

LAWS AND REGULATIONS FOR TRANSPORTATION,  
USE AND STORAGE OF



# Fireworks in California

2008 Edition

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# INTRODUCTION

The California State Fire Marshal is pleased to present the 2008 edition of FIREWORKS IN CALIFORNIA. This book is a compilation of all relevant national and state standards relating to this topic.

The Health and Safety Codes directs the California State Fire Marshal to prepare regulations governing the use of fireworks in California. The law provides a general framework around which more detailed regulations have been drawn. Users of this document should refer to, and comply with, both State Fireworks Law (statutory law) and State Fireworks Regulations, located in Sections I and Section II of this publication.

This edition has been prepared to serve as a FIREWORKS HANDBOOK. The objective of this document is to provide a publication that will enhance the safe use of pyrotechnic material and be a reference source for enforcement and fire prevention personnel as well as licensees.

In addition to the sections covering Laws and Regulations, this document includes sections that provide pertinent information regarding material referenced within the regulations. Particularly significant are the sections covering transportation and storage of fireworks.

It is recommended that users thoroughly familiarize themselves with the material contained in the CALIFORNIA FIREWORKS HANDBOOK and that a copy of be available wherever fireworks to be used or transported.

California Health and Safety Code

Section 12500-12728

# STATE FIREWORKS LAW

# CALIFORNIA HEALTH & SAFETY CODE

## SECTIONS 12500-12728

### FIREWORKS

#### Chapter 1

#### GENERAL PROVISIONS AND DEFINITIONS

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<b>12500.</b>	This part shall be known and may be cited as the State Fireworks Law

**12501.** Unless the context otherwise requires, the definitions in this chapter govern the construction of this part.

**12502. Advertise**

"Advertise" means an announcement publicly with any sign, card, or notice, or by any other means, on which appears a person's name or business name style offering to sell or transfer fireworks or pyrotechnic devices, or to cause a person's name or business name to be included in any classified advertisement or directory for the purpose of the sale or transfer of fireworks or pyrotechnic devices.

**12503. Agricultural and wildlife fireworks**

"Agricultural and wildlife fireworks" means fireworks designed and intended by the manufacturer to be used to prevent damage to crops or unwanted occupancy of areas by animals or birds through the employment of sound or light, or both.

**12504. Flammable liquid**

"Flammable liquid" means any liquid whose flashpoint is 100° Fahrenheit, or less, when tested pursuant to Standard D56-70 of the American Society for testing and materials.

**12505. Dangerous fireworks**

(1) "Dangerous fireworks" includes all of the following:

(a) Any fireworks which contain any of the following:

(1) Arsenic sulfide, arsenates, or arsenites.

(2) Boron

(3) Chlorates, except:

(A) In colored smoke mixture in which an equal or greater amount of sodium bicarbonate is included.

(B) In caps and party poppers.

(C) In those small items (such as ground spinners) wherein the total powder content does not exceed 4 grams of which not greater than 15 percent (or 600 milligrams) is potassium, sodium, or barium chlorate.

(4) Gallates or Gallic acid.

(5) Magnesium (magnesium-aluminum alloys, called magnalium, are permitted).

(6) Mercury salts.

(7) Phosphorus (red or white except that red phosphorus is permissible in caps and party poppers).

(8) Picrates or picric acid.

(9) Thiocyanates.

(10) Titanium, except in particle size greater than 100-mesh.

(11) Zirconium.

(b) Firecrackers.

(c) Skyrockets and rockets, including all devices which employ any combustible or explosive material and which rise in the air during discharge.

(d) Roman candles, including all devices which discharge balls of fire into the air.

(e) Chasers, including all devices which dart or travel about the surface of the ground during discharge.

(f) Sparklers more than 10 inches in length or one-fourth of one inch in diameter.

(g) All fireworks designed and intended by the manufacturer to create the element of surprise upon the user. These items include, but are not limited to, autofoolers, cigarette loads, exploding golf balls, and trick matches.

(h) Fireworks known as devil-on-the-walk, or any other fireworks which explodes through means of friction, unless otherwise classified by the State Fire Marshal pursuant to this part.

(i) Torpedoes of all kinds which explode on impact.

(j) Fireworks kits.

(k) Such other fireworks examined and tested by the State Fire Marshal and determined by him, with the advice of the State Board of Fire Services to possess characteristics of design or construction which make such fireworks unsafe for use by any person not specially qualified or trained in the use of fireworks.

**12506. Emergency signaling device**

"Emergency signaling device" means a pyrotechnic device designed and intended by the manufacturer to be used as such and which provides a reasonable degree of safety to the user and does not create a fire hazard when used according to the label of instructions.

**12507. End fuse**

"End fuse" means a fuse inserted into any fireworks or pyrotechnic device at the end as distinguished from the side of such item.

**12508. Exempt fireworks**

"Exempt fireworks" means any special item containing pyrotechnic compositions which the State Fire Marshal, with the advice of the State Fire Advisory Board, has investigated and determined to be limited to industrial, commercial, agricultural use, or religious ceremonies when authorized by a permit granted by the authority having jurisdiction.

**12509. Exporter**

"Exporter" means any person who sells, consigns, or delivers fireworks located within this state for delivery, use, or sale out of this state.

**12510. Fire nuisance**

"Fire nuisance" means anything or any act which increases, or may cause an increase of, the hazard or menace of fire, or which may obstruct, delay, or hinder, or may become the cause of any obstruction, delay, or hindrance, to the prevention or extinguishment of fire.

**12511. Fireworks**

"Fireworks" means any device containing chemical elements and chemical compounds capable of burning independently of the oxygen of the atmosphere and producing audible, visual, mechanical, or thermal effects which are useful as pyrotechnic devices or for entertainment.

The term "fireworks" includes, but is not limited to, devices designated by the manufacturer as fireworks, torpedoes, skyrockets, roman candles, rockets, Daygo bombs, sparklers, party poppers, paper caps, chasers, fountains, smoke sparks, aerial bombs, and fireworks kits.

**12512. Fireworks kit**



"Fireworks kit" means any assembly of materials or explosive substances, which is designed and intended by the seller to be assembled by the person receiving such material or explosive substance and when so assembled would come within the definition of fireworks in Section 12511.

**12513. Importer**

"Importer" means any person who for any purpose does any of the following:

(a) Brings fireworks into this state or causes fireworks to be brought into this state.

(b) Procures the delivery or receives shipments of any fireworks into this state.

(c) Buys or contracts to buy fireworks for shipment into this state.

**12514. Issuing authority**

"Issuing authority" means any person who has the responsibility of evaluating the application for, and issuing, the permits required by Section 12640.

**12515. Label of registration**

"Label of registration" means the label of registration of the State Fire Marshal.

**12516. License**

"License" means any nontransferable authorization granted by the State Fire Marshal to engage in any activity regulated by this part.

**12517. Licensee**

"Licensee" means any person 21 years of age or older holding a fireworks license issued pursuant to Chapter 5 (commencing with Section 12570).

**12518. Manufacturer**

"Manufacturer" means any person who manufactures, makes, constructs, fabricates, or produces any fireworks or pyrotechnic devices, but does not include any person who assembles or fabricates any sets or mechanical pieces for public displays of fireworks, or persons operating within the scope of public display or pyrotechnic operator licenses.

**12519. Model rocket**

"Model rocket" means any toy or educational device which weighs not more than 500 grams, including the engine and any payload, that is propelled by model rocket engines.

**12520. Model rocket engine**

"Model rocket engine" means a commercially manufactured, non-reusable rocket propulsion device which is constructed of a nonmetallic casing and solid propellant, wherein all of the ingredients are self-contained so as not to require mixing or handling by the user and which have design and construction characteristics determined by the State Fire Marshal to provide a reasonable degree of safety to the user.

**12521. Package**

"Package" includes any case, container, or receptacle, used for holding fireworks, which is closed or sealed by tape, cordage, or by any other means.

**12522. Permit**

"Permit" means the nontransferable permission granted by the public agency having local jurisdiction to a licensee for the purposes of establishing and maintaining a place where fireworks are manufactured, constructed, produced, packaged, stored, sold, exchanged, discharged, or used, or the nontransferable permission granted by the public agency having local jurisdiction or by the State Fire Marshal to a licensee for the purpose of transporting fireworks.

**12523. Person**

"Person" means any person, co-partnership, organization, firm, corporation, association, or any combination thereof, or any city, county, city and county, and state, and shall include any of their employees and authorized representatives.

**12524. Public display of fireworks**

"Public display of fireworks" means an entertainment feature where the public or a private group is admitted or permitted to view the display or discharge of dangerous fireworks.

**12525. Pyrotechnic compositions**

"Pyrotechnic compositions" means any combination of chemical elements or chemical compounds capable of burning independently of the oxygen of the atmosphere.

**12526. Pyrotechnic device**

"Pyrotechnic device" means any combination of materials, including pyrotechnic compositions, which, by the agency of fire, produce an audible, visual, mechanical or thermal effect designed and intended to be useful for industrial, agricultural, personal safety, or educational purposes.

The term "pyrotechnic device" includes, but is not limited to, agricultural and wildlife fireworks, model rockets, exempt fireworks, emergency signaling devices, and special effects.

**12527. Pyrotechnic operator**

"Pyrotechnic operator" means any licensed pyrotechnic operator, who by examination, experience, and training, has demonstrated the required skill and ability in the use and discharge of fireworks as authorized by the license granted.

**12528. Retailer**

"Retailer" means any person who, at a fixed place of business, sells, transfers, or gives fireworks to a consumer or user.

**12529. Safe and Sane fireworks**

"Safe and sane fireworks" means any fireworks which do not come within the definition of "dangerous fireworks" or "exempt fireworks".

**12530. Salesman**

"Salesman" means any person who, as an employee of a manufacturer or wholesaler, solicits, accepts, or receives an order for fireworks for a licensee or permittee.

**12531. Sell**

"Sell" means any arrangement between two or more persons as a result of which there is a transfer of property for a consideration.

**12532. Special effects**

"Special effects" means articles containing any pyrotechnic composition manufactured and assembled, designed, or discharged in connection with television, theater, or motion picture productions, which may or may not be presented before live audiences and any other articles containing any pyrotechnic composition used for commercial, industrial, education, recreation, or entertainment purposes when authorized by the authority

having jurisdiction.

**12533. Wholesaler**

"Wholesaler" means any person, other than an importer, exporter, or manufacturer selling only to wholesalers, who sells fireworks to a retailer or any other person for resale. It also includes any person who sells dangerous fireworks to public display permittees.

**12534. Within this state**

"Within this state" means within all territory within the boundaries of this state.

## Chapter 2

### EXCEPTIONS

#### **12540. Application of provisions**

The provisions of this part shall not apply to any of the following:

(a) Explosives regulated under Part 1 (commencing with Section 12000) of Division 11.

(b) Arms and handguns defined as firearms by the Federal Gun Control Act of 1968 as well as such devices and weapons classified under Section 12020 or 12301 of the Penal Code, including blank cartridge pistols of the type used at sporting events or theatrical productions.

(c) Research or experiments with rockets or missiles or the production or transportation of rockets or missiles by the Department of Defense of the United States, or by any agency or organization acting pursuant to a contract with the Department of Defense for the development and production of rockets or missiles.

(d) Paper caps which contain less than 0.25 grain of pyrotechnic composition per unit load.

#### **12541. Local regulations**

Nothing in this part authorizes the sale, use, or discharge of fireworks in any city, county, or city and county in which the sale, use, or discharge is otherwise prohibited or regulated by law or ordinance.

#### **12541.1. Special districts, prohibition or regulation of sale, use, or discharge of fireworks by ordinance or regulation; prevalence of state, county, or city regulations**

(a) A special district which provides fire protection, prevention, or suppression services may adopt an ordinance or regulation to prohibit or regulate the sale, use, or discharge of fireworks within that special district.

(b) If the county or city in which any area of the special district is located has adopted an ordinance or regulation to prohibit or regulate the sale, use, or discharge of fireworks within that county or city, the ordinance or regulation adopted by the county or city shall prevail over the ordinance or regulation adopted by the special district within any area of the special district which is within that county or city, and only the ordinance or regulation adopted by the county or city shall be operative in that area of the special district.

(c) If any area of a special district encompasses lands which are a state responsibility area, as defined in Sections 4125 and 4126 of the Public Resources Code, any regulation or prohibition of the state with respect to the sale, use, or discharge of fireworks within the state responsibility area shall prevail over any ordinance or regulation of the special district within that area.

## Chapter 3

### ADMINISTRATION

**Sec.**

- 12550.** State Fire Marshal.
- 12551.** Deputies and employees.
- 12552.** Rules and regulations; adoption.
- 12553.** Classification of new types of fireworks or pyrotechnic devices.
- 12554.** Rules and regulations; duration.
- 12555.** Examination of books and records; inspection of premises by fire marshal.
- 12556.** Data Collection
- 12557.** Model Ordinance
- 12558.** Inspection by issuing authority.

**12550. State Fire Marshal**

The State Fire Marshal shall enforce and administer this part.

**12551. Deputies and employees**

The State Fire Marshal shall appoint such deputies and employees as may be required to carry out the provisions of this part, subject to approval in the annual Budget Act.

