Public Input No. 3-NFPA 495-2020 [Section No. 1.3.4]

1.3.4

This code shall not apply to pyrotechnics such as flares, fuses, exploding targets of less than 0.5kg, and railway torpedoes. It also shall not apply to fireworks and pyrotechnic special effects as defined in NFPA 1123, NFPA 1124, and NFPA 1126.

Additional Proposed Changes

File Name	Description	Approved
nfpa_495_comment_egloff.docx	comment on reasons for proposed change	

Statement of Problem and Substantiation for Public Input

NFPA 495 is a code for the industrial applications of explosives, and for their manufacture, transport, storage , and use by trained and responsible parties. The code currently eschews coverage of pyrotechnics, fireworks, model rockets, etc., which are often used by untrained parties for recreation rather than industrial purposes. We have had "exploding targets" such as are made by "Tannerite" and similar entities for many years. As with fireworks, pyrotechnics, model rockets, etc., there have been instances of injury and property damage by end users who are not trained in the use of explosives. Local and federal laws and regulations manage these "non-industrial" products, their use, transport, and storage. Codes are not adopted or enforced in all jurisdictions, but jurisdictions are able to enact their own enforceable laws and regulations. This proposal specifically removes small exploding targets (<0.5kg, as Tannerite recommends using less than 1lb/0.45kg of its product) from the scope of NFPA 495, just as fireworks, pyrotechnics, model rockets, etc. are currently and specifically named as not being within the scope. Let NFPA 495 restrict itself to industrial manufacture, transport, storage, and use of explosives for construction, mining, building removal, etc.

Submitter Information Verification

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Submittal Date: Tue Dec 01 12:33:15 EST 2020
Committee: EXP-AAA

Committee Statement

Resolution: All exploding targets are covered under NFPA 495 and is addressed adequately in the code.

Public Input No. 5-NFPA 495-2020 [Section No. 5.2.8.1]

5.2.8.1 Type of Clothing.

Clothing to be worn by persons involved in the manufacturing process shall be of a type approved by management or the AHJ .

Additional Proposed Changes

File Name	Description	Approved
495_PI_5_Attachment.pdf	Held PC 4 from F2017	

Statement of Problem and Substantiation for Public Input

NOTE: This Public Input appeared as “Reject but Hold” in Public Comment No. 4 of the (F2017) Second Draft Report for NFPA 495 and per the Regs. at 4.4.8.3.1.

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Submittal Date: Tue Dec 22 09:38:20 EST 2020
Committee: EXP-AAA

Committee Statement

Resolution: Management is best suited to make decisions on clothing worn in the manufacturing process. 29 CFR 1910.132D places the burden on the employer for clothing selection.

Public Input No. 1-NFPA 495-2019 [Section No. 5.4.5.2.4]

5.4.5.2.4

Electrical equipment in an Energetic Area 1 location shall, at minimum, meet one of the following design requirements:

(1) NFPA Class II, Division 1 and constructed to prevent entry of water where subject to wash-down or deluge water

(2) NEMA 4 or NEMA 6

(3) IP 65, IP 66, IP 67, or IP 68

(4) Other equipment designed or modified to meet the requirements of 5.4.4.2

(5) T-Rating of electric motors shall not exceed the decomposition temperatures of the materials in the area.

Statement of Problem and Substantiation for Public Input

Class II Div I motors are available in different T-Ratings and may exceed decomposition temperatures or even ignition temperatures. Often the T-rating is ignored when engineers select motors based on the certification for area classification

Submitter Information Verification

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Submittal Date: Fri Feb 08 11:18:36 EST 2019
Committee: EXP-AAA

Committee Statement

Resolution: FR-1-NFPA 495-2021
Statement: T-Rating or T-Code is important to consider when selecting equipment that can generate heat.

Public Input No. 2-NFPA 495-2019 [Section No. 10.4.2]

10.4.2

Blasters shall ~~allow sufficient time~~ use atmosphereic testing equipment (i.e. 4 gas monitor) in order to ensure fumes have dissipated and for smoke and~~ fumes to dissipate and for~~ /or dust to settle before returning to the blast site.

