply or recharge and recovery container is capable of maintaining the agent in a sealed environment until it is reused or returned to the agent manufacturer.~~

A.3.3.6.2 Halogenated Closed Recovery System.

Closed recovery systems for halogenated agents with an ozone depleting potential (ODP) of 0.2 or greater should be listed for use with that agent. The system's supply or recharge and recovery container is capable of maintaining the agent in a sealed environment until it is reused or returned to the agent manufacturer.

Submitter Information Verification

Committee: PFE-AAA
Submittal Date: Wed Sep 25 19:01:13 EDT 2019

Committee Statement

Committee Statement: The explanatory materials belongs in the annex.
Response Message: FR-42-NFPA 10-2019

Public Input No. 76-NFPA 10-2019 [Section No. 3.3.6.2]

Public Input No. 77-NFPA 10-2019 [New Section after 3.3.6.2]

First Revision No. 43-NFPA 10-2019 [Section No. 3.3.7.1]

3.3.7.1 High-Pressure Cylinder.

Cylinders (and cartridges) containing nitrogen, compressed air, carbon dioxide, or other gases at a service pressure higher than 500 psi (3447 kPa) at 70°F (21°C).

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 19:15:07 EDT 2019

Committee Statement

Committee Statement: This is a Style correction since in 3.3.7.2 the term that makes the difference between high pressure and low pressure cylinders is the service pressure. This is in order to have both 3.3.7.1 and 3.3.7.2 use the same terminology.

Response Message: FR-43-NFPA 10-2019

Public Input No. 50-NFPA 10-2019 [Section No. 3.3.7.1]

First Revision No. 44-NFPA 10-2019 [Section No. 3.3.9]

3.3.9* Dry Powder.

Solid materials in powder or granular form ~~designed to extinguish~~ intended for the extinguishment of Class D combustible metal fires by crusting, smothering, or heat-transferring means.

Submitter Information Verification

Committee: PFE-AAA
Submittal Date: Wed Sep 25 19:16:02 EDT 2019

Committee Statement

Committee Statement: Editorial
Response Message: FR-44-NFPA 10-2019

Public Input No. 78-NFPA 10-2019 [Section No. 3.3.9]

First Revision No. 45-NFPA 10-2019 [Section No. 3.3.19]

3.3.19 Hydrostatic Testing.

Pressure testing of the extinguisher cylinder and certain hose assemblies to verify its strength against unwanted rupture.

Submitter Information Verification

Committee: PFE-AAA
Submittal Date: Wed Sep 25 19:19:13 EDT 2019

Committee Statement

Committee Statement: Section 8.8.3 requires certain hose assemblies to be hydrostatically tested.
Response Message: FR-45-NFPA 10-2019

Public Input No. 79-NFPA 10-2019 [Section No. 3.3.19]

First Revision No. 46-NFPA 10-2019 [New Section after 3.4.4]

3.4.4 Pump Tank Fire Extinguisher.

A fire extinguisher where the operator provides expelling energy by means of a pump and the vessel containing the agent is not pressurized.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Thu Sep 26 09:42:23 EDT 2019

Committee Statement

Committee Statement: The standard does not provide a definition for pump tank fire extinguishers although they are addressed in several sections of Chapters 4, 7, and 8 as well annexes C, D, and F .

The proposed definition was taken from NFPA 10, Annex D.1.2.1 (4).

Response Message: FR-46-NFPA 10-2019

Public Input No. 41-NFPA 10-2019 [New Section after 3.4.4]

First Revision No. 47-NFPA 10-2019 [Section No. 3.4.5]

3.4.6* Self-Expelling Fire Extinguisher.

A fire extinguisher in which the agent has sufficient vapor pressure at normal operating temperatures to expel itself.

A.3.4.6 Self-Expelling Fire Extinguisher.

One example of a self-expelling extinguisher is a carbon dioxide extinguisher.

Submitter Information Verification

Committee: PFE-AAA
Submittal Date: Thu Sep 26 09:45:35 EDT 2019

Committee Statement

Committee Statement: It would help users of the standard if an example is provided.
Response Message: FR-47-NFPA 10-2019

Public Input No. 80-NFPA 10-2019 [Section No. 3.4.5]

First Revision No. 3-NFPA 10-2019 [Section No. 4.1.4.3]

4.1.4.3

~~Paragraphs~~ 4.1.4.1 ~~and~~ 4.1.4.2 ~~shall apply only to water-based extinguishers manufactured after August 15, 2002.~~

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Tue Sep 24 11:29:33 EDT 2019

Committee Statement

Committee Statement: Some water based extinguishers made before August 15, 2002 bear the “C” rating and contain agents which can potentially conduct electricity once they puddle and pool upon discharge. Those class “C” rated water-based fire extinguisher nameplates also do not communicate or reflect anything about the potential conductivity of the agent as currently referenced and required within paragraph 4.1.4. The existing subject language exemption not only presents confusion, but represents a potential safety hazard to unsuspecting end-users. We maintain visibility on our customers equipment and can identify thousands of units which currently present such concerns. (Our records reflect 4% of the total class K and water mist units still actively in service, are pre-August 2002 models).