**12552. Rules and regulations; adoption**

The State Fire Marshal shall adopt such regulations relating to fireworks as may be necessary for the protection of life and property not inconsistent with the provisions of this part. These regulations shall include, but not be limited to, provisions for the following:

- (a) Granting of licenses and permits for the manufacture, wholesale, import, export, and sale of all classes of fireworks.
- (b) Classification of fireworks and pyrotechnic devices.
- (c) Registration of employees of licensees.
- (d) Licenses and permits required for presentation of public displays.
- (e) Granting of licenses and permits for research or experimentation with experimental or model rockets and missiles.
- (f) Investigation, examination, and licensing of pyrotechnic operators of all classes.
- (g) Registration of emergency signaling devices and the classification

and use of exempt fireworks.

- (h) Transportation of all classifications of fireworks, model rockets, emergency signaling devices, and exempt fireworks.

**12553. Classification of new types of fireworks or pyrotechnic devices**

The State Fire Marshal shall also adopt regulations for classification of any new type of fireworks or pyrotechnic devices which have not been classified prior to January 1, 1974 and for the regulation of such fireworks in accordance with the provisions of this part.

**12554. Rules and regulations; duration**

The regulations adopted by the State Fire Marshal relating to fireworks and in existence on January 1, 1974 shall continue thereafter to be in effect as regulations of the State Fire Marshal until amended or repealed pursuant to the provisions of this

**12555. Examination of books and records; inspection of premises by Fire Marshal**

The State Fire Marshal or his salaried deputies may make an examination of the books and records of any licensee or permittee relative to fireworks, and may visit and inspect any building or other premises subject to the control of, or used by, the licensee or permittee for any purpose related to fireworks of any licensee or permittee at any time he may deem necessary for the purpose of enforcing the provisions of this part.

**12556. Data Collection**

In addition to the obligations described in Section 13110.5, on or before July 1, 2008, the State Fire Marshal shall identify and evaluate methods to capture more detailed data relating to fires, damages, and injuries caused by both dangerous fireworks and safe and sane fireworks. These evaluation methods shall include a cost analysis related to capturing and reporting the data and shall meet or exceed the specificity, detail, and reliability of the data captured under the former California Fire Incident Reporting System (CFIRS). The State Fire Marshal shall furnish a copy of these evaluation methods to any interested person upon request.



12557.

### **Model Ordinance**

- (a) The Office of the State Fire Marshal shall consult with public safety agencies and other stakeholder as deemed necessary by the State Fire Marshal and develop a model ordinance that permits local jurisdictions to adopt a streamline enforcement and administrative fine procedures related to the possession of 25 pounds or less of dangerous fireworks. These procedures shall be limited to civil fines and as authorized pursuant to Section 53069.4 of the Government Code, and provide that such fines collected pursuant to this section shall not be subject to Section 12706. The model ordinance shall include provisions for reimbursing the Office of the State Fire Marshal for the cost associated with the disposal of seized fireworks and collecting these disposal costs as part of an administrative fine as described in subdivision (c).
  
- (b) An ordinance of a local jurisdiction in effect on or after January 1, 2008, that is related to dangerous fireworks and is not the model ordinance described in subdivision (a) shall, as soon as practicable, comply with all of the following:
  - (1) The ordinance shall be amended or adopted to include provisions for cost reimbursement to the Office of the State Fire Marshal and the collection of disposal costs as part of an administrative fine as described in subdivision (c).
  - (2) The ordinance shall be amended or adopted to provide that the ordinance shall be limited to a person who possesses or the seizure of 25 pounds or less of dangerous fireworks
  - (3) The ordinance shall be amended or adopted to provide that the fines collected pursuant to the ordinance shall not be subject to section 12706.
  
- (c) The State Fire Marshal shall, in consultation with local jurisdictions, develop regulation to specify a procedure on how to cover cost to the Office of the State Fire Marshal for the transportation and disposal of dangerous fireworks that are seized by local jurisdictions. The regulations shall include, but are not limited to all of the following:
  - (1) A cost recovery procedure to collect, as part of an administrative fine, the actual cost for transportation and disposal of dangerous fireworks from any person who violates a local ordinance related to dangerous fireworks.
  - (2) The method by which the actual cost for transportation and disposal by the Office of the State Fire Marshal will be calculated.

- (3) The method, manner, and procedure the local jurisdiction is required to follow to forward the amounts collected pursuant to paragraph (1) to the State Fire Marshal

**12558. Inspection by issuing authority**

The licensee or permittee shall permit the chief of the issuing authority, or his authorized representatives, as qualified in Section 12721, to enter and inspect any building or other premises subject to the control of or used by the licensee or permittee for any purpose related to fireworks at any time for the purpose of enforcing the provisions of this part.

## Chapter 4

### CLASSIFICATION OF FIREWORKS AND PYROTECHNIC DEVICES

**Sec.**

- 12560.** Classification; necessity.
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- 12562.** Classification as safe and sane fireworks.
- 12563.** Classification as agricultural and wildlife fireworks.
- 12564.** Classification as exempt fireworks.
- 12565.** Classification as model rocket engines.
- 12566.** Classification as emergency signaling devices.
- 12567.** Fireworks previously classified as safe and sane.
- 12568.** Stamping and labeling.
- 12569.** Examination and classification limited to fireworks submitted by valid licensees.

**12560. Classification; necessity**

The State Fire Marshal shall classify all fireworks and pyrotechnic devices in accordance with the provisions of this chapter. No fireworks or pyrotechnic devices shall be imported, sold, or offered for sale prior to the examination and classification by the State Fire Marshal.

**12561. Classification as dangerous fireworks**

All fireworks examined by the State Fire Marshal and determined by him to come within the definition of "dangerous fireworks" in Section 12505 shall be classified as dangerous fireworks.

**12562. Classification as safe and sane fireworks**

All fireworks examined by the State Fire Marshal and determined by him to come within the definition of "safe and sane fireworks" in Section 12529 shall be classified as safe and sane fireworks.

**12563. Classification as agricultural and wildlife fireworks**

All fireworks examined by the State Fire Marshal and determined by him to come within the definition of "agricultural and wildlife fireworks" in Section 12503 shall be classified as agricultural and wildlife fireworks.

- 12564. Classification as exempt fireworks**  
All fireworks examined by the State Fire Marshal and determined by him to come within the definition of "exempt fireworks" in Section 12508 shall be classified as exempt fireworks.
- 12565. Classification as model rocket engines**  
All fireworks or toy propellant devices containing pyrotechnic compositions examined by the State Fire Marshal and found by him to come within the definition of "model rocket" or "model rocket engine" in Section 12519 or 12520, respectively, shall be classified as model rocket engines.
- 12566. Classification as emergency signaling devices**  
All pyrotechnic devices examined by the State Fire Marshal and found by him to come within the definition of "emergency signaling devices" in Section 12506 shall be classified by the State Fire Marshal as emergency signaling devices.
- 12567. Fireworks previously classified as safe and sane**  
Those fireworks classified by the State Fire Marshal as safe and sane prior to January 1, 1974 may continue to bear that designation and may be sold as safe and sane fireworks until 12 noon on July 6, 1974. All fireworks previously designated as safe and sane which are offered for sale or sold during the 1974 retail license year and thereafter shall bear the State Fire Marshal label with the classification of safe and sane fireworks.
- 12568. Stamping and labeling**  
The manufacturer, importer, or wholesaler shall stamp or label each case or carton of dangerous fireworks offered for sale, sold, consigned, or delivered within the state for sale or use within this state as dangerous fireworks. Each package of safe and sane fireworks shall be marked as safe and sane fireworks and shall bear the State Fire Marshal's classification label and licensee's registration number.
- 12569. Examination and classification limited to fireworks submitted by valid licensees**  
Except as provided in Section 12637 and pursuant to the provisions of Sections 12560 and 12581, fireworks or pyrotechnic devices examined and classified by the State Fire Marshal shall be submitted by manufacturers, wholesalers, and importers/exporters holding a valid license only.

## Chapter 5

### LICENSES

#### Article 1

#### TYPES OF LICENSES

**Sec.**

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- 12571.** Manufacturer's license.
- 12572.** Wholesaler's license.
- 12573.** Importer's and exporter's license.
- 12574.** Retail sales license.
- 12575.** Public display license (special).
- 12576.** Public display license (general).
- 12577.** Public display license (limited).
- 12578.** Pyrotechnic operator license.
- 12579.** Transportation.

**12570. Power to issue license**

The State Fire Marshal may issue any license described in this part, subject to the regulations which he may adopt not inconsistent with the provisions of this part.

**12571. Manufacturer's license**

A manufacturer's license shall allow the manufacture of fireworks and other pyrotechnic devices of all types and the sale and transport to licensed wholesalers in California only and the sale to special effects pyrotechnic operators of materials and devices for which such pyrotechnic operators hold a valid permit.

**12572. Wholesaler's license**

A wholesaler's license allows the sale and transportation of all types of fireworks to licensed retailers, or retailers operating under a permit, licensed public display operators, and other licensed wholesalers in California only and sale to special effects pyrotechnic operators holding a valid permit and sale of exempt fireworks to those industrial and commercial concerns that possess a valid permit from the local agency having jurisdiction in the area where such fireworks are to be used or stored.

**12573. Importer's and exporter's license**

An importer's and exporter's license shall allow fireworks to be imported into and exported from the state. Import activity shall be limited to the sale of fireworks to licensed wholesalers and licensed manufacturers only. Export activity shall be limited to the sale of fireworks to persons outside of the state. Holders of this type of license shall not be issued or possess a public display license of any type without first securing a wholesaler's license. This section shall not require a license for a motion picture production company to transport or deliver special effects from within the state to a destination outside of the state.

**12574. Retail sales license**

A retail sales license allows the retail sale of safe and sane fireworks for private

**12575. Public display license (special)**

A public display (special) license allows the holding and conducting at various times of public displays of dangerous fireworks at a single location only.

**12576. Public display (general)**

A public display license (general) allows the holding and conducting of public displays of dangerous fireworks at various locations and at various times.

**12577. Public display license (limited)**

A public display license (limited) allows the performance of a single public display action of a single nature with dangerous fireworks at one location to be executed at one or more performances or exhibitions.

**12578. Pyrotechnic operator license**

The State Fire Marshal shall adopt regulations that identify and specify the scope of each class of pyrotechnic operator license. A pyrotechnic operator license shall allow the licensee to handle, supervise, or discharge dangerous fireworks at public displays of all types, and to handle, supervise, or discharge rockets and special effects pyrotechnic devices which produce an audible or visual effect in connection with group entertainment or motion picture productions which may or may not be held before live audiences.

**12579.      **Transportation****

All licensees may transport the class of fireworks for which they hold a valid license as provided in Section 12651.

## Article 2

### ISSUANCE, REVOCATION AND RENEWAL

#### Sec.

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**12580. Power to issue and renew**

The State Fire Marshal may issue and renew licenses for the manufacture, import, export, sale, and use of all fireworks and pyrotechnic devices in this state.

**12581. Application; forms**

Any person who desires to manufacture, import, export, sell or use fireworks, shall first make written application for a license to the State Fire Marshal on forms provided by him. Such application shall be accompanied by the annual license fee as prescribed in this chapter.

**12582. Applications; signature**

The application for a license shall be signed by the applicant. If the application is made by a partnership, it shall be signed by each partner of the partnership. If the application is made by a corporation, it shall be signed by an officer of the corporation and bear the corporation's seal.

**12583. Salesmen or employees; age restrictions**

The authorization to engage in the particular act or acts conferred by a license to a person shall extend to salesmen or other employees of such person who are registered with the State Fire Marshal. The sales personnel and other employees of licensed retailers, however, need not be registered with the State Fire Marshal. No person under the age of 18 shall sell, or handle for sale, any classification of fireworks.

**12585. Withdrawal of application**

Any applicant may withdraw his application for a license or renewal of a license and the State Fire Marshal may allow the withdrawal when he has determined that it is in the best interest of public safety or the administration of this part.

**12586. Disciplinary action**

The suspension, expiration, or forfeiture by operation of law of a license issued by the State Fire Marshal, or its suspension, forfeiture, or cancellation by order of the State Fire Marshal or by a court of law, or its surrender to the State Fire Marshal shall not, during any period in which it may be renewed, restored, reissued, or reinstated, deprive the State Fire Marshal of his authority to institute or continue disciplinary action against the licensee upon any ground provided by law, or to enter an order suspending or revoking a license or otherwise taking disciplinary action

against the licensee on any such ground.

**12587. Written report as grounds for denial**

A written report by the State Fire Marshal, any of his deputies, or salaried assistants, or by the chief of any city or county fire department or fire protection district or their authorized representatives, disclosing that the applicant for a license or for renewal of a license does not meet, or the premises for which the license is required do not meet, the qualifications or conditions for such license as required by this part or regulations adopted pursuant to this part, may constitute grounds for denial of any application for the license or renewal of the license.

**12588. Denial of application after prior denial**

The State Fire Marshal may deny, without hearing an application for a license or renewal of a license, if within one year prior to the date of application, the State Fire Marshal has denied or revoked a license after proceedings conducted in accordance with the provisions of Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code for the same applicant on the ground of violation of this part.

