**Section 105.20 Storage and Wholesaling of Class "C" (Common) Fireworks**

These Rules and Regulations shall apply to both existing and new facilities, except as specifically provided for herein.

a) Definitions

1) Class "C" or "Common Fireworks" are those so defined:

 Class "C" of Common fireworks are fireworks devices designed primarily to produce visible effects by combustion. Some small devices designed to produce audible effects are also included in this class. The types, sizes and amount of pyrotechnic contents of these devices are limited as enumerated in this paragraph. No component, of any device listed in this paragraph, which produces or is intended to produce an audible effect shall contain pyrotechnic composition in excess of two grains in weight; nor any metal, glass or brittle plastic fragments. Common fireworks must be in a finished state exclusive of mere ornamentation as supplied to the trade and must be so constructed and packed that loose pyrotechnic composition will not be present in packages in transportation or storage.

2) "Storage": shall mean net weight quantities of 100 lbs. or more of Class "C" fireworks.

3) "Net weight": Shall mean the weight of the finished product, the display packaging, and the first or smallest unit shipping container.

4) "Inhabited building": For the purpose of this section means a building or structure regularly used in whole or in part as a place of human habitation. The term inhabited building shall also mean any church, school, store, passenger station, airport terminal, and any other structure where people are accustomed to congregate or assemble, but excluding any building used for the manufacture, transportation, and storage of fireworks.

b) All storage of Class "C" fireworks in quantities of 100 lbs. or more, net weight, shall conform to the distances, type height of construction, and fire protection systems requirements of Tables #1 and #2, of these Rules and Regulations.

c) Existing structures used for the storage of 100 lbs. or more (net weight) of Class "C" fireworks which cannot be brought into compliance with the distance or type of construction requirements of Table #1 may continue in use by compliance with the following provisions:

1) Exterior walls shall be of two-hour fire resistive construction. Two-hour fire resistive construction shall be as defined in National Fire Protection Association #220, Types of Building Construction, 1980 Edition, Chapter 2, Para. 2-1. There is no specification as to materials required provided that performance criteria are met.

2) All portions of the structure used for the storage of Class "C" fireworks shall be protected by an automatic sprinkler system, installed and maintained in accordance with National Fire Protection Association #13, Installation of Sprinkler Systems, 1980 Edition.

3) The entire structure has a standard fire alarm system installed to consist of the following:

A) Automatic detection consisting of smoke detectors where appropriate, heat detectors in areas where smoke detection cannot be used.

B) Manual pull stations on each floor and at all exits.

C) The system connected to the fire department or other approved central station as required in the Illinois Rules and Regulations for Fire Prevention and Safety.

4) Such existing structure has no storage of Class "C" fireworks above the second floor or below the first floor.

5) In storage facilities of 300 square feet or more, at least two means of egress, remote from each other, are provided. The need for additional means of egress shall be determined by applying the 1981 Edition, Life Safety Code, National Fire Protection Association #101, Chapter 5.

d) The owner/operator of each storage and sales facility for Class "C" fireworks shall keep a record of all transactions and operations, involving fireworks for five (5) years. Such records shall show quantities (net weight) sold or shipped, in and out; such records shall be made available to authorized representatives of the Office of the State Fire Marshal.

e) Storage buildings containing Class "C" fireworks shall be separated from other buildings, magazines, and fireworks plant building in accordance with Table #2.

f) Storage buildings for Class "C" fireworks shall be vented, or in the alternative, shall be constructed in such a manner that venting will occur by yielding of weaker parts of the structure under pressure generated by burning fireworks.

g) All storage buildings shall be equipped with locking means for all openings.

h) All doors shall open outward, and all exits must be clearly marked. Aisles and exit doors should be kept free of any obstructions.

i) Only dust-ignition proof type electrical fixtures shall be used, and wiring shall comply with Section 502-4 (b) of National Fire Protection Association #70, the National Electrical Code, 1981 Edition. No wall receptacles are permitted; all light fixtures must have guards.

j) An outside master electrical switch shall be provided at each storage building where electricity is used. This switch must be placed in the OFF position when the last person leaves the premises daily. This switch may be secured with an approved locking device; such master switch shall not control the operation of any alarm systems for the building.

k) Storage Building Operations

1) When operations are being conducted in storage buildings, a competent person shall be in charge at all times. Such person shall be at least eighteen (18) years of age and shall be held responsible for the enforcement of all safety precautions.

2) Doors and other openings shall be kept locked, except during hours of operation.

3) Safety rules covering the operations of storage buildings shall be posted.

4) Containers shall be piled in a stable manner and height of storage, aisle width, and all other provisions of National Fire Protection Association #13, Installation of Sprinkler Systems, 1980, and National Fire Protection Association #231, Indoor General Storage, 1979 Edition, shall be adhered to.

5) Class "C" fireworks shall be stored in their original packaging and in unopened cases or cartons so as to take advantage of the insulation provided by such packaging; provided, however, unpackaged fireworks which have been returned may be temporarily retained in bins for re-packaging.

6) Tools used for opening containers of Class "C" fireworks shall be constructed of non-sparking material, except that metal slitters may be used for opening fiberboard containers.

7) Storage buildings shall be regularly swept, kept clean, dry, free of grit, paper, empty used packages and rubbish. Brooms and other cleaning utensils shall not have any spark-producing metal parts. Sweepings shall be properly disposed of.

8) When storage buildings need interior repairs, all fireworks shall be removed therefrom and the interior cleaned.