Statement of Problem and Substantiation for Public Input

Toxic or harmful gas exposure to the laborer or any other local employee would be mitigated by performing the atmospheric testing

Submitter Information Verification

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Submittal Date: Wed Sep 18 10:14:18 EDT 2019
Committee: EXP-AAA

Committee Statement

Resolution: This is covered under the blaster's HazOp.

Public Input No. 4-NFPA 495-2020 [Chapter 14]

Chapter 14 Small Arms Ammunition and Primers, Smokeless Propellants, and Black Powder Propellants

14.1 Basic Requirements.

14.1.1

In addition to all other applicable requirements of this code, intrastate transportation of small arms ammunition, small arms primers, smokeless propellants, and Black Powder shall comply with the U.S. DOT, 49 CFR 100–199.

14.1.2

This chapter shall apply to the users and distribution channels of small arms ammunition, small arms primers, smokeless propellants, and Black Powder.

14.1.3

This chapter shall not apply to in-process storage and intraplant transportation during manufacture.

14.1.4

This chapter shall apply to the transportation and storage of small arms ammunition and components.

14.1.5

This chapter shall not apply to safety procedures in the use of small arms ammunition and components.

14.1.6

The bulk repackaging of small arms ammunition, primers, smokeless propellants, or Black Powder propellants shall not be performed in retail stores.

14.2 Small Arms Ammunition.

14.2.1

No restrictions shall be imposed on transportation of small arms ammunition other than those imposed by the U.S. DOT or by the presence of other hazardous materials.

14.2.2

No quantity limitations shall be imposed on the storage of small arms ammunition in warehouses, retail stores, and other occupancies other than those imposed by the limitations of the storage facility and by public safety regulations.

14.2.3

Small arms ammunition shall be separated from materials classified by the U.S. DOT as flammable liquids, flammable solids, and oxidizing materials by a distance of 4.6 m (15 ft) or by a fire partition having a fire resistance of at least 1 hour.

14.2.4

Small arms ammunition shall not be stored together with Division 1.1, Division 1.2, or Division 1.3 explosives, except where the storage facility is suitable for the storage of explosive materials.

14.2.5* Damaged Ammunition.

14.2.5.1

Small arms ammunition that has been exposed to fire or has been damaged by exposure to water shall not be returned to commercial channels for reasons of consumer safety.

14.2.5.2

The manufacturer shall be contacted to obtain recommendations for the disposal of damaged ammunition.

14.3 Smokeless Propellants.

14.3.1

Quantities of smokeless propellants not exceeding 11.3 kg (25 lb) in shipping containers approved by the U.S. DOT shall be permitted to be transported in a private vehicle.

14.3.2

Quantities of smokeless propellants exceeding 11.3 kg (25 lb), but not exceeding 22.7 kg (50 lb), transported in a private vehicle, shall be transported in a portable magazine having wood walls of at least 25.4 mm (1 in.) nominal thickness or other container having a fire resistance of 1 hour .

14.3.3

Transportation of more than 22.7 kg (50 lb) of smokeless propellants in a private vehicle shall be prohibited.

14.3.4

Commercial shipments of smokeless propellants for small arms that have been classed in Division 1.3 shall be permitted to be reclassed as a Division 4.1 flammable solid for transportation purposes for shipment by motor vehicle, rail car, vessel, or cargo-only aircraft, subject to the conditions stated in the U.S. DOT, 49 CFR 173.171.

14.3.5

Commercial shipments of smokeless propellants exceeding 45.4 kg (100 lb) or not packaged in accordance with the regulations cited in 14.3.4 shall be transported in accordance with the U.S. DOT regulations for Division 1.1 or Division 1.3 explosives.

14.3.6

Smokeless propellants shall be stored in shipping containers specified by U.S. DOT, 49 CFR 100–199.

14.3.7 Quantities.

14.3.7.1

Smokeless propellants intended for personal use in quantities not exceeding 9.1 kg (20 lb) shall be permitted to be stored in original containers in residences.