Response Message: FR-3-NFPA 10-2019

Public Input No. 139-NFPA 10-2019 [Section No. 4.1.4.3]

First Revision No. 19-NFPA 10-2019 [Section No. 5.1]

5.1* General Requirements.

The selection of fire extinguishers for a given situation shall be determined by the applicable requirements of Sections 5.2 through 5.5.5 and the following factors:

(1) Type of fire most likely to occur

(2) Size of fire most likely to occur

(3) Hazards in the area where the fire is most likely to occur

(4) Energized electrical equipment in the vicinity of the fire

(5) Ambient temperature conditions

(6) Other factors *(See Section H.2.)*

A.5.1

Many Class A fires start as small fires that are often smoldering with little surface burning. A Class A fire that involves a flammable liquid is initially more intense and spreads rapidly. An example of this type of fire is where an open container of flammable liquid is spilled in a room containing furnishings and is ignited. The fire will rapidly involve combustible materials, including the furnishings in the vicinity of the spill. The flammable liquid works as an accelerant and speeds up the rate at which the fire spreads. There is a marked difference in the rates of flame spread where flammable liquids are involved in a combustible materials fire versus one involving only common combustibles.

5.1.1

Portable fire extinguishers shall be installed as a first line of defense to cope with fires of limited size, except as required by 5.5.4.5.

5.1.2

The selection of extinguishers shall be independent of whether the building is equipped with automatic sprinklers, standpipe and hose, or other fixed protection equipment.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 11:37:20 EDT 2019

Committee Statement

Committee Statement: substantiation from PI 93

Response Message: FR-19-NFPA 10-2019

Public Input No. 93-NFPA 10-2019 [New Section after 6.2]

First Revision No. 59-NFPA 10-2019 [Chapter 6 [Title Only]]

Installation ~~of Portable Fire Extinguishers~~

Submitter Information Verification

Committee: PFE-AAA
Submittal Date: Tue Oct 15 16:41:10 EDT 2019

Committee Statement

Committee Statement: Chapter 6 covers more than just the installation of extinguishers. It also covers the installation of cabinets, signs etc.
Response Message: FR-59-NFPA 10-2019

Public Input No. 84-NFPA 10-2019 [Chapter 6]

First Revision No. 10-NFPA 10-2019 [Sections 6.1.3.3.1, 6.1.3.3.2]

6.1.3.3.1

Fire extinguishers shall be installed in locations where they are visible except as permitted by 6.1.3.3.2 or 6.1.3.3 .

6.1.3.3.2*

In rooms and in locations where visual obstructions cannot be avoided, signs or other means shall be provided to indicate the extinguisher location.

6.1.3.3.3

Fire extinguishers shall be permitted to be installed in fire extinguisher cabinets provided the extinguisher is visible or signs or other means are provided to indicate the extinguisher location.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Tue Sep 24 17:17:06 EDT 2019

Committee Statement

Committee Statement: Text should be added to address the visibility of extinguishers in extinguisher cabinets. Some extinguisher cabinets don't have transparent covers, windows, doors and therefore a sign is needed.

Response Message: FR-10-NFPA 10-2019

Public Input No. 116-NFPA 10-2019 [Section No. 6.1.3.3]

First Revision No. 11-NFPA 10-2019 [Sections 6.1.3.3.3, 6.1.3.3.4]

6.1.3.3.4

~~Signs~~ Where signs or other means are used to indicate fire extinguisher location they shall be located in close proximity to the extinguisher.

6.1.3.3.5

~~Signs~~ Where signs or other means are used to indicate fire extinguisher location they shall be visible from the normal path of travel.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Tue Sep 24 17:34:26 EDT 2019

Committee Statement

Committee Statement: This is a clarification to specify that signs should not be required when portable fire extinguishers are readily visible.

Response Message: FR-11-NFPA 10-2019

First Revision No. 12-NFPA 10-2019 [Section No. 6.1.3.6]

6.1.3.6

Fire extinguishers installed in ~~vehicles or under other~~ or on vehicles shall be installed in approved strap-type brackets specifically designed for this application. ~~conditions where they are subject to dislodgement shall be installed in approved strap-type brackets specifically designed for this application.~~

6.1.3.7

Fire extinguishers installed under conditions where they are subject to dislodgement shall be installed in approved strap-type brackets specifically designed ~~for this application~~ to prevent dislodgement .

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Tue Sep 24 17:42:15 EDT 2019

Committee Statement

Committee Statement: There are safety concerns with regard to placement of extinguishers where they are subject to dislodgement. The current placement of the text in 6.1.3.6 is often overlooked by users of the standard. Breaking out that topic in a new paragraph helps users of the standard and helps increase safety.

