

DEPARTMENT OF LABOR, LICENSING AND REGULATION
OFFICE OF STATE FIRE MARSHAL
CHAPTER 71

Statutory Authority: 1976 Code, 23-9-10 et seq. and 23-35-10 et seq.

SUBARTICLE 6
FIREWORKS AND PYROTECHNICS

Statutory Authority: 1976 Code, 23-9-10 et seq. and 23-35-10 et seq.

71-8305. Fireworks and Pyrotechnics.

71-8305.1. General.

A. The purpose of this regulation is to provide reasonable safety and protection to the public, public property, private property, performers, and display operators from the hazards associated with the handling, use, transportation, and storage of pyrotechnics and fireworks.

B. This regulation shall apply to:

1. The handling and use of fireworks intended for public fireworks display;
2. The construction, handling and use of fireworks equipment intended for public fireworks display;
3. The general conduct and operation of public firework displays;
4. The transportation and storage of fireworks for public fireworks display;
5. The transportation and use of consumer fireworks;
6. The construction, handling, and use of pyrotechnics intended for proximate audience displays; special effects for motion picture, theatrical, and television productions;
7. The construction, handling, and use of flame effects intended for proximate audience displays, or special effects for motion picture, theatrical, and television productions;
8. The construction, handling, and use of rockets intended for proximate audience displays, or special effects for motion picture, theatrical, and television productions; and
9. The general conduct and operation of proximate audience displays.

C. This regulation shall not apply to:

1. The manufacture, sale, or storage of fireworks as governed by the SC Department of Labor Licensing and Regulation, State Board of Pyrotechnic Safety;
2. The transportation, handling, and/or use of fireworks by the State Fire Marshal, his employees, or any commissioned law enforcement officers acting within their official capacities;
3. Fireworks deregulated by the U.S. Department of Transportation;
4. Weapons used in enactments, when there is no projectile;
5. Artillery field pieces used as salutes with no projectile; and
6. The outdoor use of model rockets within the scope of NFPA 1122.

D. Definitions.

1. "AHJ" means Authority Having Jurisdiction, which is the State Fire Marshal, or his agents, or any local fire official covered by 23-9-30.

2. "Consumer Fireworks" means any small device designed to produce visible effects by combustion and which must comply with the construction, chemical composition, and labeling regulations of the U.S. Consumer Product Safety Commission, as set forth in Title 16, Code of Federal Regulations, parts 1500 and 1507. Some small devices designed to produce audible effects are included, such as whistling devices, ground devices containing fifty (50) mg or less of explosive materials, and aerial devices containing 130 mg or less of explosive materials. Consumer fireworks are classified as fireworks UN0336 and UN0337 by the U.S. Department of Transportation at 49 CFR 172.101. This term does not include fused setpieces containing components which together exceed 50 mg of salute powder.

Consumer Fireworks are further defined as those classified by the U.S. Department of Transportation hazard classification 1.4g. These fireworks were formerly known as "Class C Fireworks."

3. "Day box" means a portable magazine used for immediate storage of pyrotechnic materials.

4. "Display Fireworks" means large fireworks designed primarily to produce visible or audible effects by combustion, deflagration, or detonation. This term includes, but is not limited to, salutes containing more than two (2) grains (130 mg) of explosive materials, aerial shells containing more than 40 grams of pyrotechnic compositions, and other display pieces which exceed the limits of explosive materials for classification as "Consumer Fireworks." Display fireworks are classified as fireworks UN0333, UN0334, or UN0335 by the U.S. Department of Transportation at 49 CFR 172.101. This term also includes fused setpieces containing components which together exceed fifty (50) mg of salute powder. Display fireworks are further defined as those classified by the U.S. Department of Transportation as hazard classification 1.3g. These fireworks were formerly known as "Class B Fireworks."

5. "Fireworks" means any composition or device designed to produce a visible or an audible effect by combustion, deflagration, or detonation, and which meets the definition of "consumer fireworks" or "display fireworks" as defined by this section.

6. "MSDS(s)" means Material Safety Data Sheet(s).

7. "Motion Picture" means, for the purposes of this item, any audiovisual work with a series of related images either on film, tape, or other embodiment, where the images shown in succession impart an impression of motion together with accompanying sound, if any, which is produced, adapted, or altered for exploitation as entertainment, advertising, promotional, industrial, or educational media.

