

§ 555.221

27 CFR Ch. II (4-1-04 Edition)

TABLE: NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) OFFICIAL STANDARD NO. 492, 1968

Notes of Table of Separation Distances of Ammonium Nitrate and Blasting Agents From Explosives or Blasting Agents

(1) This table specifies separation distances to prevent explosion of ammonium nitrate and ammonium nitrate-based blasting agents by propagation from nearby stores of high explosives or blasting agents referred to in the table as the "donor." Ammonium nitrate, by itself, is not considered to be a donor when applying this table. Ammonium nitrate, ammonium nitrate-fuel oil or combinations thereof are acceptors. If stores of ammonium nitrate are located within the sympathetic detonation distance of explosives or blasting agents, one-half the mass of the ammonium nitrate is to be included in the mass of the donor.

(2) When the ammonium nitrate and/or blasting agent is not barricaded, the distances shown in the table must be multiplied by six. These distances allow for the possibility of high velocity metal fragments from mixers, hoppers, truck bodies, sheet metal structures, metal containers, and the like which may enclose the "donor." Where explosives storage is in bullet-resistant magazines or where the storage is protected by a bullet-resistant wall, distances and barricade thicknesses in excess of those prescribed in the table in § 555.218 are not required.

(3) These distances apply to ammonium nitrate that passes the insensitivity test prescribed in the definition of ammonium nitrate fertilizer issued by the Fertilizer Institute.¹ Ammonium nitrate failing to pass the test must be stored at separation distances in accordance with the table in § 555.218.

(4) These distances apply to blasting agents which pass the insensitivity test prescribed in regulations of the U.S. Department of Transportation (49 CFR part 173).

(5) Earth or sand dikes, or enclosures filled with the prescribed minimum thickness of earth or sand are acceptable artificial barricades. Natural barricades, such as hills or timber of sufficient density that the surrounding exposures which require protection cannot be seen from the "donor" when the trees are bare of leaves, are also acceptable.

(6) For determining the distances to be maintained from inhabited buildings, passenger railways, and public highways, use the table in § 555.218.

¹Definition and Test Procedures for Ammonium Nitrate Fertilizer, Fertilizer Institute 1015-18th St. N.W. Washington, DC 20036.

§ 555.221 Requirements for display fireworks, pyrotechnic compositions, and explosive materials used in assembling fireworks or articles pyrotechnic.

(a) Display fireworks, pyrotechnic compositions, and explosive materials used to assemble fireworks and articles pyrotechnic shall be stored at all times as required by this Subpart unless they are in the process of manufacture, assembly, packaging, or are being transported.

(b) No more than 500 pounds (227 kg) of pyrotechnic compositions or explosive materials are permitted at one time in any fireworks mixing building, any building or area in which the pyrotechnic compositions or explosive materials are pressed or otherwise prepared for finishing or assembly, or any finishing or assembly building. All pyrotechnic compositions or explosive materials not in immediate use will be stored in covered, non-ferrous containers.

(c) The maximum quantity of flash powder permitted in any fireworks process building is 10 pounds (4.5 kg).

(d) All dry explosive powders and mixtures, partially assembled display fireworks, and finished display fireworks shall be removed from fireworks process buildings at the conclusion of a day's operations and placed in approved magazines.

[T.D. ATF-293, 55 FR 3722, Feb. 5, 1990, as amended by T.D. ATF-400, 63 FR 45004, Aug. 24, 1998]

§ 555.222 Table of distances between fireworks process buildings and between fireworks process and fireworks nonprocess buildings.

Net weight of fireworks ¹ (pounds)	Display fireworks ² (feet)	Consumer fireworks ³ (feet)
0-100	57	37
101-200	69	37
201-300	77	37
301-400	85	37
401-500	91	37
Above 500	Not permitted ^{4 5}	Not permitted ^{4 5}

¹Net weight is the weight of all pyrotechnic compositions, and explosive materials and fuse only.

²The distances in this column apply only with natural or artificial barricades. If such barricades are not used, the distances must be doubled.

Bureau of Alcohol, Tobacco, Firearms, and Explosives, Justice

§ 555.224

³While consumer fireworks or articles pyrotechnic in a finished state are not subject to regulation, explosive materials used to manufacture or assemble such fireworks or articles are subject to regulation. Thus, fireworks process buildings where consumer fireworks or articles pyrotechnic are being processed shall meet these requirements.

⁴A maximum of 500 pounds of in-process pyrotechnic compositions, either loose or in partially-assembled fireworks, is permitted in any fireworks process building. Finished display fireworks may not be stored in a fireworks process building.

⁵A maximum of 10 pounds of flash powder, either in loose form or in assembled units, is permitted in any fireworks process building. Quantities in excess of 10 pounds must be kept in an approved magazine.

[T.D. ATF-293, 55 FR 3723, Feb. 5, 1990, as amended by T.D. ATF-400, 63 FR 45004, Aug. 24, 1998]

§ 555.223 Table of distances between fireworks process buildings and other specified areas.

DISTANCE FROM PASSENGER RAILWAYS, PUBLIC HIGHWAYS, FIREWORKS PLANT BUILDINGS USED TO STORE CONSUMER FIREWORKS AND ARTICLES PYROTECHNIC, MAGAZINES AND FIREWORKS SHIPPING BUILDINGS, AND INHABITED BUILDINGS.^{3 4 5}

Net weight of fireworks ¹ (pounds)	Display fireworks ¹ (feet)	Consumer fireworks ² (feet)
0-100	200	25
101-200	200	50
201-300	200	50
301-400	200	50
401-500	200	50
Above 500	Not permitted	Not permitted.

¹Net weight is the weight of all pyrotechnic compositions, and explosive materials and fuse only.

²While consumer fireworks or articles pyrotechnic in a finished state are not subject to regulation, explosive materials used to manufacture or assemble such fireworks or articles are subject to regulation. Thus, fireworks process buildings where consumer fireworks or articles pyrotechnic are being processed shall meet these requirements.

³This table does not apply to the separation distances between fireworks process buildings (see § 555.222) and between magazines (see §§ 555.218 and 555.224).

⁴The distances in this table apply with or without artificial or natural barricades or screen barricades. However, the use of barricades is highly recommended.

⁵No work of any kind, except to place or move items other than explosive materials from storage, shall be conducted in any building designated as a warehouse. A fireworks plant warehouse is not subject to § 555.222 or this section, tables of distances.

[T.D. ATF-293, 55 FR 3723, Feb. 5, 1990, as amended by T.D. ATF-400, 63 FR 45004, Aug. 24, 1998]

§ 555.224 Table of distances for the storage of display fireworks (except bulk salutes).

Net weight of firework ¹ (pounds)	Distance between magazine and inhabited building, passenger railway, or public highway ^{3,4} (feet)	Distance between magazines ^{2,3} (feet)
0-1000	150	100
1001-5000	230	150
5001-10000	300	200
Above 10000	Use table § 555.218

¹Net weight is the weight of all pyrotechnic compositions, and explosive materials and fuse only.

²For the purposes of applying this table, the term "magazine" also includes fireworks shipping buildings for display fireworks.

³For fireworks storage magazines in use prior to (30 days from the date of publication of the final rule in the FEDERAL REGISTER), the distances in this table may be halved if properly barricaded between the magazine and potential receptor sites.

⁴This table does not apply to the storage of bulk salutes. Use table at § 555.218.

[T.D. ATF-293, 55 FR 3723, Feb. 5, 1990, as amended by T.D. ATF-400, 63 FR 45004, Aug. 24, 1998]