9) In making exterior storage building repairs, when there is a possibility of causing sparks or fire, the fireworks shall be removed from the storage building.

10) Fireworks removed from a storage building under repair shall either be placed in another storage building or placed a safe distance from the storage building where they shall be properly guarded and protected until repairs have been completed. Upon completion of repairs, the fireworks shall be properly returned to the storage building.

l) Miscellaneous Safety Precautions

1) Smoking, matches, open flames, spark producing devices and firearms shall not be permitted inside storage buildings. Smoking, matches, open flames, spark producing devices and firearms shall not be permitted within 25 feet of storage buildings. Existing storage facilities with a property line less than 25 feet to the nearest portion of the building shall not permit such prohibited material in the area between the property line and the building.

2) The land surrounding storage buildings shall be kept clear of brush, dried grass, leaves, and similar combustibles for a distance of at least twenty-five (25) feet, except for such existing facilities as cannot meet the distance requirements of Table #1.

3) There shall be conspicuously posted signs with the words "FIREWORKS – NO SMOKING" in letters not less than four inches high.

4) Heat-producing devices when used shall not be located within the storage building, hear shall be provided through ducts, or piping. Entry into the boiler/furnace room shall be from the outside. No openings into the boiler/furnace room from the storage building shall be allowed. Ductwork shall have smoke and fire dampers at each duct opening into the storage building.

5) Re-packaging of fireworks shall not be done in any facility used for the storage of 500 or more pounds of Class "C" fireworks, unless the re-packaging activity is separated from storage by two-hour fire resistive construction. Only that amount of fireworks necessary for one days re-packaging may be kept in the re-packaging room or area.

m) Quantity-Distance Separation Tables

Table 1. Minimum separation, and construction requirements of Class "C" fireworks storage structures from inhabited buildings, passenger railways, and public highways.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Net Wt. of Frwks. | Bldg. Const. | Fire Alarms | Sprinklers | Distance from Passing. Railways & Public Highways | Distance From Inhabited Bldgs. |
|  |  |  |  |  | Class C Frwks | Class C Frwks |
| Pounds |  |  |  |  | Feet | Feet |
|  |  |  |  |  |  |  |
| 100 | Ord | Cons | N/A\* | N/A | 25 | 50 |
| 200 | " | " | " | " | 30 | 60 |
| 400 | " | " | " | " | 35 | 70 |
| 600 | " | " | " | " | 40 | 80 |
| 800 | " | " | " | " | 45 | 90 |
|  |  |  |  |  |  |  |
| 1,000 | Ord | Cons | F.A.\*\* | N/A | 50 | 100 |
| 2,000 | " | " | " | " | 58 | 115 |
| 3,000 | " | " | " | " | 62 | 124 |
| 4,000 | " | " | " | " | 65 | 130 |
|  |  |  |  |  |  |  |
| 5,000 | Non-Comb | F.A. | N/A | 68 | 135 |
| 6,000 | " | " | " | " | 70 | 139 |
| 8,000 | " | " | " | " | 73 | 140 |
| 10,000 | " | " | " | " | 75 | 150 |
| 15,000 | " | " | F.A. | Sprinklers | 80 | 159 |
| 20,000 | " | " | " | " | 83 | 165 |
| 30,000 | " | " | " | " | 87 | 174 |
| 40,000 | " | " | " | " | 90 | 180 |
| 50,000 | " | " | " | " | 93 | 185 |
| 60,000 | " | " | " | " | 95 | 189 |
|  |  |  |  |  |  |  |
| 80,000 | Fire-Res | F.A. | Sprinklers | 98 | 195 |
| 100,000 | " | " | " | " | 100 | 200 |
| 150,000 | " | " | " | " | 105 | 209 |
| 200,000 | " | " | " | " | 108 | 215 |
| 250,000 | " | " | " | " | 110 | 220 |

 \*N/A Not Applicable

\*\*F.A. Fire Alarm Systems

n) Minimum Separation Distances at Fireworks Manufacturing Plants

|  |  |  |
| --- | --- | --- |
| Net Weight Fireworks | Distances of Magazines and Storage Buildings from Nonprocess Buildings | Distance Between Process Buildings and Between Process and Nonprocess Buildings |
| Pounds | Class C Fireworks | Class C Fireworks |
| 100 | Feet | Feet |
| 200 |  |  |
| 400 | 30 | 37 |
| 600 | 30 | 37 |
| 800 | 30 | 37 |
| 1,000 | 30 | 37 |
| 2,000 | 30 | 37 |
| 3,000 | 30 | 37 |
| 4,000 | 35 | 48 |
| 5,000 | 38 | 60 |
| 6,000 | 42 | 67 |
| 8,000 | 50 | 78 |
| 10,000 | 54 | 82 |

1) For the purposes of applying the separation distances in Table 2 a process building includes a mixing building, any building in which pyrotechnic or explosive composition is pressed or otherwise prepared for finishing and assembling, and any finishing and assembling building. A nonprocess building means office buildings, warehouses, and other fireworks plant buildings where no fireworks or explosive compositions are processed or stored.

2) Distances apply with or without barricades or screen-type barricades.

3) Distances included are those between magazines, between storage buildings, between magazines and storage buildings, between magazines or storage buildings from process buildings and nonprocess buildings.

(Source: Recodified from 41 Ill. Adm. Code 100.85 at 11 Ill. Reg. 5992)