**12589. Void applications**

The application for any license shall become void when any of the following occurs:

(a) The State Fire Marshal has notified the applicant to appear for examination and the applicant fails to appear or fails to submit a written statement of just cause for not appearing.

(b) The applicant fails to achieve a passing score on a required examination. A minimum qualifying score shall be established by regulations pursuant to this part.

(c) The applicant has not submitted documentary evidence of his qualifications as required by regulations adopted pursuant to this part.

(d) The applicant has failed to submit evidence of insurability as required by this part.

(e) The applicant withdraws his application prior to an investigation by the State Fire Marshal to determine if the license shall be issued.

(f) The license is denied after a hearing is conducted as provided by this part.

(g) The applicant has made misrepresentations or filed false statements.

**12590. Revocation or denial; grounds**

The State Fire Marshal may deny or revoke any license issued pursuant to this part if the State Fire Marshal finds any of the following conditions has occurred:

(a) The licensee has failed to pay the annual renewal license fee provided in this chapter.

(b) The licensee or license applicant has violated any provisions of this part or any regulations adopted by the State Fire Marshal pursuant to this part.

(c) The licensee or license applicant has created or caused a fire nuisance.

(d) The licensee has failed to keep full, complete, and accurate records or failed to file any required reports.

(e) Any fact or condition exists which, if it had existed at the time of the original application for the license reasonably would have warranted the State Fire Marshal in refusing originally to issue the license.

(f) The permit issued under Section 12640 has been rescinded or revoked by the issuing authority.

(g) Any licensee or license applicant has refused to make available to the State Fire Marshal full, complete, and accurate records.

**12591. Suspension pending investigation**

The State Fire Marshal may, upon three days notice, suspend any license for a period not exceeding 30 days pending investigation of any violation of the provisions of this part.

**12592. Right of hearing**

Any applicant who has been denied a license or renewal of a license, or any licensee who has had a license suspended, shall be entitled to a hearing in accordance with the provisions of this part.

**12593. Hearings; procedure**

Except where otherwise provided in this part, all hearings under this part shall be conducted in accordance with Chapter 5 (commencing with Section 11500) of Part 1 of Division 3 of Title 2 of the Government Code.

**12594. Time reports and payments deemed made**

Reports on fireworks transactions or the payment of license fees or penalties required by this part shall be deemed to have been made or paid at the time they are filed with, or paid to, the State Fire Marshal, or, if sent by mail, on the date shown by the United States postmark on the envelope containing the report or payment.

**12595. Fee for fiscal year**

Except as otherwise provided in Section 12599, on and after July 1, 1974, the original and annual license fee shall be for the fiscal year beginning July 1 and ending June 30 of the following year, or for the remaining portion of such fiscal year if the license is issued after the beginning of that fiscal year.

**12596. License for half year**

Any person or organization may obtain any license required by this part between January 1, 1974, and June 30, 1974, to be effective for that period only.

**12597. Application for renewal; penalty**

Application for renewal of a license shall be made during the license renewal period in the current license year in order to renew a license for the next following license year. The license renewal period shall begin on January 1 and end May 1 preceding the license year for which renewal is requested. A penalty of 50 percent of the basic license fee shall be assessed in all cases where the renewal fees are not paid on or before May 1, preceding the license year for which renewal is requested. This section shall not apply to retail sales licenses.

**12598. Failure to renew; surrender of license**

Every licensee who fails to renew his or her license by the time the license expires shall surrender the license to the State Fire Marshal within 10 days after the license expires.

**12599. Safe and sane fireworks; time of sale**

A retail license shall authorize a retail sale of safe and sane fireworks within this state only during the period of 12 noon on the 28th of June through 12 noon on the 6th of July of the same calendar year and such license shall expire at the end of such period. No retail license shall be issued for the license period defined in this section unless the application for such license is received by the State Fire Marshal on or before June 15 proceeding the license period. A new retail sales license shall be required annually for the period specified in this section.

**12600. License nontransferable**

Except as provided in Section 12583, the authority to perform any acts permitted by a license issued under this part shall be limited to the licensee and shall not be transferable.

**12601. Expiration of license upon failure to renew**

Except as provided in Section 12599, any license not renewed in accordance with the provisions of this part shall automatically expire at 12 midnight on June 30 of each year.

**12602. License requirements; exemptions**

A license shall not be required for the retail sale, use, or discharge of agricultural and wildlife fireworks, model rocket engines, or emergency signaling devices.

**12603. Television, motion picture or theater productions; manufacturer's license not required**

No person or employee holding a pyrotechnic license shall be required to obtain a manufacturer's license to design, assemble, compound, use, discharge, fabricate, construct, or erect any fireworks of any class or any combination thereof when such person or employee of such person is engaged in the business of producing television, motion picture, theater, or opera productions if the fireworks are for a specific use in a particular production or are used to maintain a reasonable inventory of special effects by a special effects independent contractor.

**12604. Disposal of fireworks after revocation or surrender of license**

Following the revocation or voluntary surrender of a license, or failure to renew his license, any person in lawful possession of lawfully acquired

fireworks for which a license is required may sell or otherwise dispose of such fireworks only under supervision of the State Fire Marshal and in such a manner as he shall provide by regulations and solely to persons who are authorized to buy, possess, sell, or use such fireworks. Such disposal shall be accomplished not later than 90 days from the legal revocation, voluntary surrender, or day that the license expires. Any person possessing fireworks pursuant to this section shall report the disposition of such fireworks to the local authority who issued the storage permit within the time period specified by this section.

**12605. Violation of provisions of this part**

Any person found guilty of violating any of the provisions of this part is not eligible to apply for a new license, apply for a renewal of a license, or take an examination for any license for a period of one year from the date of any conviction. The State Fire Marshal may waive the provisions of this section when he finds to granting of a license will not endanger public safety.

**12606. Charge of violations to be filed with State Fire Marshal**

Any charges against applicants for a license or against licensees which would be cause for the State Fire Marshal to initiate proceedings for revocation or denial of a license shall be filed with the State Fire Marshal within three years of the alleged act or omission.

**12607. Persons convicted of certain felonies; denial of license**

The State Fire Marshal may deny the application for a license or the application for renewal of a license filed by any person who has been convicted of a felony involving explosives or dangerous fireworks or who has been convicted as a principal or accessory in a crime against property involving arson or any other fire-related offense contained in Chapter I (commencing with Section 447a) of Title 13 of Part 1 of the Penal Code.

**12608. Employees convicted of felony; authority to perform acts**

The authority to perform those acts conferred upon the employee of a licensee as provided for in Section 12583 may be denied to any person who has been convicted of a felony.

**12610. Liability insurance for public display of fireworks; amount**

Notwithstanding any of the provisions of the law which may require a certificate of insurance as a condition for a permit to hold a general, special, or limited public display, any person, firm, or corporation applying for a public display license shall furnish to the State Fire Marshal a policy of public liability and property damage insurance, with limits, as

determined by the State Fire Marshal, which are reasonably necessary to cover possible liability for damage to property and bodily injury or damage to persons which may result from, or be caused by, the public display of fireworks, or any negligence on the part of the licensee or his or her or its agents, servants, employees, or subcontractors presenting the public display.

**12611. Certificate of insurance; contents**

The certificate of insurance shall provide all of the following:

(a) That the insurer will not cancel the insured's coverage without 15 days prior written notice to the State Fire Marshal.

(b) That the duly licensed pyrotechnic operator required by law to supervise and discharge the public display, acting either as an employee of the insured or as an independent contractor and the state of California, its officers, agents, employees, and servants are included as additional insureds, but only insofar as any operations under contract are concerned.

(c) That the state shall not be responsible for any premium or assessments on the policy.

## Article 4

### REPORTS

**Sec.**

- 12615.** Records; maintenance and availability.
- 12616.** Report of theft or loss.
- 12617.** Notification to fire authorities of theft or loss.
- 12618.** License numbers on papers covering sales or shipments.
- 12619.** Reports to be filed by import and export licensees; contents.
- 12620.** Supplemental reports.

**12615. Records; maintenance and availability**

All licensees, except retailers, shall maintain and make available to the State Fire Marshal full and complete, true, and accurate records showing all production, imports, exports, purchases, sales, or other disposition or consumption of fireworks by kind and class whether dangerous, safe and sane, or agricultural and wildlife fireworks.

**12616. Report of theft or loss**

The licensees shall report any theft or loss of fireworks to the State Fire Marshal within 24 hours after the discovery of the theft or loss. The report shall show the quantity, type and kind, classification of fireworks and the location where the loss occurred.

**12617. Notification to fire authorities of theft or loss**

In the event of the theft or loss of any fireworks or pyrotechnic devices, the State Fire Marshal shall notify the fire authorities in the location where the theft or loss occurred and the fire authorities shall cooperate with the State Fire Marshal in conducting a joint investigation of the circumstances.

**12618. License numbers on papers covering sales or shipments**

Each bill of lading, manifest, and invoice issued to cover the sale and shipment of fireworks shall bear the license number of both the seller or shipper and buyer or receiver.



**12619. Reports to be filed by import and export licensees; contents**

All import and export licensees shall file a notice with the State Fire Marshal prior to the arrival of any class of fireworks subject to the license he holds. The notice shall state all of the following:

- (a) Estimated date of arrival.
- (b) Type, kind, and quantity of fireworks.
- (c) Name of carrier.
- (d) Point of origin and bill of lading number.
- (e) Name and address of consignee.
- (f) Load number or other identification carton marks.

**12620. Supplemental reports**

In addition to the report required under this part, the State Fire Marshal may by regulation require such additional reports from licensees or permittees as are necessary to carry out the purposes of this part, and prescribe the form, including verification of the information to be given when filing such additional reports.

## Article 5

### FEES

**Sec.**

- 12630.** Establishment and collection of original and annual renewal fees.
- 12631.** Agricultural and wildlife fireworks; establishment and collection of fee.
- 12632.** Model rocket engines; amount of fee.
- 12633.** Registration of model or emergency signaling device; fee.
- 12634.** Dual licensing.
- 12635.** California fireworks licensing fund; deposit of moneys collected.
- 12636.** Certification of records and documents; fee.
- 12637.** Non-license manufacturers; fee for examination of products.

**12630. Establishment and collection of original and annual renewal fees**

The State Fire Marshal shall establish and collect the original and annual renewal fees for fireworks licenses required by this chapter. The fees shall not exceed the amount necessary to cover the costs incurred in the administration and enforcement of this part.

**12631. Agricultural and wildlife firework; establishment and collection of**

The original and annual renewal license fee to manufacture, import, export, or wholesale, or any combination thereof, agricultural and wildlife fireworks shall be established and collected by the State Fire Marshal.

**12632. Model rocket engines; establishment and collection fee**

The original and annual renewal license fee to manufacture; import, export, or wholesale, or any combination thereof, model rocket engines shall be established and collected by the State Fire Marshal.

**12633. Registration of model of emergency signaling device; fee**

The original and annual renewal application for registration of each model of emergency signaling devices shall be made to the State Fire Marshal. A registration fee established and collected by the State Fire Marshal for each model of signaling device shall accompany each application.

**12634. Dual licensing**

When a license to manufacture, wholesale, or import and export fireworks has been issued pursuant to Section 12571, 12572, or 12573, respectively, a separate license for the same person to manufacture,

wholesale, import, or export agricultural and wildlife fireworks or model rocket engines pursuant to Section 12631 or 12632 shall not be required where the license allows such activity with respect to other fireworks.

**12635. California fireworks licensing fund; deposit of money collected**

The California Fireworks Licensing Fund is hereby established in the State Treasury. All of the moneys collected pursuant to this part shall be deposited in the fund and those moneys shall be available, when appropriated by the Legislature, to the State Fire Marshal to carry out the provisions of this part.

**12636. Certification of records and documents; fee**

Except as otherwise provided by law, the State Fire Marshal shall charge a fee in the amount of five dollars (\$5) for each certified copy of any record, document, or paper in his custody, or for certification of any document representing the content of any such record, document, or paper.

**12637. Non-licensed manufacturers; fee for examination of products**

All fireworks or pyrotechnic devices intended for sale in this state, which are products of non-licensed manufacturers, shall be examined and classified by the State Fire Marshal upon written application on forms provided by him. Such application shall be accompanied by a fee as follows:

(a) Ten dollars (\$10) for each label of an item of identical size and design of a given lot or batch, provided that the lot or batch is identifiable by a code, serial number, shipment lot, case cargo number, etc.

A separate application and fee shall be submitted for each lot or batch. The State Fire Marshal seal and the wholesalers or importers registration number shall not be imprinted on the label until the lot or batch has been examined and classified.

## Chapter 6

### PERMITS

**Sec.**

- 12640. Necessity of permit.
- 12641. Safe and sane fireworks; emergency signaling devices; permit not required.
- 12642. Duration of permit.
- 12643. Application.
- 12644. License as prerequisite.
- 12645. Investigation and report.
- 12646. Grant or denial of permit.
- 12647. Delegation of power to grant or deny application; appeal from denial; action by board.
- 12648. Application for permit for public display of fireworks; investigation.
- 12649. Submission of license; proof of compensation insurance.
- 12650. Lawful sale to permittee.
- 12651. Transportation of fireworks or pyrotechnic devices; approved routes.
- 12652. Transportation permit.
- 12653. Application for transportation permit.
- 12654. Carriers not required to obtain transportation permit.