8. "Proximate Audience" means any indoor use of pyrotechnics and the use of pyrotechnics before an audience located closer than the distances allowed by NFPA 1123

9. "Public Firework Display" means a presentation of Display or Consumer Fireworks for a public gathering.

10. "Pyrotechnics" means any composition or device designed to produce visible or audible effects for entertainment purposes by combustion, deflagration, or detonation.

11. "SFM" means State Fire Marshal or his agent.

12. "Theatrical Pyrotechnics" means pyrotechnic devices for professional use in the entertainment industry similar to consumer fireworks in chemical composition and construction but not intended for consumer use.

71-8305.2. Codes and Standards.

A. All references to ICC Codes found in these regulations refer to the editions adopted in SCRR 71-8300.2. The building code shall define occupancy classifications referenced in these regulations.

B. All references to NFPA standards found in these regulations refer to the editions adopted in SCRR 71-8300.2 and are modified by the following regulations as shown below.

71-8305.3. Licensing and Permitting Fees.

A. All fees are due at time of application for licenses, tests, or permitting.

B. Permit applications are due in the Office of State Fire Marshal fifteen days before the performance date. Fees will be doubled for an application received less than fifteen days before the performance date.

C. The Office of State Fire Marshal is responsible for all administrative activities of the licensing program. The State Fire Marshal shall employ and supervise personnel necessary to effectuate the provisions of this article and shall establish fees sufficient but not excessive to cover expenses, including direct and indirect costs to the State for the operation of this licensing program. Fees may be adjusted not more than once each two years, using the method set out in South Carolina Code 40-1-50(D).

D. Fees shall be established for the following:

1. Application

2. Background Check
3. Testing
4. Licensing
5. Permitting
6. Inspection
7. Renewal

E. All fees are due at time of application for licenses, background checks, testing, permits, inspection or renewal.

F. All fees paid to the Office of State Fire Marshal are nonrefundable.

71-8305.4. Qualifications of Operators.

A. All Operators.

1. No person shall be granted a license who has not successfully completed a written examination administered by the Office of State Fire Marshal. The exam will cover the applicable codes, state laws, and regulations and the additional requirements listed below for the specific class of license for which they are applying.

2. Any applicant who fails the written examination is allowed one re-test after a minimum seven-day waiting period. Any applicant who fails the re-test shall wait at least six months before reapplying.

3. Applicants shall submit a completed fingerprint card with their application. The Office of State Fire Marshal will conduct a criminal background check as part of the licensing application process.

4. Operators using explosives or explosive materials must have the appropriate Federal licenses. Operators shall provide a copy of applicable Federal licenses.

5. Licenses must be renewed biennially on the day of expiration shown on the license.

6. Every two years, each licensed operator shall be required to attend training offered by the Office of State Fire Marshal or attend pre-approved training providing a total of eight (8) hours of continuing education during the licensing cycle;

7. The State Fire Marshal may revoke, suspend, or deny a license because of, but not limited to:

- a. Failure to comply with any order written by the SFM;
- b. Conviction of a felony, a crime of violence, or any crime punishable by a term of imprisonment exceeding two years; or
- c. Advocating or knowingly belonging to any organization or group which advocates violent overthrow of or violent action against the federal, state, local government, or its citizens; or
- d. Having or contracting physical or mental illness or conditions that in the judgment of the State Fire Marshal would make use or possession of fireworks, pyrotechnics, or explosive materials hazardous to the licensee or the public; or
- e. Violating the terms of the license or essential changes in the conditions under which the license was issued without prior approval of the Office of State Fire Marshal,
- f. Violating the state laws or regulations governing Public Fireworks Displays or Proximate Audience Pyrotechnics; or
- g. Giving false information or making a misrepresentation to obtain a license.

B. Public Display Operators

1. Applications for licensing must furnish a notarized statement from a South Carolina licensed display operator concerning their participation in at least 6 fireworks displays and indicating for each display the date, the site, and the name and license number of the supervising operator;

2. The person in charge of the Public Fireworks Display shall be licensed by the Office of State Fire Marshal.

C. Pyrotechnic Operators

1. Applications for licensing must provide written documentation from a South Carolina licensed display operator or company that the applicant has actively participated in the set-up and operation of at least six proximate audience performances using the types of pyrotechnics for the license classification

the applicant is seeking. Only the State Fire Marshal may accept an alternative number of displays for this requirement based on the applicant's experience.