14.3.7.2

Quantities exceeding 9.1 kg (20 lb), but not exceeding 22.7 kg (50 lb), shall be permitted to be stored in residences where kept in a wooden box or cabinet having walls of at least 25.4 mm (1 in.) nominal thickness or other container having a fire resistance of 1 hour .

14.3.8

Not more than 22.7 kg (50 lb) of smokeless propellants, in containers of a 0.45 kg (1 lb) maximum capacity, shall be displayed in commercial establishments.

14.3.9

Commercial stocks of smokeless propellants shall be stored as follows:

(1) Quantities exceeding 22.7 kg (50 lb), but not exceeding 45.4 kg (100 lb), shall be stored in portable wooden boxes having walls of at least a 25.4 mm (1 in.) nominal thickness or other container having a fire resistance of 1 hour .

(2) Quantities exceeding 45.4 kg (100 lb), but not exceeding 363 kg (800 lb), shall be stored in nonportable storage cabinets having walls of at least a 25.4 mm (1 in.) nominal thickness or other container having a fire resistance of 1 hour .

(3) Not more than 181 kg (400 lb) shall be permitted to be stored in any one cabinet.

(4) Cabinets shall be separated by a distance of at least 7.63 m (25 ft) or by a fire partition having a fire resistance of at least 1 hour.

(5) Quantities exceeding 363 kg (800 lb) but not exceeding 2268 kg (5000 lb) shall be permitted to be stored in a building, provided the following requirements are met:

(6) The warehouse or storage room shall not be accessible to unauthorized personnel.

(7) Smokeless propellants shall be stored in nonportable storage cabinets having wood walls of at least 25.4 mm (1 in.) nominal thickness or other container having a fire resistance of 1 hour and having shelves with no more than 0.92 m (3 ft) of separation between shelves.

(8) No more than 181 kg (400 lb) shall be stored in any one cabinet.

(9) Cabinets shall be located against the walls of the storage room or warehouse with at least 12.2 m (40 ft) between cabinets.

(10) The separation between cabinets shall be permitted to be reduced to 6.1 m (20 ft) where barricades twice the height of the cabinets are attached to the wall, midway between each cabinet.

(11) The barricades shall extend at least 3 m (10 ft) outward, be firmly attached to the wall, and be constructed of 6.4 mm (1/4 in.) boiler plate, 51 mm (2 in.) thick wood, brick, or concrete block.

(12) Smokeless propellants shall be separated from materials classified by the U.S. DOT as flammable liquids, flammable solids, and oxidizing materials by a distance of 7.63 m (25 ft) or by a fire partition having a fire resistance of at least 1 hour.

(13) The building shall be protected by an automatic sprinkler system installed in accordance with NFPA 13.

(14) Smokeless propellants not stored in accordance with 14.3.9(1) through 14.3.9(5) shall be stored in a Type 4 magazine constructed and located in accordance with Chapter 9.

14.4 Black Powder.

14.4.1

Black Powder shall be transported in accordance with the U.S. DOT. *(See also Chapter 8.)*

14.4.2

Black Powder shall be stored in shipping containers approved by the U.S. DOT.

14.4.3

Black Powder intended for personal use in quantities not exceeding 9.1 kg (20 lb) shall be permitted to be stored in residences where kept in the original containers and stored in a wooden box or cabinet having walls of at least a 25.4 mm (1 in.) nominal thickness or other container having a fire resistance of 1 hour .

14.4.4

No more than 0.45 kg (1 lb) of Black Powder shall be displayed in commercial establishments.

14.4.5

Commercial stocks stored in buildings in quantities not exceeding 22.7 kg (50 lb) shall be stored in a Type 4 indoor magazine.

14.4.6

Commercial stocks in quantities exceeding 22.7 kg (50 lb) shall be stored in a Type 4 outdoor magazine.

14.4.7

Where smokeless propellants are stored in the same magazine with Black Powder, the total quantity shall not exceed that permitted for Black Powder.