**12640. Necessity of permit**

In any case where this chapter requires that a permit be obtained from the State Fire Marshal, or in any case where the public agency having local jurisdiction requires pursuant to this chapter that a permit be obtained, any licensee shall possess a valid permit before performing any of the following:

(a) Manufacturing, importing, exporting, storing, possessing, or selling dangerous fireworks at wholesale.

(b) Manufacturing, importing, exporting, storing, selling at wholesale and retail safe and sane fireworks and transporting safe and sane fireworks, except that a transportation permit shall not be required for safe and sane fireworks possessed by retail licensees.

(c) Manufacturing, importing, exporting, possessing, storing, transporting, using, selling at wholesale and retail, those fireworks classified by the State Fire Marshal as agricultural and wildlife fireworks.

(d) Manufacturing, importing, exporting, possessing, storing, selling at wholesale and retail, model rocket engines.

(e) Discharging dangerous fireworks at any place, including a public display.

(f) Using special effects.

**12641.** Safe and sane fireworks; emergency signaling devices: permit not required

A permit, as provided in this part, shall not be required of any person to transport, purchase at retail, or use safe and sane fireworks, or to purchase at retail, use, or transport registered emergency signaling devices.

**12642. Duration of permit**

The effective period of the permit shall be defined in the permit and in no case shall the period of the permit exceed the valid period of the license. This section shall not prohibit the revocation of the permit by the issuing authority for just cause where a fire nuisance exists or where personal injury may occur.

**12643. Application**

Any licensee desiring to do any act specified in Section 12640 shall first make written application for a permit to the chief of the fire department or the chief fire prevention officer of the city or county, or to such other issuing authority which may be designated by the governing body of the city or county. In the event there is no such officer or person appointed within the area, application shall be made to the State Fire Marshal or his deputy. Applications for permits shall be made in writing at least 10 days prior to the proposed act.

**12644. License as prerequisite**

The issuing authority shall not accept an application for a permit from any person who does not possess, and present at the time of application, evidence of a valid license to perform those acts specified on the application for the permit. When a license is not required for specific acts, the issuing authority may prescribe such reasonable conditions to qualify the applicant to receive a permit and provide for the public safety.

**12645. Investigation and report**

The officer to whom the application for a permit is made shall undertake an investigation and submit a report of his findings and his

recommendation concerning the issuance of the permit, together with his reasons therefore, to the governing body of the city or county. The applicant for a permit to conduct a public display shall file a certificate evidencing the possession of a valid public display license with the officer making the investigation.

**12646. Grant or denial of permit**

The governing body may grant or deny the permit, subject to such reasonable conditions, if any, as it shall prescribe.

**12647. Delegation of power to grant or deny application; appeal from denial; action by board**

The governing body may delegate the power to grant or deny the permit to the issuing authority to whom the application is made. In such case, the governing body shall also provide for a hearing by the governing body by which an applicant may appeal a denial of the permit. The governing body may, after such a hearing, reverse, modify, or sustain the denial.

**12648. Application for permit for public display of fireworks; investigation**

The officer to whom the application for a permit for a public display of fireworks is made shall make an investigation to determine whether such a display as proposed will be of such character or so located that it may be hazardous to property or dangerous to any person. He shall, in the exercise of reasonable discretion, recommend granting or denying the permit, subject to such conditions as he may prescribe.

**12649. Submission of license; proof of compensation insurance**

The applicant for a permit for any public display of fireworks shall, at the time of application, submit his license for inspection and furnish proof that he carries compensation insurance for his employees as provided by the laws of this state.

**12650. Lawful sale to permittee**

When a permit for the public display of fireworks is granted, the sale, possession, transportation, and use of fireworks for the public display is lawful for that purpose only. The permit to hold a public display shall authorize the transportation of public display fireworks between the approved routes, as specified in Section 12651, and the public display site.

**12651. Transportation of fireworks or pyrotechnic devices; approved routes**

Any person holding a valid license for the manufacture, wholesale, or import and export of dangerous fireworks or pyrotechnic devices may transport any class of fireworks or pyrotechnic devices authorized by such license. Persons holding a special effects pyrotechnic operators license may transport special effects fireworks, but the transportation of fireworks by all other pyrotechnic operator licensees shall not be permitted. The authority granted to the licensee to transport fireworks is limited to traveling upon the approved routes for the transportation of explosives designated as provided in Section 31616 of the Vehicle Code and equip and maintain any vehicle used to transport fireworks as required by Section 31610 of the Vehicle Code. It is the intent of the Legislature by this section to require the maximum use of the approved routes in the delivery of fireworks to the point of destination.

**12652. Transportation permit**

When traveling between the approved routes, as specified in Section 12651 and the point of destination the licensee shall possess a transportation permit from the local fire authority having jurisdiction over the boundaries in which the off-route travel occurs. A transportation permit is not required for public display fireworks as provided in Section 12650.

**12653. Application for transportation permit**

The application for a transportation permit shall be submitted to the State Fire Marshal for the transportation of any quantity of fireworks where such transportation is outside the boundaries of the issuing authority having jurisdiction at the point of origin or such shipment originates within this state and is transported out of this state.

The application for a transportation permit as required by this section shall be approved by the issuing authority having jurisdiction at the place where the shipment originates before the State Fire Marshal shall issue such transportation permit. No further permits shall be required by issuing authorities other than the authority at the point of origin where the State Fire Marshal has issued a permit pursuant to this section.

**12654. Carriers not required to obtain transportation permits**

A transportation permit shall not be required by this part for public carriers or private carriers who each hold a valid license or permit issued pursuant to the provisions of Division 14 (commencing with Section 31600) of the Vehicle Code or Division 11 (commencing with Section 12000) of the Health and Safety Code.

## Chapter 7

### VIOLATIONS

#### Sec.

- 12670. Advertising involving fireworks or pyrotechnic devices.
- 12671. Unclassified and unregistered fireworks.
- 12672. Safe and sane fireworks; time of sale.
- 12673. Storage of fireworks.
- 12674. Revoked or surrendered licenses; storage or possession of fireworks.
- 12675. Failure to record license number on sales and shipments.
- 12676. Dangerous fireworks; sale or transfer to one not a permittee.
- 12677. Possession of dangerous fireworks without a permit.
- 12678. Use or discharge of agricultural and wildlife fireworks without a permit.
- 12679. Storage, sale or discharge of fireworks near flammable liquids.
- 12680. Discharge of fireworks where likelihood of injury to other person.
- 12681. Safe and sane fireworks; sale; place of business.
- 12682. Fire nuisance.
- 12683. Unregistered emergency signaling device; sale or use.
- 12684. Use of emergency signaling devices.
- 12685. Public display; permit required.
- 12686. Special effects fireworks; use.
- 12687. Special effects fireworks; sale or transfer.
- 12688. Advertising to sell or transfer fireworks.
- 12689. Sale or delivery to persons under 18 years of age.
- 12690. Expired license or permit.
- 12691. Regulations adopted by State Fire Marshal; violation of.
- 12692. Operations or functions of licensed pyrotechnic operator holding special effects license

#### **12670. Advertising involving fireworks or pyrotechnic devices**

It is unlawful for any person to advertise that he is in any business or venture involving fireworks or pyrotechnic devices or shall cause his name or business name style to be included in any classified advertisement or directory under a classification which includes the word fireworks, unless he is licensed pursuant to this part.

#### **12671. Unclassified and unregistered fireworks**

It is unlawful for any person to sell, offer for sale, use, discharge, possess, store, or transport any type of fireworks within this state unless the State Fire Marshal has classified and registered such fireworks.



**12672. Safe and sane fireworks; time of sale**

It is unlawful for any person to sell, or offer for sale, safe and sane fireworks at any time outside of the period specified in Section 12599.

**12673. Storage of fireworks**

It is unlawful for any person to store any fireworks without having in his possession a valid permit as required by this part.

**12674. Revoked or surrendered licenses; storage or possession of fireworks**

It is unlawful for any person to store or possess any fireworks for which a license is required and which has been revoked or surrendered or any license which has not been renewed and such storage or possession is held beyond the period provided for in Section 12604.

**12675. Failure to record license number on sales and shipments**

It is unlawful for any person to fail to record on each bill of lading, manifest or invoice issued to cover the sale or shipment of fireworks, the license number of both the seller or shipper and the buyer or receiver; unless the sale or shipment is made to non-licensees in accordance with the provisions of his license.

**12676. Dangerous fireworks; sale or transfer to one not a permittee**

It is unlawful for any person to sell, transfer, give, deliver, or otherwise convey title of any dangerous fireworks, including fireworks kits, to any person in this state who does not possess and present to the seller or donor for inspection at the time of transfer, a valid permit to receive, use, or transport dangerous fireworks as provided in this part.

**12677. Possession of dangerous fireworks without a permit**

It is unlawful for any person to possess dangerous fireworks without holding a valid permit.

**12678. Use or discharge of agricultural and wildlife fireworks without a permit**

It is unlawful for any person to use or discharge agricultural and wildlife fireworks without first securing a permit as provided in this part.

- 12679. Storage, sale or discharge of fireworks near flammable liquids**
- It is unlawful for any person to store, sell, or discharge any type of fireworks in or within 100 feet of a location where gasoline or any other flammable liquids are stored or dispensed.
- 12680. Discharge of fireworks where likelihood of injury to other person**
- It is unlawful for any person to place, throw, discharge or ignite, or fire dangerous fireworks at any person or group of persons where there is a likelihood of injury to any such person.
- 12681. Safe and sane fireworks; sale; place of business**
- It is unlawful for any person to sell or transfer any safe and sane fireworks to a consumer or user thereof other than at a fixed place of business of a retailer for which a license and permit has been issued.
- 12682. Fire nuisance**
- It is unlawful for any person to allow or permit a fire nuisance, as defined in Section 12510, to exist on any premises where any fireworks are manufactured, sold, assembled, discharged, packaged, stored, or distributed. The authority to determine that a fire nuisance exists shall be vested in those officers identified in Section 12721.
- 12683. Unregistered emergency signaling device; sale or use**
- It is unlawful for any person to sell, use, or discharge any emergency-signaling device not registered by the State Fire Marshal.
- 12684. Use of emergency signaling devices**
- It is unlawful for any person to use or discharge any registered emergency-signaling device in any manner other than that permitted by the instructions for use.
- 12685. Public display; permit required**
- It is unlawful for any person to conduct a public display without possessing a valid permit for this purpose.
- 12686. Special effects fireworks; use**
- It is unlawful for any person to use any special effects fireworks unless he possesses a pyrotechnic operator license.

**12687. Special effects fireworks; sale or transfer**

It is unlawful for any person to sell, transfer, give, or deliver any special effects fireworks to any person not licensed as a pyrotechnic operator.

**12688. Advertising to sell or transfer fireworks**

It is unlawful for any person to advertise to sell or transfer any class of fireworks, including agricultural and wildlife fireworks or model rocket engines, unless he possesses a valid license or permit.

**12689. Sale or delivery to persons under 18 years of age**

(a) It is unlawful for any person to sell, give, or deliver any dangerous fireworks to any person under 18 years of age.

(b) It is unlawful for any person who is a retailer to sell or transfer any safe and sane fireworks to a person who is under 16 years of age.

(c) Except as otherwise provided in subdivision (d), it is unlawful for any person who is a retailer to sell or transfer to a person under the age of 18 any rocket, rocket propelled projectile launcher, or similar device containing any explosive or incendiary material whether or not the device is designed for emergency or distance signaling purposes. It is also unlawful for a minor to possess such a device unless he or she has the written permission of, or is accompanied by, his or her parent or guardian while it is in his or her possession.

(d) Model rocket products including model rockets, launch systems, and model rocket motors designed, sold, and used for the purpose of propelling recoverable model rockets may be sold or transferred pursuant to regulations, adopted by the State Fire Marshal which the Fire Marshal determines are reasonably necessary to carry out the requirements of this part.

**12690. Expired license or permit**

It is unlawful for any person to perform any act, or transact or attempt to transact any business, with an expired license or an expired permit where a license or permit is required for the performance of such act or transaction.

**12691. Regulations adopted by State Fire Marshal; violation of**

It is unlawful for any person to violate any provision of any regulation adopted by the State Fire Marshal pursuant to this part.

**12692. Operations or functions of licensed pyrotechnic operator holding special effects license**

This chapter shall not prohibit the operations or functions of a licensed pyrotechnic operator holding a special effects license when the operations or functions are a necessary part of the production and are performed pursuant to a valid permit issued by the authority having jurisdiction.