2. Licenses for pyrotechnic operators authorize and place the responsibility for the handling, supervision, and discharge of the fireworks or pyrotechnic device permitted by their license classification. The operator is responsible for the training of his or her assistants in the safe handling, supervision, and discharge of the fireworks or pyrotechnic devices permitted by their license classification.

a. "Pyrotechnic Operator - Unrestricted" may conduct and take charge of all activity in connection with the use of explosives or explosive materials, rockets, flame effects, Display Fireworks, binary system pyrotechnics, Consumer Fireworks, Theatrical Pyrotechnics, Novelties, and other special effects permitted by the Office of State Fire Marshal for a proximate audience display, commercial entertainment, or special effects in motion picture, theatrical, and television productions.

b. "Pyrotechnic Operator - Commercial Outdoor" may conduct and take charge of all activity in connection with the use of flame effects, Display Fireworks, binary system pyrotechnics, Consumer Fireworks, Theatrical Pyrotechnics, and Novelties permitted by the Office of State Fire Marshal for a proximate audience display and commercial entertainment.

c. "Pyrotechnic Operator - Rockets" may conduct and is restricted to all activities in connection with research, experiments, production, transportation, fuel loading, and launching of all types of experimental, solid fuel, and high power rockets. Only individuals or companies holding valid import, export, or wholesale licenses may import, export, or wholesale experimental high-powered motors.

d. "Pyrotechnic Operator - Motion Picture Special Effects" may conduct and take charge of all activity in connection with the use of explosives or explosive materials, flame effects, Display Fireworks, binary system pyrotechnics, Consumer Fireworks, Theatrical Pyrotechnics, and Novelties, and other special effects permitted by the Office of State Fire Marshal for the sole purpose of motion picture, television, theatrical or operatic productions.

e. "Pyrotechnic Operator - Commercial Indoor" may conduct and take charge of all activity in connection with the use of binary system pyrotechnics, Theatrical Pyrotechnics, and Novelties permitted by the Office of State Fire Marshal in stage or theatrical productions only.

f. "Pyrotechnic Operator - Trainee" must function under the direct supervision and control of a pyrotechnic operator for the license classification that he/she is seeking a license.

71-8305.5. Display Permits.

A. All Displays.

1. Any person who desires to hold a Public Fireworks Display or a Proximate Audience Display must obtain a permit from the Office of State Fire Marshal before the display.

2. Permits shall be valid for up to one calendar period prescribed or until any condition of the permit application changes. The State Fire Marshal shall make final determination of a change of condition in the permit.

3. All permit forms will be made available on the State Fire Marshal's Web site.

4. The State Fire Marshal may revoke, suspend, or deny a permit because of, but not limited to:

a. The display operator does not possess the correct license classification for the display, or

b. Not complying with any order written by the State Fire Marshal; or

c. Violating the terms of the permit or essential changes in the conditions under which the permit was issued without prior approval of the Office of State Fire Marshal, or

d. Giving false information or making a misrepresentation to obtain a permit.

5. The following additional information must be provided with the permit application:

a. A list of the number, type, and size of fireworks or effects being discharged;

b. A Diagram of display site including measurements;

c. Directions to the site; and

d. A Copy of certificate of insurance.

6. The Authority Having Jurisdiction providing fire suppression equipment and personnel for the Public Fireworks Display must sign the permit form.

7. Permits must be posted at the display site.

B. Public Fireworks Display Permits

1. The sponsor of the display shall forward a copy of the permit to the Office of State Fire Marshal along with the items required in these regulations fifteen working days before the display. The permit becomes valid when co-signed by the State Fire Marshal.

2. The validated permit will be distributed as follows:

- a. The Office of State Fire Marshal shall retain the original,
- b. A copy to the sponsor,
- c. A copy to the supplier, which will authorize shipment of the fireworks,
- d. A copy to the Authority Having Jurisdiction providing the fire suppression equipment and personnel for the display.
- e. A copy posted at the display site.

3. All pyrotechnics shall be purchased from a pyrotechnic manufacturer or distributor licensed by the Board of Pyrotechnic Safety. A licensed Public Display Operator shall be present and supervise firing of all public fireworks displays.