14.4.8

Commercial shipments of Black Powder for small arms that have been classed in Division 1.3 shall be permitted to be reclassed as a Division 4.1 flammable solid for transportation purposes for shipment by motor vehicle, rail car, vessel, or cargo-only aircraft, subject to the conditions stated in the U.S. DOT, 49 CFR 173.171.

14.5 Small Arms Primers.

14.5.1

Small arms primers shall be transported or stored in containers approved by the U.S. DOT.

14.5.2

Transportation of small arms primers shall comply with U.S. DOT Regulations.

14.5.3

No more than 25,000 small arms primers shall be permitted to be transported in a private vehicle.

14.5.4

For small arms primers classified by the U.S. DOT as 1.4S, the limit shall be permitted to be increased to 150,000.

14.5.5

No more than 10,000 small arms primers shall be permitted to be stored in residences.

14.5.6

For small arms primers classified by the U.S. DOT as 1.4S, the limit stored in residences shall be permitted to be increased to 150,000.

14.5.7

No more than 10,000 small arms primers shall be permitted to be displayed in commercial establishments.

14.5.8

For small arms primers classified by the U.S. DOT as 1.4S, the limit displayed in commercial establishments shall be permitted to be increased to 150,000.

14.5.9

Commercial stocks of small arms primers shall be stored as follows:

(1) Quantities not exceeding 750,000 shall be permitted to be stored in a building where not more than 100,000 are stored in any one pile and where piles are at least 4.6 m (15 ft) apart.

(2) Quantities exceeding 750,000 shall be permitted to be stored in a building, provided the following conditions are met:

(3) The warehouse or storage room shall not be accessible to unauthorized personnel.

(4) Primers, other than DOT type 1.4S, shall be stored in cabinets.

(5) No more than 200,000 primers, other than DOT type 1.4S, shall be stored in any one cabinet.

(6) Shelves in cabinets shall have a vertical separation of at least 0.6 m (2 ft).

(7) Cabinets shall be located against the walls of the warehouse or storage room with at least 12.2 m (40 ft) between cabinets.

(8) The separation between cabinets shall be permitted to be reduced to 6.1 m (20 ft) where barricades twice the height of the cabinets are attached to the wall, midway between each cabinet.

(9) The barricades shall extend at least 3 m (10 ft) outward, be firmly attached to the wall, and be constructed of 6.4 mm (1/4 in.) boiler plate, 51 mm (2 in.) thick wood, brick, or concrete block.

(10) Primers shall be separated from materials classified by the U.S. DOT as flammable liquids, flammable solids, and oxidizing materials by a distance of 7.63 m (25 ft) or by a fire partition having a fire resistance of at least 1 hour.

(11) The building shall be protected by an automatic sprinkler system installed in accordance with NFPA 13.

(12) Small arms primers not stored in accordance with 14.5.9(1) and 14.5.9(2) shall be stored in a magazine meeting the requirements of Chapter 9.

Statement of Problem and Substantiation for Public Input

A 1in nominal thickness wooden container is not the only means of protecting from or delaying fire effects. International Building Code (IBC) section 703 and ASTM E119 provide information on establishing fire rating times in buildings. Both IBC and ASTM E119 are copyrighted and subject to periodic changes. This proposal adds another option of another containment method with a 1 hour fire rating to all instances found where a 1in nominal thickness wooden container or box is specified. The 1in thick wooden box seems to be a historical and simple to comply with method for safe storage. This proposed change will retain that language and method, but then add the option for any 1 hour fire rating containment method. The time of the rating may be decreased or increased as determined by the committee, but should be consistent with what is afforded by the 1in nominal thickness wooden box. Adding this option allows more modern materials and methods to be employed.

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Submittal Date: Tue Dec 01 13:15:56 EST 2020
Committee: EXP-AAA

Committee Statement

Resolution: CI-2-NFPA 495-2021
Statement: The committee would like to consider alternative construction for containers other then 1' nominal of wood and has formed a task group to look into alternatives. Fire resistance is not the only consideration when constructing these containers.