Response Message: FR-12-NFPA 10-2019

Public Input No. 86-NFPA 10-2019 [Section No. 6.1.3.6]

First Revision No. 61-NFPA 10-2019 [Section No. 6.1.3.9.3]

6.1.3.10.3*

The restrictions of 6.1.3.10.2 shall not apply to the original manufacturer's labels, labels that specifically relate to the extinguisher's operation or fire classification, or inventory control labels specific to that extinguisher.

A.6.1.3.10.3

An example of an inventory control label could be a label or sticker with a number, symbol, or barcode that correlates with a specific extinguisher's details and location.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Thu Oct 17 08:33:56 EDT 2019

Committee Statement

Committee Statement: There is still disagreement on what "inventory control labels" refer to and, as a result, some labels that are clearly used for inventory purposes and placed on the front of the extinguisher are seen as being non-compliant with sub-section 6.1.3.9.3. This note serves as good guidance on what inventory control labels could include.

Response Message: FR-61-NFPA 10-2019

Public Input No. 2-NFPA 10-2018 [New Section after A.6.1.3.7]

First Revision No. 64-NFPA 10-2019 [Section No. 6.1.3.10.1]

6.1.3.11.1 Locked Cabinets.

6.1.3.11.1.1

Cabinets housing fire extinguishers shall not be locked, except where fire extinguishers are subject to malicious use and cabinets include a means of emergency access.

6.1.3.11.1.2

Cabinets housing fire extinguishers with break-front panels shall be provided with breaker bars or hammers, designed for accessing the extinguisher during a fire emergency.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Fri Nov 01 11:11:24 EDT 2019

Committee Statement

Committee Statement: It is unsafe to have a cabinet that has a scored front panel without a device, such as a breaker bar or hammer specifically designed for accessing the extinguisher.

Response Message: FR-64-NFPA 10-2019

Public Input No. 88-NFPA 10-2019 [New Section after 6.1.3.10.1]

First Revision No. 16-NFPA 10-2019 [Section No. 6.1.3.10.2]

6.1.3.11.2 Location.

~~The location of fire extinguishers as described in 6.1.3.3.2 shall be marked conspicuously.~~

6.1.3.11.2.1

The location of fire extinguishers in cabinets that are not visible from the normal path of travel shall be provided with signs or other means to indicate the extinguisher location.

6.1.3.11.2.2

Signs or other means as stated in 6.1.3.11.2.1 shall be visible from the normal path of travel.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 10:54:35 EDT 2019

Committee Statement

Committee Statement: The requirements of 6.1.3.3.2 and 6.1.3.3.4 are applicable to extinguishers in cabinets. The requirement in 6.1.3.10.2 needs to be updated to reflect those requirements.

Response Message: FR-16-NFPA 10-2019

Public Input No. 94-NFPA 10-2019 [Section No. 6.1.3.10.2]

First Revision No. 18-NFPA 10-2019 [Section No. 6.2.1.3]

~~6.2.1.3~~

~~Smaller fire extinguishers that are rated on Class B and Class C fires but do not have a minimum 1-A rating shall not be used to meet the requirements of 6.2.1.~~

6.2.1.3

Fire extinguishers of lesser rating shall be permitted to be installed but shall not be considered as fulfilling any part of the requirements of Table 6.2.1.1, except as permitted in 6.2.1.3.1 and 6.2.1.3.2.

6.2.1.3.1

Up to two water-type extinguishers, each with 1-A rating, shall be permitted to be used to fulfill the requirements of one 2-A-rated extinguisher.

6.2.1.3.2

Two 2½ gal (9.46 L) water-type extinguishers shall be permitted to be used to fulfill the requirements of one 4-A-rated extinguisher.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 11:30:05 EDT 2019

Committee Statement

Committee Statement: Paragraph is not needed. If an extinguisher has a BC rating and does not have a Class A rating, it obviously can't be installed to satisfy section 6.2.1. The paragraph creates more confusion than clarification. Renumber existing paragraphs accordingly.

Response Message: FR-18-NFPA 10-2019

Public Input No. 92-NFPA 10-2019 [Section No. 6.2.1.3]

First Revision No. 20-NFPA 10-2019 [Section No. 6.3.2.2]

~~6.3.2.2*~~

~~Where personnel who are trained in extinguishing fires in the protected hazards are located on the premises and capable of responding immediately, the maximum surface area shall not exceed 20 ft~~ ^{2} ~~(1.86 m~~ ^{2} ~~).~~

~~A.6.3.2.2~~

~~Where such personnel are not available, the hazard should be protected by fixed systems.~~

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 12:29:16 EDT 2019

Committee Statement

Committee Statement: The type of training is not specified. Trained personnel could only be there during times when the facility is manned.