## Chapter 8

### PENALTIES

**Sec.**

- 12700.** Offenses; punishment.  
**12701.** Separate offense for each day of violation.  
**12702.** Sale of delivery of dangerous fireworks to persons under 18 years of age; penalty.  
**12703** Temporary Suspension of Commercial Driving Privileges  
**12704** Unauthorized Shipments (Attorney General Notice)  
**12706** Fines and Forfeitures

**12700. Offenses; punishment**

(a) Except as provided in Section 12702 and subdivision (b), a person who violates any provision of this part, or any regulations issued pursuant to this part, is guilty of a misdemeanor, and upon conviction shall be punished by a fine of not less than five hundred dollars (\$500) nor more than one thousand dollars (\$1,000) or by imprisonment in the county jail for not exceeding one year, or by both such fine and imprisonment.

(b) A person who violates any provision of this part, or any regulations issued pursuant to this part, by possessing dangerous fireworks shall be subject to the following:

- (1) A person who possesses a gross weight, including packing, of less than 25 pounds of unaltered dangerous fireworks, as defined in Section 12505, is guilty of a misdemeanor, and upon conviction shall be punished by a fine of not less than five hundred dollars (\$500) or more than one thousand dollars (\$1000), or by imprisonment in the county jail for not exceeding one year, or both that fine and imprisonment. Upon a second or subsequent conviction, a person shall be punished by a fine of not less than one thousand dollars (\$1000) or by imprisonment in the county jail not exceeding one year or both that fine and imprisonment.
- (2) A person who possesses a gross weight, including packing, of not less than 25 pounds or more than 100 pounds of unaltered dangerous fireworks, as defined in Section 12505, is guilty of a public offense, and upon conviction shall be punished by imprisonment in the county jail for not more than one year, or by a fine of not less than one thousand dollars (\$1000) or more than five thousand dollars (\$5000), or by both that fine and imprisonment.

(3) A person who possesses a gross weight, including packaging, of not less than 100 pounds or more than 5,000 pounds of unaltered dangerous fireworks, as defined in Section 12505, is guilty of a public offense, and upon conviction shall be punished by imprisonment in the state prison or the county jail for not more than one year, or by a fine of not less than five thousand dollars (\$5,000) or more than ten thousand dollars (\$10,000), or by both that fine and imprisonment.

(4) A person who possesses a gross weight, including packaging, of more than 5,000 pounds of unaltered dangerous fireworks, as defined in Section 12505, is guilty of a public offense, and upon conviction shall be punished by imprisonment in the state prison or the county jail for not more than one year, or by a fine of not less than ten thousand dollars (\$10,000) or more than fifty thousand dollars (\$50,000), or by both that fine and imprisonment.

(c) Subdivision (b) shall not apply to a person who holds and is operating within the scope of a valid license as described in Section 12516 or valid permit as described in Section 12522.

**12701. Separate offense for each day of violation**

A person is guilty of a separate offense for each day during which he commits, continues, or permits a violation of this part or any provision of, or any order, regulation issued pursuant to, this part.

**12702. Sale or delivery of dangerous fireworks to persons under 18 years of age; dangerous fireworks having total net weight of 7,500 grains or more; penalties**

(a) Any person who violates this part by selling, giving, or delivering any dangerous fireworks to any person under 18 years of age is guilty of a misdemeanor and upon a first conviction shall be punished as prescribed in Section 12700.

(b) Upon any second or subsequent conviction of the offense, the person shall be punished by an additional fine of five thousand dollars (\$5000) or by imprisonment in the county jail for up to one year or by both that fine and imprisonment. The person shall not be granted probation and the execution of the sentence imposed upon the person shall not be suspended by the court.

**12703. (a) The State Fire Marshal shall, in conjunction with the Department of Motor Vehicles, develop regulations and procedures to temporarily**

suspend the commercial motor vehicle license of a person who is operating a commercial motor vehicle while transporting unaltered dangerous fireworks, as defined in Section 12505, having a gross weight, including packaging, of 10,000 pounds or more.

(b) A driver of a commercial motor vehicle shall not operate a commercial motor vehicle for three years if the driver is convicted of transporting unaltered dangerous fireworks, as defined in Section 12505, having a gross weight, including packaging, of 10,000 pounds or more, as described in Section 15301 of the Vehicle Code.

(c) This section shall not apply to a person who holds and is operating within the scope of a valid license as described in Section 12516 or valid permit as described in Section 12522

**12704.** The State Fire Marshal, at least once a year and in consultation with the Attorney General, shall serve notice to any individual or business known to supply fireworks that any unauthorized shipments of fireworks into California will result in an immediate report to federal authorities with a request for any relevant federal prosecution.

**12706.** Notwithstanding Section 1463 of the Penal Code, all fines and forfeitures imposed by or collected in any court of this state, except for administrative fines described in Section 12557, as a result of citations issued by a public safety agency, for any violation of subdivision (b) of Section 12700 or of any regulation adopted pursuant to subdivision (b) of Section 12700, shall be deposited, as soon as practicable after the receipt of the fine or forfeiture, with the county treasurer of the county in which the court is situated. Amounts deposited pursuant to this section shall be paid at least once a month as follows:

(a) Sixty-five percent to the Treasurer, by warrant of the county auditor drawn upon the requisition of the clerk or judge of the court, for deposit in the State Fire Marshal Fireworks Enforcement and Disposal Fund, as described in Section 12728, on order of the Controller. At the time of the transmittal, the county auditor shall forward to the Controller, on the form or forms prescribed by the Controller, a record of the imposition, collection, and payments of the fines or forfeitures.

(b) Thirty-five percent to the local public safety agency in the county in which the offense was committed to reimburse the local public safety agency for expenses, including, but not limited to, the costs for handling, processing, photographing, and storing seized dangerous fireworks.

## Chapter 9

### REMEDIES

#### Sec.

- 12720. Injunction.
- 12721. Seizure.
- 12722. Fireworks subject to seizure.
- 12723. Notice of seizure; disposal.
- 12724. Petition for return of seized fireworks.
- 12725. Preventing or stopping public displays.
- 12726. Dangerous fireworks; disposal
- 12727. Enforcement and Disposal Fund Regulations
- 12728. Enforcement and Disposal Fund Establishment

#### 12720. Injunction

Any threatened violation of any provision of this part or of any order or regulation of the State Fire Marshal issued pursuant to this part may be enjoined in a civil action brought in the name of the people of the State of California. Such actions maybe instituted by the Attorney General or the district attorney of the county in which the act, practice, or transaction is about to be committed.

#### 12721. Seizure

The State Fire Marshal, his or her salaried deputies, or any chief of a fire department, or his or her authorized representatives, any fire protection agency, or any other public agency authorized by statute to enforce the State Fire Marshal's regulations, may seize any fireworks described in this part. The State Fire Marshal, any chief of a fire department, any fire protection agency, or any other public agency authorized to enforce the State Fire Marshal's regulations may charge any person, firm, or corporation, whose fireworks are seized pursuant to this section, an amount which is sufficient to cover the cost of transporting, storing, and handling the seized fireworks. When the State Fire Marshal, other enforcing officer or agency described in this section, or a court determines that a person's, firm's or corporation's fireworks are illegally or erroneously seized, or if legal proceedings do not result in a conviction for violation of any provision of this part, any funds collected pursuant to this section shall be refunded, or if charged but unpaid, canceled.



**12722. Fireworks subject to seizure**

The following fireworks may be seized pursuant to Section 12721:

(a) Those fireworks which are sold, offered for sale, possessed, stored, used, or transported within this state prior to having been examined, classified, and registered by the State Fire Marshal, except those specific items designated as samples pending examination, classification, and registration by the State Fire Marshal where the licensee provides documentary evidence that such action by the State Fire Marshal is pending.

(b) All imported fireworks possessed without benefit of the filing of notices as required by this part.

(c) Safe and sane fireworks stored in violation of the conditions required by the permit as provided in this part.

(d) Safe and sane fireworks sold or offered for sale at retail which do not bear the State Fire Marshal label of registration and firing instructions.

(e) Safe and sane fireworks sold or offered for sale at retail which are in unsealed packages or containers which do not bear the State Fire Marshal label of registration and firing instructions.

(f) Safe and sane fireworks sold or offered for sale at retail before 12 noon on the 28th day of June or after 12 noon on the sixth day of July of each year.

(g) Each safe and sane fireworks item sold or offered for sale at retail which does not have its fuse or other igniting device protected by a cap approved by the State Fire Marshal, or groups of fireworks with exposed fuses which are not enclosed in sealed packages which bear the State Fire Marshal label or registration. The State Fire Marshal shall approve such caps as he determined provide reasonable protection from unintentional ignition of the fireworks.

(h) Dangerous fireworks, including fireworks kits, used, possessed, stored, manufactured, or transported by any person who does not possess a valid permit authorizing any activity listed in this part.

(i) Any fireworks stored or sold in any public garage or public oil station, or on any premises where gasoline or any other class 1 flammable liquids are stored or dispensed.

(j) Any fireworks still possessed by a person who has just thrown any

ignited fireworks at any person or group of persons.

(k) Any model rocket engines or model rockets with engines possessed by any person not holding a valid permit.

(l) Any emergency signaling device sold, offered for sale, or used which does not bear the State Fire Marshal label of registration as required by this part.

(m) Any fireworks or pyrotechnic device offered for sale by any person violating any provision of this part.

**12723. Notice of seizure; disposal**

The authority seizing any fireworks under the provisions of this chapter shall notify the State Fire Marshal not more than three days following the date of seizure and shall state the reason for the seizure and the quantity, type, and location of the fireworks. Any fireworks, with the exception of dangerous fireworks, seized pursuant to Section 12721 shall be disposed of by the State Fire Marshal in the manner prescribed by the State Fire Marshal at any time subsequent to 60 days from the seizure or 10 days from the final termination of proceedings under the provisions of Section 12593 or Section 12724, whichever is later. Dangerous fireworks shall be disposed of according to procedures in Sections 12724 and 12726 Any fireworks seized by any authority as defined in this chapter, other than the State Fire Marshal or his or her salaried assistants, shall be held in trust for the State Fire Marshal by that authority.

**12724. Petition for return of seized fireworks; determination; finality**

(a) Any person whose fireworks are seized under the provisions of this chapter may, within 10 days after seizure, petition the State Fire Marshal to return the fireworks seized upon the ground that the fireworks were illegally or erroneously seized. Any petition filed pursuant to this section shall be considered by the State Fire Marshal within 15 days after filing or after a hearing granted to the petitioner, if requested. The State Fire Marshal shall advise the petitioner of his or her decision in writing. The determination of the State Fire Marshal is final unless within 60 days after seizure an action is commenced in a court of competent jurisdiction in the State of California for the recovery of the fireworks seized pursuant to this part, except as provided in subdivision (b).

(b) The determination of the State Fire Marshal is final in the case of the seizure of dangerous fireworks, unless within 20 days after the notice of the determination is mailed to the petitioner an action is commenced in a court of competent jurisdiction in the State of California for the recovery of the fireworks seized pursuant to this part.

**12725. Preventing or stopping public displays**

The State Fire Marshal, his salaried deputies, or any chief or his authorized representatives as qualified in this chapter may prevent, stop, or cause to be stopped, any public display in progress, or any proposed public display, when the location, discharge, or firing of such public display is determined by him to be hazardous to property or dangerous to the public.

**12726. Dangerous fireworks; disposal**

(a) The dangerous fireworks seized pursuant to this part shall be disposed of by the State Fire Marshal in the manner prescribed by the State Fire Marshal at any time after the final determination of proceedings under Section 12724, or upon final termination of proceedings under Section 12593, whichever is later. If no proceedings are commenced pursuant to Section 12724, the State Fire Marshal may dispose of the fireworks after all of the following requirements are satisfied

(2) The analysis of the random sampling has been completed.

(3) Photographs have been taken of the dangerous fireworks to be destroyed.

(4) The State Fire Marshal has given written approval for the destruction of the dangerous fireworks seized, the total weight of the dangerous fireworks to be destroyed, and the total weight of the dangerous fireworks not to be destroyed.

(b) To carry out the purposes of this section, the State Fire Marshal shall acquire and use statewide mobile dangerous fireworks destruction units to collect and destroy seized dangerous fireworks from local and state agencies.

(c) If dangerous fireworks are seized pursuant to a local ordinance that provides for administrative fines or penalties and these fines or penalties are collected, the local government entity collecting the fines or penalties shall forward 65 percent of the collected moneys to the Controller for deposit in the State Fire Marshal Fireworks Enforcement and Disposal Fund, as described in Section 12728.

**12727. Enforcement and Disposal Fund Regulations**

(a) The State Fire Marshal shall establish regulations pursuant to the requirements and procedures established with the Office of Administrative Law to assess fees on all import and export, wholesale, and retail fireworks licensees in California to be deposited in the State Fire Marshal Fireworks

Enforcement and Disposal Fund.

(b) In determining the appropriate amount of the fees described in subdivision (a), the State Fire Marshal shall consult with the fireworks industry and import and export, wholesale, and retail fireworks licensees.

(c) The total amount of the fees collected shall not exceed the reasonable costs of the statewide programs described in subdivision (c) of Section 12728.

**12728. Enforcement and Disposal Fund Establishment**

(a) The State Fire Marshal Fireworks Enforcement and Disposal Fund is hereby established in the State Treasury.