4. The fireworks supplier shall carry a minimum of \$500,000 of Public Liability Insurance. The policy must list the display sponsor, the State of South Carolina, and its agents as additional insured. The coverage company must be an insurer which is either licensed by the Department of Insurance in this State or approved by the Department of Insurance as a nonadmitted surplus lines carrier for risks located in this State. In the event the liability insurance is canceled, suspended, or nonrenewed, the insurer shall give immediate notice to the Office of State Fire Marshal.

C. Proximate Audience Display Permits

1. Public Liability Insurance in the amount of \$500,000 shall be provided by the permittee. The permittee shall furnish a certificate of insurance in this amount with their application. The permittee shall list the State of South Carolina and its agents as additional insured.

2. Public Liability Insurance in the amount of \$1,000,000 shall be provided by any permittee involved with motion picture productions. Motion picture companies employing this person(s) shall list the State of South Carolina and its agents as additional insured.

3. The coverage company must be an insurer which is either licensed by the Department of Insurance in this State or approved by the Department of Insurance as a nonadmitted surplus lines carrier for risks located in this State. In the event the liability insurance is canceled, suspended, or nonrenewed, the insurer shall give immediate notice to the Office of State Fire Marshal.

71-8305.6. General Operational Requirements of Displays.

A. All Displays.

1. The operator shall have their license in their possession when conducting a display and shall exhibit their license on request of any Authority Having Jurisdiction.

2. All displays must have a person in charge that holds the proper license issued by the Office of State Fire Marshal for the type of display being conducted.

3. The SFM or any approved authority having jurisdiction may enforce these laws and regulations.

4. Magazine log shall be available for inspection during normal work hours, 1 hour before, and 1 hour after each performance.

5. Operators must notify the Office of State Fire Marshal within 24 hours of any fires or thefts involving fireworks. The operators shall provide the Office of State Fire Marshal with a copy of the report filed with the police department or the incident report from the fire department. Operators must also provide the Office of State Fire Marshal with a copy of ATF Form 5400.5.

6. Any person who violates any provision of these laws and regulations will purchase the appropriate permit, pay the appropriate license fee, if any are required, and be subject to the following:

- a. S.C. Code Ann. 23-36-170, 1976, as amended.
 - b. S.C. Code Ann. 23-35-150, 1976, as amended.
7. Confiscation, storage, or disposal of fireworks, pyrotechnic and explosive materials used for proximate audience or public firework displays by the SFM shall comply with S.C. Code Ann. 23-36-110, 1976, as amended.
8. Storage of special effects pyrotechnics and other material.
- a. All classes of explosives shall be stored in accordance with the South Carolina Explosives Control Act or Title 27 Code of Federal Regulations, Subpart K.
 - b. All other fireworks or pyrotechnic materials shall be stored per the appropriate NFPA standard.
9. The AHJ may require the permittee to furnish fire support personnel other than local firefighters.
- B. Public Fireworks Displays.
1. Where unusual conditions exist, the AHJ may increase the minimum clearances as necessary before granting approval of the display site. The AHJ may not reduce clearances specified in NFPA 1123 without written approval of the Office of State Fire Marshal.
 2. A copy of the display permit shall be kept at the firing station.
 3. Operators shall never use damaged fireworks, fireworks that are wet, or fireworks damaged by moisture. Operators shall not dry wet pyrotechnics for reuse. Operators shall handle and dispose of wet or damaged pyrotechnics per the manufacturer's instructions.
 4. The operator of the display shall keep a record of all shells that fail to ignite or function. The form shall be completed and returned to the supplier within fifteen days of the display and the operator shall retain a copy for their records. The operator and supplier shall retain Malfunction Reports for three years from the date of the display. The operator and supplier must produce these reports upon request of the State Fire Marshal. The "Malfunction Report" form will be available on the State Fire Marshal's website.
 5. Moorings or anchors shall secure floating vessels or platforms used for firing of a Public Fireworks Display.
 6. Operators shall not reload mortars during a display.
 7. If a display is postponed, the sponsor of the display shall notify the Office of State Fire Marshal and the department providing fire suppression equipment and personnel for the display of the alternate date before presenting the display.
 8. It shall be the responsibility of the permittee to arrange with the AHJ for the detailing of firefighters and equipment as required.
- C. Proximate Audience Display.
1. The licensed pyrotechnic operator is responsible for the storing, handling, supervision, discharge, and removal of all pyrotechnic devices and materials based on their license classification and the terms of their permit. The licensed pyrotechnic operator is responsible for supervising and training of their assistants in the safe handling and discharge of all pyrotechnic devices.
 2. The permit package shall contain a copy of the permit, Certificate of Insurance, and the MSDS(s) for material used.
 3. A copy of the permit package shall be kept at the control site used to initiate the display. An audible announcement shall be made not more than 10 minutes before the display to notify personnel of the use of proximate audience pyrotechnics.
 4. Motion Picture productions shall display one permit package at the production office, and maintain the second permit package on the film site through the First Assistant Director. Before the start of any effect, verbal notification of Proximate Audience Pyrotechnic use shall be required before each camera roll.
 5. The AHJ may inspect the proximate audience display. As a minimum, the inspection shall cover the requirements in Annex B of NFPA 1126.