Response Message: FR-20-NFPA 10-2019

First Revision No. 21-NFPA 10-2019 [Section No. 6.6.3]

6.7 Solid-Fuel Cooking Appliances.

All solid-fuel cooking appliances (whether or not under a hood) with fire boxes of 5 ft^3 (0.14 m^3) volume or less shall have at least a listed 2-A-rated water-type fire extinguisher or a 1.6 gal (6 L) wet-chemical fire extinguisher that is listed for Class K fires.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 12:48:20 EDT 2019

Committee Statement

Committee Statement: Current paragraph 6.6.3 contains requirements for 2-A rated water extinguishers and Class K extinguishers for the protection of solid fuel cooking appliances. It should therefore be in a separate section from the 6.6 section on Class K Hazards.

Response Message: FR-21-NFPA 10-2019

Public Input No. 121-NFPA 10-2019 [Section No. 6.6.3]

First Revision No. 22-NFPA 10-2019 [New Section after 7.1.3]

7.1.3.1*

When the removal and replacement of fire extinguishers from installed locations is necessary or desired during service, the owner shall be notified.

A.7.1.3.1

Removal or replacement of fire extinguishers during service should be done with the owner's knowledge and permission. This ensures that any replaced equipment meets with the owner's expectations and has been documented to address the applicable fire extinguisher record-keeping requirements.

Replacement fire extinguishers should equal the rating, agent capacity, and type of the removed extinguisher. The extinguisher should use a hanger or bracket.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 15:01:50 EDT 2019

Committee Statement

Committee Statement: This new proposal will help to ensure that fire extinguishers being removed or swapped out during service, are done so with the owner's knowledge and permission. It additionally ensures that any equipment being replaced or substituted meets with the owner's expectations and has been properly documented to address applicable fire extinguisher record keeping requirements.

Response Message: FR-22-NFPA 10-2019

Public Input No. 123-NFPA 10-2019 [New Section after 7.1.3]

First Revision No. 48-NFPA 10-2019 [Section No. 7.2.2 [Excluding any Sub-Sections]]

Periodic inspection ~~or electronic monitoring~~ of fire extinguishers shall include a check of at least the following items:

(1) Location in designated place

(2) Visibility of the extinguisher or means of indicating the extinguisher location

(3) Access to the extinguisher

(4) Pressure gauge reading or indicator in the operable range or position

(5) Fullness determined by weighing or hefting for self-expelling-type extinguisher, cartridge-operated extinguishers, and pump tanks

(6) Condition of tires, wheels, carriage, hose, and nozzle for wheeled extinguishers

(7) Indicator for nonrechargeable extinguishers using push-to-test pressure indicators

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Thu Sep 26 10:55:43 EDT 2019

Committee Statement

Committee Statement: Fullness determined by weighing or hefting should only be required for specific types that typically do not have pressure gauges since gauges can often be relied on to determine if an extinguisher is full.

Response Message: FR-48-NFPA 10-2019

Public Input No. 65-NFPA 10-2019 [Section No. 7.2.2 [Excluding any Sub-Sections]]

Public Input No. 64-NFPA 10-2019 [Section No. 7.2.2 [Excluding any Sub-Sections]]

Public Input No. 10-NFPA 10-2018 [Section No. 7.2.2 [Excluding any Sub-Sections]]

Public Input No. 75-NFPA 10-2019 [Section No. 7.2.2 [Excluding any Sub-Sections]]

First Revision No. 52-NFPA 10-2019 [Section No. 7.3.2.1]

7.3.2.1 Physical Condition.

An annual external visual examination of all fire extinguishers shall be made to detect obvious physical damage, corrosion, or nozzle blockage to verify that the operating instructions are present, legible, and facing forward, and that the HMIS information is present and legible, and to determine if a 6-year interval examination or hydrostatic test is due.

7.3.2.1.1

At the time of the annual external visual examination, a check of at least the inspection items of 7.2.2 shall be conducted.

7.3.2.1.2 Record.

7.3.2.1.2.1

The record for the annual visual examination, including 7.3.2.1.1 , shall be permitted to be recorded as required by 7.3.4 .

7.3.2.1.2.2

The record for the annual visual examination, including 7.3.2.1.1 , shall not be required to be recorded in accordance with 7.2.4 .

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Thu Sep 26 13:30:37 EDT 2019

Committee Statement

Committee Statement: Currently there have been AHJ's citing hospitals for not performing a monthly inspection during the month that the annual inspection is performed. This addition of the monthly inspection requirements within Section 7.2.2 will clearly indicate that the annual inspection should include the monthly inspection and that when an annual inspection is performed it will cover all aspects of the monthly inspection avoiding these types of citations.