(b) All of the moneys collected pursuant to Section 12706 shall be deposited in the fund and shall be available, upon appropriation by the Legislature, to the State Fire Marshal for the exclusive use in statewide programs for the enforcement, prosecution related to, disposal, and management of seized dangerous fireworks, and for the education of public safety agencies in the proper handling and management of dangerous fireworks.

(c) All of the moneys collected pursuant to Section 12727 shall be deposited in the fund and shall be available, upon appropriation by the Legislature, to the State Fire Marshal for the exclusive use in statewide programs for all of the following:

(1) To further assist in statewide programs for the enforcement, prosecution related to, disposal, and management of seized dangerous fireworks.

(2) The education of public safety agencies in the proper handling and management of dangerous fireworks as well as safety issues involving all fireworks and explosives.

(3) Assist the State Fire Marshal in identifying and evaluating methods to capture more detailed data relating to fires, damages, and injuries caused by both dangerous and safe and sane fireworks, and to assist with funding the eventual development and implementation of those methods.

(4) To further assist in public safety and education efforts within the general public as well as public safety agencies on the proper and responsible use of safe and sane fireworks.

Title 19, California Code of Regulations  
Chapter 6

# STATE FIREWORKS REGULATIONS

**Title 19, California code of Regulations  
Chapter 6. Fireworks**

**Article 1. Jurisdiction**

**§979. Jurisdiction.**

For the purposes of this chapter, the California State Fire Marshall shall be the primary enforcement authority for these regulations in all state-owned or state-occupied buildings. This authority shall extend to those premises leased by the state of California.

Authority: Sections 13108(c), Health and Safety Code

Reference: Sections 13100 and 13108, Health and Safety Code

**Article 2. Definitions**

**§980. Definitions.**

**(a) "A" Definitions.**

**(1) Aerial Shell.** A cylinder or spherical cartridge containing a burst charge and pyrotechnic or non-pyrotechnic effects, a fuse, a black powder lift charge and is fired from a mortar.

**(2) ASTM.** The American Society of Testing and Materials, a national organization publishing standards for all types of materials and products.

**(b) "B" Definitions.**

**(1) Barrage.** A rapidly fired sequence of effects.

**(2) Batten.** A strip of wood to which pyrotechnic devices are attached for support.

**(3) Binary Low Explosive Compounds.** Special effects materials in which fuel and an oxidizer are mixed together to produce a pyrotechnic composition.

**(4) Blank Cartridge.** A cartridge constructed from either metal or plastic casing, with a center or rim fire primer filled with various amounts of pyrotechnic compositions measured by loads.

**(5) Blasting Galvanometer.** An electrical resistance measuring device designed specifically and approved for testing of electric firing circuits.

**(6) Bottle Rocket.** A pyrotechnic device containing a maximum of 20 grams of pyrotechnic composition, which rises into the air upon ignition. A stick is used for guidance and stability, and a burst of color or noise, or both, is produced at height of flight.

**(7) Break.** An individual burst from an aerial shell, producing either a visible or audible effect or both, and may consist of a single burst or multiple effects.

**(8) Bullet Effect.** The discharge of the pyrotechnic or explosive bullet hit.

**(9) Bullet Hit.** A device containing various levels and amounts of pyrotechnic composition, whose purpose is to create the illusion of a bullet impact.

**(c) “C” Definitions.**

**(1) California Candle.** Hand held heavy paper or cardboard tube emitting showers of sparks.

**(2) Comet.** A pyrotechnic device launched from a mortar that produces an ascending burning effect, is self-consuming, and may or may not contain a burst charge or stars.

**(d) “D” Definitions.**

**(1) Darts.** To move suddenly and swiftly from one place to another.

**(2) Detonator.** Any device containing a detonating charge that is used for initiating detonation in an explosive. The term includes, but is not limited to, electric blasting caps of instantaneous and delay types, detonating cord delay connectors, and nonelectric instantaneous and delay blasting caps.

**(3) D.O.T.** DOT means U.S. Department of Transportation.

**(4) Dud.** A pyrotechnic item which leaves the mortar and returns to earth without producing the intended burst or effect. See also Misfire.

**(e) “E” Definitions.**

**(1) Electric Firing.** A technique used to discharge fireworks in which an electric match or squib and a source of electric current are used to ignite fuses or lift charges.

**(2) Electric Match.** An electric device containing a pyrotechnic compound which ignites when sufficient current flows through the leads.

**(3) Experimental High Power Rocket.** Non-professional rockets which are propelled by commercially manufactured high-power solid propellant rocket motors.

**(4) Experimental High Power Rocket Motor.** A State Fire Marshal approved, commercially manufactured rocket propulsion device containing a solid propellant charge wherein all the ingredients are pre-mixed and which produces more than 160 Newton-seconds (36 lb.-seconds) but shall not exceed 10,240 Newton-

seconds (2302.2 lb.-seconds) of total impulse.

**(f) “F” Definitions.**

**(1) Firecracker.** A device containing explosive pyrotechnic composition in an amount not to exceed 50 milligrams (.772 grains) in total pyrotechnic weight, in a fused container whose primary function is to produce an audible effect.

**Note:** All firecrackers are classified as “dangerous fireworks”, and pyrotechnic devices similar in construction to a “firecracker” which exceed the specified weight shall be designated explosives in accordance with Health and Safety Code Section 12000.

**(2) Flash Paper.** Treated paper which is extremely sensitive to heat and creates a brief flash of fire upon ignition.

**(3) Flash Powder.** Pyrotechnic composition intended for use in firecrackers and salutes, and often used for “flash”-type effects on stage and in productions involving special effects. Flash powder produces an audible report and a flash of light when ignited. Typical flash powder compositions contain potassium chlorate or potassium perchlorate, sulfur or antimony sulfide, and powdered aluminum.

**(4) Flower Pot.** A shell (not the lifting charge) that explodes at or near the bottom of a mortar blowing a shower of stars and burning material into the air.

**(5) Fountain.** See Gerb.

**(g) “G” Definitions.**

**(1) Gerb.** (also known as a Fountain). A device that, when ignited, emits a shower of sparks into the air at various altitudes.

**(2) Ground Spinning Device.** Also known as a Ground Spinner. A pyrotechnic device that discharges sparks as it spins across the surface upon which it is placed.

**(h) “H” Definitions.**

**(1) HDPE Mortar.** Also known as a High Density Polyethylene Mortar, is a mortar constructed of high density polyethylene which is certified and labeled as meeting one or more of the following ASTM standards, which are hereby incorporated by reference: ASTM D 3350, or ASTM F 714.

**(i) “I” Definitions.**

**(1) Ignitor.** An electric, chemical or mechanical device used to initiate burning or pyrotechnic or propellant materials.



(j) **“J” Definitions.** None.

(k) **“K” Definitions.** None.

(l) **“L” Definitions.**

(1) **Lance.** A thin cardboard tube packed with a color-producing pyrotechnic composition.

(2) **License.** “License” means any nontransferable authorization granted by the State Fire Marshal to engage in any activity regulated by this part.

(3) **Licensee.** “Licensee” means any person 21 years of age or older holding a fireworks license issued pursuant to Chapter 5 (commencing with Section 12570), of the Health and Safety Code.

(4) **Loader.** A person who places shells into mortars.

(5) **Low Burst or Low Break.** The result of a shell exploding below its prescribed height.

(m) **“M” Definitions.**

(1) **Magazine Tender.** Person who distributes pyrotechnic items to the loader during the show.

(2) **Match.** A fuse made of string or thread impregnated with black powder.

(3) **Meteoric Shower.** A self-contained cardboard tube mounted on a plastic base emitting a shower of stars into the air.

(4) **Mines or Mine Bags.** A device contained within a reusable or disposable tube, where upon ignition stars, firecrackers, salutes, whistles or other devices are propelled into the air, with the tube remaining on the ground.

(5) **Misfire.** A pyrotechnic item which fails to function as designed after initiation. See also Dud.

(6) **Model Rocket Motor.** The same as a model rocket engine, as defined in Health and Safety Code Section 12520. Model rocket motors shall not produce more than 160 Newton-seconds of total impulse power.

(7) **Monitor.** Person responsible for watching for pyrotechnic items which do not perform properly.

(8) **Mortar.** A cylinder that is used to hold and fire public display or special effects pyrotechnic items or compositions as defined in Section 999 of this subchapter.

(9) **Mortar Box.** Also known as a Trough. A portable wooden structure used for the placement of mortars.

**(10) Mortar Rack.** A wooden rack holding closely spaced HDPE or paper mortars. Mortar racks are limited to 10 tubes per individual rack.

**(11) Multiple Break Shell.** Aerial shell which has two or more breaks.

**(12) Muzzle Burst.** The process of an aerial shell breaking or bursting just as it leaves the mortar, scattering stars and burning material.

**(n) “N” Definitions.**

**(1) N.F.P.A.** The National Fire Protection Association.

**(2) Non-metallic Mortar.** See HDPE and Paper Mortar definition.

**(o) “O” Definitions.** None.

**(p) “P” Definitions.**

**(1) Pan Type Mortar.** A shallow metal container that is used to hold and fire special effect pyrotechnic compositions.

**(2) Paper Mortar.** A mortar constructed of spiral or convolute wound paper or chipboard.

**(3) Party Popper.** “Party Popper” also known by other names such as Champagne Party Poppers, Party Surprise Popper and Hot Shot Poppers, is a pyrotechnic device which contains less than 0.25 grain of pyrotechnic composition per unit load, designed to be held in the hand and when fired propels soft paper, cloth inserts or other similar fill material into the air.

**(4) Pigeons.** Also known as line rockets. Pyrotechnic items using mechanical devices to control the effect of flight movement.

**(5) Public Display of Fireworks.** “Public display of fireworks” means an entertainment feature where the public or a private group is admitted or permitted to view the display or discharge of dangerous fireworks, as defined in Section 12505 of Health and Safety Code.

**(q) “Q” Definitions.** None.

**“R” Definitions.**

**(1) Report.** A detailed written account of all events involving pyrotechnic materials, devices, and operations in which a fire, injury, or death occurs, or in which any violation of the laws or regulations takes place.

**(2) Retailer.** Any person who, at a fixed place of business, sells, transfers, or gives fireworks to a consumer or user.

**(3) Roman Candle.** A heavy paper or cardboard tube containing pellets of

pyrotechnic composition which, when ignited, are expelled into the air at several-second intervals.

**(s) “S” Definitions.**

**(1) Salute.** An aerial shell as well as other pyrotechnic items whose primary effects are detonation and flash of light.

**(2) Set Piece.** Also known as ground display piece, mechanical piece. A pyrotechnic device or series of devices that while on the ground or elevated produces a visual and/or audible effect. These devices may employ fountains, roman candles, wheels, and lances.

**(3) Shunt.** A deliberate short-circuit of an electrically fired pyrotechnic device or a means contained within its firing system to protect it from accidental ignition by extraneous electricity.

**(4) Single Break Shell.** Aerial shell having one or more effects within a cylindrical or spherical casing.

**(5) Snap Cap.** Also known by other names such as, but not limited to, Snappers, Pop Pop Snappers, Fun Snaps and Bang Snaps. It is a pyrotechnic device that typically contains less than .20 grams, but shall not contain more than .25 grams, of gravel impregnated with not more than one milligram of pyrotechnic composition. Each unit consists of a small, roughly spherical paper parcel, approximately one-quarter (1/4) inch in diameter with a twisted paper tail. Each unit, when dropped against a hard surface, produces a small, toy cap-like report.

**Note:** Studies are conducted annually by the Office of State Fire Marshal which will determine whether or not there are adverse consequences from the regulation of snap caps.

**(6) Soft Detonator.** A detonator in which the explosive or pyrotechnic material is encased in a non-metallic container.

**(7) Sparkler.** A Stick or wire coated with a pyrotechnic composition that produces a shower of sparks upon ignition.

**(8) Squib.** See Electric Match. See also Detonator and Soft Detonator.

**(t) “T” Definitions.**

**(1) Travel.** To move from point of ignition either vertically or horizontally.

**(2) Trough.** Also known as a Mortar Box. A portable wooden structure used for the placement of mortars.

**(u) “U” Definitions.** None.

**(v) “V” Definitions.** None.

**(w) “W” Definitions.**

**(1) Wheel Driver.** A heavy paper or cardboard tube emitting a shower of sparks from a very small orifice, similar to a propellant motor.

**(2) Within This State.** “Within this state” means all territory within the boundaries this state.

**(x) “X” Definitions.** None.

**(y) “Y” Definitions.** None.

**(z) “Z” Definitions.** None.

## Article 3. Licenses

### §981. General.

(a) No person shall engage in any type of fireworks activities without having submitted an application for and having obtained a license from the State Fire Marshal in accordance with the provisions of this chapter. Licenses shall be processed in accordance with Title 19, California Code of Regulations, Section 3.33.

#### Exceptions:

- (1) Licensed Pyrotechnic Operators Basic Commercial, Restricted Commercial and Rockets, First Class may employ unlicensed assistants. Unlicensed assistants shall perform only when under the direct, immediate and constant supervision of the licensee when handling fireworks and pyrotechnic compositions.
- (2) Licensed special effects and theatrical pyrotechnicians may employ unlicensed assistants. Unlicensed assistants shall perform only when under the direct, immediate and constant supervision of the licensee when handling fireworks and pyrotechnic compositions.
- (3) A license shall not be required for the use or discharge of safe and sane fireworks.