6. The permittee shall furnish a fire watch during the times the special effects materials have been removed from storage and/or magazines and the conclusion of the performance. This person shall be identified by an orange shirt or vest (or other color approved by the AHJ) with three-inch white letters on the front and back stating FIRE WATCH. For motion picture productions, the method for identifying the FIRE WATCH shall be a mutually agreed means of designation between the State Fire Marshal, the permittee, and the First Assistant Director.

7. Indoor facilities used for Proximate Audience Displays must be equipped with an automatic fire alarm system and a public address system.

a. The fire alarm system shall be zoned so that the areas affected by special effects smoke can be overridden during the event.

b. An override switch shall be provided at the firing point and a second switch in the control room to shut off stage sound and make the public address system available for evacuation instructions. These switches must be labeled and visible throughout the show.

c. The fire alarm system must be returned to normal operation before the fire watch and the display operator may leave the facility.

71-8305.7. Use of Consumer Fireworks in South Carolina.

A. It shall be deemed a violation of these regulations to:

1. Explode or ignite fireworks within 600 ft. of any Assembly Occupancy, Educational Occupancy, Hazardous Occupancy, Institutional Occupancy, or any facility storing or dispensing flammable liquids, combustible liquids, LP Gas, or other hazardous materials;

2. Explode or ignite fireworks within 75 ft. of where fireworks are stored, sold or offered for sale;

3. Ignite, discharge, and/or throw fireworks from any motor vehicle or to place, ignite, discharge, and/or throw fireworks into or at any motor vehicle; and

4. Ignite or discharge fireworks in a wanton or reckless manner to constitute a threat to the personal safety or property of another.

B. The distances in SCRR 71-8305.7 A (1) maybe reduced if the display is permitted with the Office of State Fire Marshal as a Public Fireworks Display or as a Proximate Audience Display.

C. Consumer Fireworks shall not be used for a Public Fireworks Display unless permitted by the Office of State Fire Marshal per the applicable provisions of this regulation and all permit fees are paid.

71-8305.8. Transportation of Fireworks or Pyrotechnics in South Carolina.

A. Vehicles transporting Display Fireworks (pyrotechnics classified as 1.3 explosives) in any quantity and Consumer Fireworks (pyrotechnics classified as 1.4 explosives) in quantities greater than 1000 lbs. shall be in the custody of drivers with a CDL with a HAZMAT endorsement.

B. On both sides, on the front, and on the rear, vehicles transporting Display Fireworks (pyrotechnics classified as 1.3 explosives) in any quantity and Consumer Fireworks (pyrotechnics classified as 1.4 explosives) in quantities greater than 1000 lbs. shall prominently display signs marked "EXPLOSIVES" that conform to the United States Department of Transportation and other federal regulations.

C. The fire and police departments shall be promptly notified when a vehicle transporting pyrotechnics is involved in an accident, break down, or fire. Only in the event of such an emergency shall the transfer of pyrotechnics from one vehicle to another be allowed on highways and then only when qualified supervision is provided.

D. Any vehicle used for the transportation of pyrotechnics covered by item A or B above shall have not less than one approved-type fire extinguisher with a minimum rating of 2A 10 B:C and shall be so located as to be readily available for use.

E. Operators must notify the Office of State Fire Marshal within 24 hours of any fires or thefts involving fireworks. The operator shall provide the Office of State Fire Marshal with a copy of the report

filed with the police department or the incident report from the fire department. Operators must also provide the Office of State Fire Marshal with a copy of ATF Form 5400.5.