Response Message: FR-52-NFPA 10-2019

Public Input No. 179-NFPA 10-2019 [Section No. 7.3.2.1]

Public Input No. 122-NFPA 10-2019 [Section No. 7.3.2.1]

First Revision No. 23-NFPA 10-2019 [Section No. 7.6]

7.6 Electronic Monitoring System Maintenance.

7.6.1 Electronic Monitoring.

The components of the monitoring device/system shall be tested and maintained annually in accordance with the manufacturer's ~~listed~~ maintenance manual, with the following items included as a minimum:

(1) Power supply inspection/battery change

(2) Obstruction sensor inspection

(3) Location sensor inspection

(4) Pressure indication inspection

(5) Connection continuity inspection *(~~See~~ see 7.6.1.1 and 7.6.1.2.~~)~~*

7.6.1.1

One hundred percent of all units shall be tested upon initial installation or reacceptance with verification of ~~receipt of signal at the control panel or a local alarm~~ communication between the device connecting the fire extinguisher electronic monitoring device/system and the fire alarm control or other control unit to ensure proper signals are received at the control unit and remote annunciator(s), if applicable .

7.6.1.2

~~Twenty~~ One hundred percent of all units shall be tested annually ~~on a rotating basis so that all units are tested within a 5-year period.~~ with verification of communication between the device connecting the fire extinguisher electronic monitoring device/system and the fire alarm control unit or other control unit to ensure proper signals are received at the control unit and remote annunciator(s), if applicable.

7.6.2 Fire Alarm System.

~~When~~ Where used in conjunction with fire alarm systems, fire extinguisher electronic monitoring devices shall be inspected and maintained in accordance with *NFPA 72*. ~~and 7.6.1~~ .

Detail FR-24

7.6.2.1

Where used in conjunction with non-fire alarm systems, fire extinguisher electronic monitoring devices shall be inspected and maintained as required in 7.6.1 through 7.6.1.2 and the manufacturer's installation and maintenance manual(s).

7.6.3 Corrective Action.

~~When~~ Where maintenance of any monitoring system reveals a deficiency, immediate corrective action shall be taken.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 16:38:15 EDT 2019

Committee Statement

Committee Statement: NFPA 72 requires that all fire extinguisher electronic monitoring devices/systems be tested on an annual basis therefore, NFPA 10 should recognize the minimum requirements of NFPA 72 for the testing of these devices/systems. Reference NFPA 72 Table 14.4.3.2, Item 19.

Response Message: FR-23-NFPA 10-2019

Public Input No. 45-NFPA 10-2019 [Section No. 7.6]

First Revision No. 25-NFPA 10-2019 [Section No. 7.8.2.3.1]

7.8.2.3.1

The premixed agent in liquid- charge~~–~~ - type AFFF and FFFP fire extinguishers shall be replaced ~~at least once every 3 years.~~ following the fire extinguisher manufacturer's instructions, not to exceed the 5-year hydrostatic test interval.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 17:17:33 EDT 2019

Committee Statement

Committee Statement: Substantiation

The existing language currently requires and mandates the unnecessary disposal and replacement of all pre-mixed foam solutions within sealed stored pressure fire extinguisher models, which are not subject to the same type of contamination concerns that might exist with non-pressurized forms of hardware. The suggested language allows the fire extinguisher manufacture to provide agent specific performance replacement recommendations within the mandated 5 year hydro test replacement limitation. This will help eliminate concerns associated with waste, unnecessary service costs and environmental impact.

Response Message: FR-25-NFPA 10-2019

Public Input No. 168-NFPA 10-2019 [Section No. 7.8.2.3.1]

First Revision No. 26-NFPA 10-2019 [Section No. 7.8.3.5.2]

7.8.3.5.2*

The dry powder shall be replaced if found damp. ~~(See A.7.8.3 .)~~

A.7.8.3.5.2

Dry powder used for combustible metal fires (Class D) should not be allowed to become damp, because the powder will not be free flowing. In addition, when dry powder contains sufficient moisture, a hazardous reaction could result when applied to a metal fire.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 17:37:15 EDT 2019

Committee Statement

Committee Statement: Only the last paragraph of A.7.8.3 relates to 7.8.3.5.2. This paragraph should be a separate annex relating to 7.8.3.5.2.

Response Message: FR-26-NFPA 10-2019

Public Input No. 96-NFPA 10-2019 [Section No. 7.8.3.5.2]

First Revision No. 27-NFPA 10-2019 [Section No. 7.8.4.8.1]

7.8.4.8.1 Labels.

7.8.4.8.1.1

Each fire extinguisher shall have a tag or label securely attached that indicates ~~the month and year recharging was performed, identifies the person performing the service, and identifies the name of the agency performing the work.~~ recharging was performed.

7.8.4.8.1.2

The tag or label, as a minimum, shall identify the following:

(1) Month and year charging was performed

(2) Person performing the work

(3) Name of the agency performing the work

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 17:44:55 EDT 2019

Committee Statement

Committee Statement: The paragraph should be reformatted to match 7.3.4.1.1 and other tag and label requirements.

Response Message: FR-27-NFPA 10-2019

Public Input No. 98-NFPA 10-2019 [Section No. 7.8.4.8.1]

Public Input No. 99-NFPA 10-2019 [New Section after 7.8.4.8.1]

First Revision No. 28-NFPA 10-2019 [Section No. 7.9]

7.9* Pressure Gauges.