Authority: Sections 12552, Health and Safety Code  
Reference: Sections 12552, Health and Safety Code

### §981.1. Cause for Denial.

The use of any false or misleading statement or misrepresentation offered or used to secure any fireworks license, permit, classification, registration, or any other official fireworks document is a violation of these regulations, and shall be cause for denial of the license, permit, classification, registration or other official fireworks document.

All fireworks licensees as set forth in this chapter shall be prohibited from giving or permitting any other person to use such license for any purpose whatsoever. Any license issued under this chapter found to be altered shall be confiscated by the authority examining the license. The authority confiscating the license shall notify the State Fire Marshal immediately, and shall cooperate with the State Fire Marshal in all matters relating to an investigation of the incident.

Authority: Sections 12552, Health and Safety Code  
Reference: Sections 12552, Health and Safety Code

### **§981.2. Misuse or Alteration of License.**

All fireworks licensees as set forth in this chapter shall be prohibited from giving or permitting any other person to use such license for any purpose whatsoever.

Any license issued under this chapter found to be altered shall be confiscated by the authority examining the license. The authority confiscating the license shall notify the State Fire Marshal immediately, and shall cooperate with the State Fire Marshal in all matters relating to an investigation of the incident.

Authority: Sections 12552, Health and Safety Code  
Reference: Sections 12583 and 12600, Health and Safety Code

### **§981.3. License Fees.**

(a) Every license fee required in accordance with this section shall be paid by check or money order made payable to the "CDF/State Fire Marshal."

(b) Every required fee shall be paid at or mailed to the office location designated by the State Fire Marshal.

(c) The original and annual renewal fee for a license shall be for the fiscal year or portion thereof beginning July 1 and ending June 30 of the following year, except that the fee for a Retail License shall be for the period of noon on the 28th of June through noon on the 6th of July, of the same calendar year.

(d) The original and annual renewal fees shall be as follows:

- (1) Manufacturer \$1500.00
- (2) Wholesaler \$3000.00
- (3) Importer & Exporter \$4500.00
- (4) Retailer \$50.00
- (5) Public Display (special) \$350.00
- (6) Public Display (limited) \$200.00
- (7) Public Display (general) \$1,500.00
- (8) Pyrotechnic Operator:
  - Basic Commercial \$125.00
  - Restricted Commercial \$50.00
  - Rockets, 1st Class \$50.00
  - Rockets, 2nd Class \$50.00
  - Rockets, 3rd Class \$50.00
  - Special Effects, 1st Class \$250.00
  - Special Effects, 2nd Class \$200.00
  - Special Effects, 3rd Class \$100.00
  - Theatrical \$200.00
  - Theatrical Trainee \$100.00
  - Performer \$125.00
- (9) Manufacture, import, export, or wholesale, or any combination thereof; agricultural and wildlife fireworks \$500.00

(10) Manufacture, import, export, or wholesale, or any combination thereof; model rocket motors \$500.00

(11) Registration or classification fee for each model of emergency signaling device \$50.00

(12) Party Popper/Snap Cap Distributor Permit \$750.00

(13) Manufacture, import, export, wholesale, or any combination thereof high power or experimental high power rockets and motors \$1500.00

(14) Retailer (high power rocket) \$500.00

(e) The original registration and classification fees shall be as follows:

(1) Original registration and classification fee for each

Model of Model rocket motor, high power rocket or motor, safe and sane, party popper, snap caps/snappers, agricultural/wildlife or exempt fireworks \$50.00

(f) Required fees shall be submitted jointly with the appropriate application. Such fees are non-refundable once the license has been issued.

Authority: Sections 12552 and 12631-12633, Health and Safety Code  
Reference: Sections 12552 and 12630-12633, Health and Safety Code

#### **§981.4. Duplicate License.**

In the event a valid license is lost or destroyed, a duplicate license will be issued upon written notice from the licensee to the State fire Marshal and the submission of a \$25.00 fee.

Authority: Sections 12552 and 12580, Health and Safety Code  
Reference: Sections 12630, 12631, and 12632, Health and Safety Code

#### **§981.5. License Scope.**

**(a) Model Rockets.** A Model Rocket License authorizes the manufacture, import, export or wholesale or any combination thereof.

**(b) Pyrotechnic Operator.** A Pyrotechnic Operator's License authorizes and places the responsibility for the handling, supervision and discharge of any fireworks item or pyrotechnic device and establishes that the operator is responsible for the training of his or her assistants in the safe handling, supervision, and discharge of these items and devices, in accordance with the following:

(1) Pyrotechnic Operator--Unrestricted may conduct and take charge of all fireworks activities in connection with every kind of public fireworks display, whether commercial entertainment, experimental and other types of rockets, special effects in motion picture, theatrical and television production.

(2) Pyrotechnic Operator--Basic Commercial may conduct and is restricted to all fireworks activities in connection with a commercial fireworks public display, including the determination that all mortars, set pieces, rocket launchers and rockets are properly installed and that the proper safety precautions have been taken to insure the safety of persons and property. Such operator shall have charge of all activities directly related to handling, preparing and firing all fireworks at the public display, including the fixing of lifting charges and quick match as needed for aerial shells.

(3) Pyrotechnic Operator--Restricted Commercial may conduct and is restricted exclusively to the use and discharge of firecrackers and the use of other exempt fireworks in religious ceremonies.

(4) Pyrotechnic Operator--Rockets First Class may conduct and is restricted to all activities in connection with research experiments, production, transportation, fuel loading and launching of all types of experimental rockets. Such operator shall also be responsible for the actions and conduct of all assistants. Operators licensed under subsection (b) are also required to obtain a local permit from the authority having jurisdiction prior to all launches.

(5) Pyrotechnic Operator--Rockets Second Class may conduct and is restricted to all activities in connection with research experiments, production, transportation, fuel loading and launching of all types of solid fuel experimental rockets only. Such operator shall also be responsible for the actions and conduct of all assistants. Operators licensed under subsection (b) are also required to obtain a local permit from the authority having jurisdiction prior to all launches.

(6) Pyrotechnic Operator--Rockets Third Class may purchase, transport, store, and launch high power rockets. Experimental high power rocket motors may only be imported, exported, and wholesaled by individuals or companies holding valid import, export, or wholesale licenses. Pyrotechnic Operators--Third Class may only purchase high powered rocket motors from licensed wholesalers. Operators licensed under subsection (b) are also required to obtain a local permit from the authority having jurisdiction prior to all launches.

(7) Pyrotechnic Operator--Special Effects First Class may conduct and is restricted to the use, preparation for transportation and the preparation and use of all types of fireworks and special effects pyrotechnics, for the sole purpose of producing a visible or audible effect where and when such use is a necessary part of motion picture, television, theatrical or operatic production, as permitted by the fire authority having jurisdiction.

(8) Pyrotechnic Operator--Special Effects Second Class may conduct and is restricted to the use of special effects, the loading of blank cartridges, colored fire,



flash paper, smoke composition, the preparation and use of binary A and B Flash composition and such other fireworks of whatever kind and class as may be permitted by the authority having jurisdiction, under a special permit in connection with television and motion picture production.

(9) Pyrotechnic Operator--Special Effects Third Class authorizes the loading of blank cartridge shells, and use of special effects when under the direct supervision and control of a Pyrotechnic Operator--Special Effects First or Second Class.

(10) Pyrotechnic Operator--Theatrical authorizes the use of special effects, blank cartridges, colored fire, flash paper, flash, smoke composition, and the preparation and use of binary A and B Flash composition in stage or theatrical productions only.

(11) Pyrotechnic Operator--Theatrical Trainee authorizes the conducting of procedures permitted a Pyrotechnic Operator--Theatrical when under the direct supervision and control of a licensed Pyrotechnic Operator--Theatrical.

(12) Pyrotechnic Operator--Performer is restricted to persons who perform before an audience, directly or indirectly, and may include magicians, comedians, still photographers, and others whose primary interest is in other than pyrotechnics. Such license is restricted to the use of blank cartridges, colored fire, flash paper, sparklers, and smoke composition in connection with the production of theatricals and operas before live audiences in theaters, opera houses, television studios, night clubs, and similar occupancies, or by the use of a still photographer.

**(c) Separate License Not Required.** A separate license shall not be required of licensed manufacturers, wholesalers, or importer-exporter to manufacture, wholesale, import or export agricultural and wildlife fireworks or model rocket engines.

**(d) Explosive Materials Not Included in Scope of License.** The license scope as defined in this section is restricted to the use of materials defined as "fireworks" (as defined in Health and Safety Code Section 12511) and in no way confers authority for the use or discharge of explosive materials defined in Health and Safety Code Sections 12000, et seq.

Authority: Sections 12552 and 12580, Health and Safety Code

Reference: Sections 12630, 12631, and 12632, Health and Safety Code

## Article 4. Permits

### §982. Local Permit, Application For.

(a) When applying for a permit under Health and Safety Code section 12640(e), an applicant shall submit the following information and evidence to the authority having jurisdiction:

(1) The name of the organization sponsoring the display, together with the names and license numbers of persons actually in charge of the display.

(2) The date and time of day the display is to be held.

(3) The exact location planned for the display.

(4) The size and number of all fireworks to be discharged including the number of set pieces, shells, and other items. Shells shall be designated by diameter specifying single, multiple break or salute.

(5) The manner and place of storage of all fireworks prior to, during, and after the display.

(6) Diagram of the grounds on which the display is to be held showing the point at which the fireworks are to be discharged, the location of all buildings, roads, and other means of transportation, the lines behind which the audience will be restrained, the location of all nearby trees, telegraph or telephone lines, or other overhead obstruction.

(7) Proof that satisfactory workers' compensation insurance is carried for all employees in compliance with Labor Code Section 3700.

(8) If the permit is for a public display or special effects, documentary proof of conformance with sections 12610 and 12611, Health and Safety Code.

(9) A State Fire Marshal's license for the public display of fireworks, under Health and Safety Code Sections 12575, 12576, or 12577. No permit for a public display of any type shall be granted unless a public display license general, special, or limited has been first obtained from the State Fire Marshal.

(10) The name and license number of the wholesaler who supplied all items used in the display.

(b) Permittee shall be responsible for compliance with the provisions under which a public display permit has been granted.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

## Article 5. Qualifications-Examination and Investigation

### §984. General.

(a) Test and Examination. Every applicant for a pyrotechnic operator's license shall take and pass a written examination administered by the State Fire Marshal in accordance with the provisions of this chapter. The applicant shall submit evidence attesting to the qualifications and experience required by this Article for the type of license for which application has been submitted.

(1) Pyrotechnic Operator--Unrestricted shall require a minimum amount of experience as indicated for each of the following types of licenses. Such experience shall be in the actual discharge of fireworks and pyrotechnic devices for the types indicated.

(A) Pyrotechnic Operator--Basic Commercial 2 years.

(B) Pyrotechnic Operator--Rockets First Class 2 years.

(C) Pyrotechnic Operator--Special Effects First Class 2 years.

Under the provisions of this section, not less than 6 years total experience is required.

(2) Pyrotechnic Operator--Basic Commercial shall require a minimum of 2 years of active work as an unlicensed assistant to either a licensed Pyrotechnic Operator--Unrestricted, or Basic Commercial. This time requirement may be reduced by 1 year through the successful completion of a State Fire Marshal approved training course or through exceptional work experience as evidenced by log entries or work records. Notwithstanding the 2 year requirement, the applicant shall have participated in the firing of not less than 8 different public displays.

(3) Pyrotechnic Operator--Special Effects First Class shall require a minimum of 2 years of active work as a Pyrotechnic Operator--Special Effects Second Class. This time requirement may be reduced by 1 year through the successful completion of a State Fire Marshal approved training course or through exceptional work experience as evidenced by log entries or work records.

(4) Pyrotechnic Operator--Special Effects Second Class shall require a minimum of 2 years of active work as a Pyrotechnic Operator--Special Effects Third Class. This time requirement may be reduced by 1 year through the successful completion of a State Fire Marshal approved training course or through exceptional work experience as evidenced by log entries or work records.

(5) Pyrotechnic Operator--Special Effects Third Class. No experience required.

(6) Pyrotechnic Operator--Theatrical shall require a minimum of 2 years of active work as a Pyrotechnic Operator--Theatrical Trainee. This time requirement may be reduced by 1 year through the successful completion of a State Fire Marshal approved training course or through exceptional work experience as evidenced by log entries or work records.

(7) Pyrotechnic Operator--Theatrical Trainee. No experience required.

(8) Pyrotechnic Operator Performer. No experience required.

**(b) Qualifications.** Adequate qualification for the issuance of the requested license shall be determined by the State Fire Marshal. It shall be incumbent upon the applicant to present to the State Fire Marshal evidence of such qualifications which may include a physical demonstration of knowledge and ability.

**(c) Experience.** The required experience for issuance of a pyrotechnic operator's license shall be in accordance with this section. In addition, applications shall be accompanied by the names and complete addresses of not less than five persons as reference who are not a relative, and who can attest to the applicant's experience, integrity and training. The references shall be licensed pyrotechnic operators of a class equal to or greater than the class applied for and shall have been licensed for at least one year.