7.9.1

Broken, cracked, illegible, damaged, nonworking, or water-contaminated pressure gauges shall be replaced.

7.9.2

Replacement pressure gauges shall have the correct indicated charging (i.e., service) pressure.

7.9.3

Replacement pressure gauges shall be marked for use with the agent in the fire extinguisher.

7.9.4

Replacement pressure gauges shall be compatible with the fire extinguisher valve body material.

Submitter Information Verification

Committee: PFE-AAA
Submittal Date: Wed Sep 25 17:46:53 EDT 2019

Committee Statement

Committee Statement: There currently is no requirement to replace damaged and nonworking gauges.
Response Message: FR-28-NFPA 10-2019

Public Input No. 100-NFPA 10-2019 [Section No. 7.9]

First Revision No. 29-NFPA 10-2019 [New Section after 7.11.4]

7.12.4.4

Pump tank fire extinguishers shall not be required to have a verification-of-service collar installed.

Submitter Information Verification

Committee: PFE-AAA
Submittal Date: Wed Sep 25 17:54:31 EDT 2019

Committee Statement

Committee Statement: Included pump type fire extinguishers in the service collar exemption section.
Response Message: FR-29-NFPA 10-2019

Public Input No. 46-NFPA 10-2019 [New Section after 7.11.4]

First Revision No. 31-NFPA 10-2019 [Section No. 8.4.1.2]

8.4.1.2 Nonhalon, Nonrechargeable Fire Extinguishers.

~~Nonrechargeable fire extinguishers, other than halogenated agent types shall not be required to comply with 8.4.1 but shall be discharged and discarded where the fire extinguisher shows evidence of dents, mechanical injury, or corrosion to the extent of indicating weakness.~~

8.4.1.2.1

Nonrechargeable fire extinguishers~~,~~ other than ~~halogenated~~ halon agent types, that show evidence of dents, mechanical injury, or corrosion to the extent of indicating weakness shall not be required to comply with 8.4.1.

8.4.1.2.2

Nonrechargeable fire extinguishers as stated in 8.4.1.2.1 shall be discharged and discarded. ~~where the fire extinguisher shows evidence of dents, mechanical injury, or corrosion to the extent of indicating weakness.~~

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 18:28:38 EDT 2019

Committee Statement

Committee Statement: Paragraphs 8.4.1.2 and 8.4.1.3 should be correlated. Since 8.4.1.3 provides a requirement for nonrechargeable halon type extinguishers, 8.4.1.2 should address the remainder of nonrechargeable extinguishers.

Response Message: FR-31-NFPA 10-2019

Public Input No. 102-NFPA 10-2019 [Section No. 8.4.1.2]

First Revision No. 32-NFPA 10-2019 [Section No. 8.5.2.5]

8.5.2.5

Any distortion of the cylinder shall be cause ~~for rejection.~~ to condemn the cylinder.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 18:37:42 EDT 2019

Committee Statement

Committee Statement: NFPA 10 uses the term “condemn” to disposition cylinders that do not meet hydrostatic test or visual inspection. This change is consistent with the rest of the standard.

Response Message: FR-32-NFPA 10-2019

Public Input No. 104-NFPA 10-2019 [Section No. 8.5.2.5]

First Revision No. 33-NFPA 10-2019 [Section No. 8.6.2.2]

~~8.6.2.2~~

~~Carbon dioxide fire extinguishers having cylinder specification ICC3 shall be tested at 3000 psi (20.68 MPa).~~

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 18:40:37 EDT 2019

Committee Statement

Committee Statement: The ICC cylinder designation was eliminated and changed to DOT over 50 years ago. This reference is not only extremely dated, but also unnecessary as the testing of ICC marked cylinders is already addressed within DOT regulations table 180.209. Not aware of any existing CO2 fire extinguisher models utilizing ICC markings that still exist or are still able to be serviced and hydrostatically tested per NFPA-10. Reference paragraphs 4.4, 4.4.2. and 8.1.2.

Response Message: FR-33-NFPA 10-2019

Public Input No. 170-NFPA 10-2019 [Section No. 8.6.2.2]

First Revision No. 34-NFPA 10-2019 [Section No. A.5.3.2.4]

A.5.3.2.4

The following information pertains to Class D hazards:

(1) Chemical reaction between burning metals and many extinguishing agents (including water) can range from explosive to inconsequential, depending in part on the type, form, and quantity of metal involved. In general, the hazards from a metal- fire are significantly increased when such extinguishing agents are applied. The advantages and limitations of a wide variety of commercially available metal fire extinguishing agents are discussed in NFPA 484 and in Section 6, Chapter 9, of the NFPA *Fire Protection Handbook*. The MSDS of the Class D hazard being protected or the extinguisher manufacturer should be consulted.

(2) The agents and fire extinguishers discussed in this section are of specialized types, and their use often involves special techniques peculiar to a particular combustible metal. A given agent will not necessarily control or extinguish all metal fires. Some agents are valuable in working with several metals; others are useful in combating only one type of metal fire. The authorities having jurisdiction should be consulted in each case to determine the desired protection for the particular hazard involved.

(3) Certain combustible metals require special extinguishing agents or techniques. See NFPA 484 for additional information. If there is doubt, NFPA 484 or the NFPA *Fire Protection Guide to Hazardous Materials* should be consulted. (NFPA 49 and NFPA 325 have been officially withdrawn from the *National Fire Codes*, but the information is contained in the NFPA *Fire Protection Guide to Hazardous Materials*.)

(4) Reference should be made to the manufacturer's recommendations for use and special techniques for extinguishing fires in various combustible metals.

(5) Fire of high intensity can occur in certain metals. Ignition is generally the result of frictional heating, exposure to moisture, or exposure from a fire in other combustible materials. The greatest hazard exists when these metals are in the molten state or in finely divided forms of dust, turnings, or shavings.

The properties of a wide variety of combustible metals and the agents available for extinguishing fires in these metals are discussed in NFPA 484 ~~and the NFPA *Fire Protection Handbook* .~~ , the NFPA *Fire Protection Handbook* , and the *SFPE Handbook of Fire Protection Engineering* .

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 18:47:06 EDT 2019

Committee Statement

Committee Statement: The SFPE Handbook of Fire Protection Engineering also has additional information related to suppression agents for Class D fires. Specifically, information related to the hazards for fine dusts. See Chapter 70, Fine Dusts.

Response Message: FR-34-NFPA 10-2019

Public Input No. 71-NFPA 10-2019 [Section No. A.5.3.2.4]

First Revision No. 35-NFPA 10-2019 [Section No. A.5.3.2.6.1]

Global FR-1

A.5.3.2.6.1

~~ANSI/~~UL 2129, ~~CAN/~~ULC/CAN-S566, *Standard for Halocarbon Clean Agent Fire Extinguishers*; and ~~CAN/~~ULC/CAN-S512, *Standard for Halogenated Agent Hand and Wheeled Fire Extinguishers*, require halocarbon and halogenated agent nameplates to provide safety guidelines for avoiding overexposure to agent vapors when the agents are discharged into confined spaces. The UL minimum volume requirement for confined spaces is based on exposure to the agent in the absence of a fire and does not include considerations of fire or agent decomposition products. ULC/CAN-S512 has been withdrawn from the standards directory and although new listings to this standard are not anticipated, extinguishers listed prior to the Montreal Protocol are still listed.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 18:48:17 EDT 2019

Committee Statement

Committee Statement: The standard has been withdrawn but is viable as a reference standard for those products currently listed and in service. The annex note explains this issue.

Response Message: FR-35-NFPA 10-2019

Public Input No. 56-NFPA 10-2019 [Section No. A.5.3.2.6.1]

First Revision No. 36-NFPA 10-2019 [Section No. A.5.5.6]

A.5.5.4.6

Where occupancies are required to have extinguishers installed, ~~this section~~ 5.5.4.6 is applicable to areas where the electronic equipment is located. Delicate electronic equipment includes, but is not limited to, telecommunications, computers, servers, robotics, and reproduction equipment.

Extinguishers provided for the protection of delicate electronic equipment are typically halogenated agent and water mist extinguishers with Class A ratings.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 18:49:07 EDT 2019

Committee Statement

Committee Statement: Added text for recommended types of extinguishers that are typically provided for the protection of delicate electronic equipment.

Response Message: FR-36-NFPA 10-2019

Public Input No. 115-NFPA 10-2019 [Section No. A.5.5.6]

First Revision No. 37-NFPA 10-2019 [Section No. A.5.5.6.1]

A.5.5.4.6.2

Dry chemical residue will probably not be able to be completely and immediately removed, and, in addition, multipurpose dry chemical exposed to temperatures in excess of 250°F (121°C) or relative humidity in excess of 50 percent can cause corrosion. The use of other clean agent types of extinguishing agents can help to minimize or eliminate collateral equipment damage and associated clean-up concerns.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 18:51:48 EDT 2019

Committee Statement

Committee Statement: Substantiation

The added sentence onto this ANNEX paragraph helps to further explain why the selection and use of a clean agent extinguisher may be an advisable consideration.

Response Message: FR-37-NFPA 10-2019

Public Input No. 166-NFPA 10-2019 [Section No. A.5.5.6.1]

First Revision No. 15-NFPA 10-2019 [Section No. A.6.1.3.10]

A.6.1.3.11

In addition to providing storage, extinguisher cabinets provide protection for extinguishers and prevent accidental bumping. The cabinet cavity must be big enough to accommodate the extinguisher, so the extinguisher must be selected before selecting the cabinet. The final selection of the cabinet should allow adequate room for the extinguisher to be easily removed.

Fire extinguishers in cabinets can be monitored for tampering or theft by means of a switch and local alarm to indicate when the extinguisher is removed from the cabinet.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 10:40:42 EDT 2019

Committee Statement

Committee Statement: The addition of a requirement section doesn't add any new information since there is nothing that prohibits the use of local alarm devices currently. You can monitor for tampering as long as you install in accordance with the manufacturers instructions or inhibit access. This new annex section helps inform users about this.

Response Message: FR-15-NFPA 10-2019

Public Input No. 90-NFPA 10-2019 [New Section after 6.1.3.10.1]

First Revision No. 38-NFPA 10-2019 [Section No. F.5.1]

F.5.1 Combustible Cooking Media Fires.

F.5.1.1

Combustible cooking media fires require the use of extinguishers that will extinguish the fire from a safe distance without causing splashing of the burning grease or permitting reignition of the fire. This can be achieved by a special- purpose residential fire extinguisher listed for residential grease fires or an automatic fire extinguisher unit listed for residential range top protection. An ABC dry chemical extinguisher is not the extinguisher of choice because of the possibility of reignition. Other agents can have limited effectiveness. Water, AFFF, and FFFP can cause dangerous splashing of burning grease and can cause fire to spread.

WARNING: Do not attempt to pick up a pot or pan containing burning grease! To avoid personal injury and to avoid spreading the fire, fight the fire in place. Shut off the heat source as soon as it is safe to do so, to avoid fire reflash.

F.5.1.2

Special-purpose residential fire extinguishers for residential grease fires are listed to the following:

(1) UL 299D, *Dry Chemical Fire Extinguishers For Residential Cooking Equipment*

(2) UL 711A, *Fire Test Method for Portable Hand-Held Extinguishers Intended for Use On Residential Cooking Equipment*

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 18:55:11 EDT 2019

Committee Statement

Committee Statement: Specific hazard application products as referenced are listed in accordance with these certification documents.

Response Message: FR-38-NFPA 10-2019

Public Input No. 173-NFPA 10-2019 [Section No. F.5.1]

First Revision No. 39-NFPA 10-2019 [New Section after K.1.1]

K.1.2.3 SFPE Publications.

Society of Fire Protection Engineers. 9711 Washingtonian Blvd., Suite 380, Gaithersburg, MD 20878.

SFPE Handbook of Fire Protection Engineering , 5th edition, 2016.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 18:56:11 EDT 2019

Committee Statement

Committee Statement: Addition of SFPE Handbook in list of references is need if statement in Public Input 71 is accepted.

Response Message: FR-39-NFPA 10-2019

Public Input No. 73-NFPA 10-2019 [New Section after K.1.1]

First Revision No. 40-NFPA 10-2019 [Section No. K.1.2.4]

K.1.2.5 ULC Publications.

~~Underwriters' Laboratories of Canada, 7 Underwriters Road, Toronto, ON M1R 3A9, Canada.~~ ULC Standards, 171 Nepean Street, Suite 400, Ottawa, Ontario K2P 0B4 Canada.

~~CAN/~~ ULC/CAN -S512, *Standard for Halogenated Agent Hand and Wheeled Fire Extinguishers*, 2005, reaffirmed 2007.

Submitter Information Verification

Committee: PFE-AAA
Submittal Date: Wed Sep 25 18:56:48 EDT 2019

Committee Statement

Committee Statement: Update of ULC publications address..
Response Message: FR-40-NFPA 10-2019

Public Input No. 57-NFPA 10-2019 [Section No. K.1.2.4]

First Revision No. 41-NFPA 10-2019 [Section No. K.1.2.5]

Global FR-1

K.1.2.6 UL/ULC Publications.

The following publications are binationally harmonized standards for Underwriters Laboratories Inc., 333 Pfingsten Road, Northbrook, IL 60062-2096, and ~~Underwriters' Laboratories of Canada, 7 Underwriters Road, Toronto, ON M1R 3A9, Canada.~~ ULC Standards, 171 Nepean ST, Suite 400, Ottawa, Ontario K2P 0B4, Canada.

~~ANSI/~~UL 299, CAN/ULC-S504, *Standard for Dry Chemical Fire Extinguishers*, ~~2012~~2018.

~~ANSI/~~UL 711, CAN/ULC-S508, *Standard for Rating and Fire Testing of Fire Extinguishers*, ~~2013~~2018.

~~ANSI/~~UL 2129, CAN/ULC-S566, *Standard for Halocarbon Clean Agent Fire Extinguishers*, ~~2014~~2017.

Submitter Information Verification

Committee: PFE-AAA

Submittal Date: Wed Sep 25 18:57:26 EDT 2019

Committee Statement

Committee Statement: Update the publishing dates for each of the UL standards listed to reflect the most up to date edition and an update of ULC publications address .Specific hazard application products as referenced are listed in accordance with these certification documents.

Response Message: FR-41-NFPA 10-2019

Public Input No. 58-NFPA 10-2019 [Section No. K.1.2.5]