Authority: Section 12552, Health and Safety Code

Reference: Sections 12552, 12580, 12603 and 12607, Health and Safety Code

#### **§984.1. Examinations.**

The written examination required for pyrotechnic operators shall consist of at least three parts, one pertaining to laws relating to fireworks, one pertaining to regulations relating to fireworks and one relating to the practices and procedures of the license scope.

Authority: Section 12552, Health and Safety Code

Reference: Sections 12552 and 12580, Health and Safety Code

#### **§984.2. Examination Process.**

(a) To satisfactorily pass the written examination, the applicant must obtain a minimum grade of seventy percent (70%) in each part.

(b) Every person taking an examination for pyrotechnic operator shall have the right to contest the validity of individual questions of such examination.

(c) Every objection as to the validity of individual questions of an examination shall be made in writing within 5 days after taking said examination. Objections shall state the reasons for each objection.

(d) The decision made by the State Fire Marshal and the action taken shall be reflected in all future examinations but shall not affect the grades established in past examinations.

(e) The decision as to the action to be taken on the submitted objection(s) shall be by the State Fire Marshal and such decision shall be final.

(f) Any applicant failing the examination may reapply and take another examination not

less than 15 days from the date of the previous examination.

(g) Applicants applying to take repeat examination shall file a new application. An additional fee is not required in those instances where the applicant has taken a test and failed it.

(h) The State Fire Marshal may require a reexamination of any licensee. The examination may be of any type permitted by these regulations. A fee shall not be required for a reexamination.

(i) Any applicant found using any extrinsic aids during the examination shall automatically fail the examination, and shall forfeit admission to future examinations for a period of one year.

Authority: Section 12552, Health and Safety Code

Reference: Sections 12552, 12580, 12589, Health and Safety Code

### **984.3. Application Period.**

An original pyrotechnic operator's license shall not be issued for the month of June of any fiscal year unless the application has been received in the Office of the State Fire Marshal on or before the preceding May 15.

Authority Section: 12552, Health and Safety Code

Reference Section: 12552, 12580, 12589, 12595, 12597, Health and Safety Code

### **984.4. Investigation and Letters of Reference.**

Applicants for a pyrotechnic operator's license are subject to an investigation by the State Fire Marshal. The investigation is intended to determine, but will not be limited to, compliance with state laws and regulations, and competency of applicant to perform in a safe manner. To assist in this investigation five letters of reference in conformance with Section 984(c) shall be submitted with this application. Additionally, a review of the applicant's log or journal detailing the kind of materials used, the quantity, how fired, date, time and location, and name and license number of the supervising pyrotechnician shall be conducted.

Authority: Section 12552, Health and Safety Code

Reference: Sections 12552, 12580, 12587, 12590, 12615 Health and Safety Code

### **984.5. Renewal Applications.**

Application for renewal of a license shall be made by the person to whom the license was issued. In all cases, applicants for license renewal shall pass an examination as required for an original application in accordance with the provisions of this chapter every four years.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

## **Article 6. Classification of Fireworks**

### **§986. Classification.**

(a) Fireworks or pyrotechnic devices that are to be used or sold for use in this state and found by the State Fire Marshal to come within the definition of “party poppers”, “snap caps”, “safe and sane”, “agricultural and wildlife”, “model rocket motors”, “high power rocket motors”, “emergency signaling device” or “exempt” fireworks shall be classified as such by the State Fire Marshal.

**Exception:** Special Effects items developed and compounded on location for single time usage.

(b) The classification of an item shall not be construed as conferring classification to any similar item without the approval of the State Fire Marshal. The trade name of an item shall not be changed without notifying the State Fire Marshal 30 days prior to such change.

Authority: Sections 12552 and 12553, Health and Safety Code  
Reference: Sections 12560-12569 and 12571, Health and Safety Code

### **§986.1. Sparklers.**

Sparklers, which are defined as a stick or wire coated with a pyrotechnic composition that produces a shower of sparks upon ignition, are classified as dangerous fireworks under the authority of Health and Safety Code section 12505(k).

Authority: Section 12552, Health and Safety Code  
Reference: Sections 12505(k), 12552, 12560 and 12561, Health and Safety Code

### **§986.2. Test Samples.**

(a) Undischarged samples of each item of fireworks which are to be examined, classified and labeled as “Party Poppers”, “Snap Caps,” or “safe and sane” must be submitted to the State Fire Marshal for testing. The number of samples necessary shall be determined by the State Fire Marshal and in no case shall be less than ten (10).

(b) Undischarged samples of each item which is to be examined, classified, and labeled as “agricultural wildlife”, “emergency signaling devices”, “model rocket engine”, and “high-power rocket engine” shall be submitted to the State Fire Marshal for testing. The number of undischarged samples necessary for each test shall be determined by the State Fire Marshal and in no case shall be less than three (3).

Authority: Sections 12552 and 12553 Health and Safety Code  
Reference: Sections 12560-12569 and 12671, Health and Safety Code

### **§986.3. Chemical Analysis.**

The request for classification of all fireworks as “safe and sane” fireworks or any item as a “party popper” or “snap caps”, shall be accompanied by a qualitative chemical analysis showing every chemical and substance used in the manufacture of such fireworks, “party poppers” or “snap caps”. Such qualitative analysis shall be made by the manufacturer, and shall include the total pyrotechnic weight of each item.

Authority: Sections 12552 and 12553 Health and Safety Code  
Reference: Sections 12560-12569 and 12671, Health and Safety Code

### **§986.4. Re-Tests.**

Licensees shall advise the State Fire Marshal of any change in quality, content, or construction of any fireworks article classified by the State Fire Marshal and shall resubmit such articles for re-test and classification.

Authority: Sections 12552 and 12553, Health and Safety Code  
Reference: Sections 12560-12569 and 12671, Health and Safety Code

### **§986.5. Revocation.**

The classification may be revoked by the State Fire Marshal if he or she finds that the material being marketed is not the same as that submitted for classification or when such fireworks or their labeling does not conform to the provisions of this chapter.

Authority: Sections 12552 and 12553, Health and Safety Code  
Reference: Sections 12560-12569 and 12671, Health and Safety Code

### **§986.6. Specifications for Safe and Sane Fireworks.**

The provisions of this section shall apply to all handle goods, stick, dowel, spike and California candle fireworks having a stick dowel or inside diameter greater than 1/8 inch and other devices as noted.

Handle goods are exempt from compliance with the provisions of subsections (a), (d) and (e) of this section if they incorporate all of the following features: (1) a soft, crushable type paper tube, (2) an inside diameter of 3/8 inch or less, (3) 3 inches or less of combustible chemical composition, and having an overall length not exceeding 12 inches without any choke or other muzzle restriction.

(a) The chemical composition tubes or cases of all stick or handle fireworks items, whether spike or dowel, except flares, shall not exceed 9 inches in length or have an inside diameter greater than 5/8 inch and shall be convolute or spiral wound of chip board or other paper having equivalent strength and shall be well glued. The above

dimensions do not include the stick, dowel or tubular handles of such items. The chemical composition tubes in all fireworks items shall be sealed in a manner that prevents leakage of the pyrotechnic composition during shipping, handling, or normal operation and shall be constructed in a manner to allow functioning without burnout or blowout.

(b) The use of any choke or other muzzle restriction in any stick or handle fireworks item, whether spike or dowel or California candle is prohibited.

(c) Compositions in all devices shall be designed and manufactured to prevent loosely compacted charges. Pyrotechnic compositions shall not discharge a flame longer than 8 inches or throw sparks further than 10 feet from the composition tube muzzle. Handle goods shall not throw sparks further than 6 feet from the composition tube muzzle.

(d) Clay base shall have a minimum finished thickness of 1/2 inch and shall be formed in place inside the tube. In no case shall the final composition charge and the clay be formed in a combined operation. All clay used as clay base shall be sufficiently moistened to insure permanent effective adhesion to the inside of the tube or case.

(e) Fireworks devices which are intended to be hand-held and are so labeled shall incorporate a handle at least 4 inches in length. Handles shall remain firmly attached during transportation, handling and full operation of the device, or shall consist of an integral section of the device at least 4 inches below the pyrotechnic chamber. Spikes and dowels shall be inserted into the chemical composition tubes a minimum distance not less than 25% of the length of tubes 6 inches or less in length and not less than 2 inches into tubes over 6 inches long. They shall be cemented firmly in place against the clay base. There shall be no void space within the chemical composition tube.

Spikes provided with fireworks devices shall protrude at least 2 inches from the base of the device and shall have a blunt tip not less than 1/8 inch in diameter or 1/8 inch square.

(f) All fuses of every type and kind of fireworks items shall be securely fixed in contact with the composition charge to insure against accidental loss. Each fuse shall be capable of either supporting the combined weight of the fireworks item plus eight ounces dead weight, or double the weight of the item without separation from the fireworks article.

Fuses on all items shall burn for not less than 3 seconds but not more than 6 seconds. Fuses on all items shall be treated or coated in such a manner as to reduce the possibility of side ignition. The fuse on devices such as "ground spinners" that require a restricted orifice for proper thrust and contain less than 6 grams of pyrotechnic composition are exempt from this requirement.

Fireworks items sold or offered for sale at retail which are not enclosed in sealed packages, shall have their fuses or other igniting means covered in a manner approved by the State Fire Marshal to provide reasonable protection from unintentional ignition.



(g) All pyrotechnic devices having a base shall provide stable support to maintain the item in a vertical position when firing. When bases are added to the device, they shall be firmly glued in place.

The base or bottom of fireworks devices having a base or fireworks devices that operate in a standing upright position shall have the minimum horizontal dimensions or the diameter of the base equal to at least one-third (1/3) of the height of the device including any base or cap affixed thereto.

(h) The appearance of any fireworks items resembling those articles classified by statute as “dangerous fireworks” shall constitute sufficient grounds for their classifications, by the State Fire Marshal, as “dangerous fireworks.” Special reference is intended, though not by way of limitation, to cherry bombs and sky rockets and other fireworks which normally explode or rise in the air during discharge.

(i) Pinwheels shall be limited to a maximum overall diameter of 15 inches, shall be substantially constructed and all driver gerbs, firepots and other elements shall be firmly fixed to the wheel.

Drivers shall be securely attached to the device so that they will not come loose in transportation, handling, and normal operation. Wheel devices intended to operate in a fixed location shall be designed in such a manner that the axle remains attached to the device during normal operation.

(j) Smoke devices shall conform to the following:

(1) Smoke devices shall be so constructed that they will neither burst nor produce external flame (excluding the fuse and first fire upon ignition).

(2) Smoke devices shall not be of such color or configuration so as to be confused with dangerous fireworks, such as firecrackers or cherry bombs.

(3) Smoke devices shall not incorporate plastic as an exterior material if the pyrotechnic composition would come in direct contact with the plastic.

Authority: Sections 12552 and 12553, Health and Safety Code

Reference: Sections 12560-12569 and 12671, Health and Safety Code  
Section 1507.4, CFR 16, Code of Federal Regulations

### **§986.7. Party Poppers.**

(a) General. Party Poppers, as defined in Section 980, may be sold at retail outlets without requirement of a state fireworks retailer license or other retail sales restrictions so long as these Party Poppers are units of a particular manufacturer and design which have been classified by the Office of State Fire Marshal.

(1) Only entities or individuals maintaining a valid Office of State Fire Marshal importer/exporter's license may import Party Poppers into California and may sell

Party Poppers only to entities or individuals maintaining a valid Office of State Fire Marshal wholesaler's license.

(2) Only entities or individuals maintaining a valid Office of State Fire Marshal's wholesaler's license or Party Popper/Snap Cap Distributor permit may sell Party Poppers to a retail outlet. Entities or individuals maintaining a Party Popper/Snap Cap Distributor Permit may purchase Party Poppers only from an individual or entity maintaining a valid Office of State Fire Marshal wholesaler's license and may sell Party Poppers only to retail outlets.

(3) Only entities or individuals maintaining either a valid Office of State Fire Marshal wholesaler's or importer/exporter's license or Party Popper/Snap Cap Distributor Permit may transport, or cause to be transported for sale, Party Poppers within California.

(4) All wholesaler licenses and Party Popper/Snap Cap Distributor permittees must file with the Office of State Fire Marshal by the close of the month immediately following each quarter, a list of the names and addresses of all retail outlets to whom they sold Party Poppers in the preceding quarter. Retail outlets holding valid Office of State Fire Marshal retail sales licenses for the sale of Safe and Sane fireworks within the State for the period of 12:00 noon on the 28th of June through 12:00 noon on the 6th of July of that calendar year, as required by Health and Safety Code Section 12599, need not appear on this list filed with the Office of State Fire Marshal as required by this Section.

(b) In addition to the tests required by this Section, Party Poppers shall conform to the following:

(1) The device shall contain not more than 0.25 grains of explosive.

(2) The device shall not contain any materials specified in Section 12505 of the Health and Safety Code.

(3) The tube casing or body shall be constructed so as to eliminate any emission into the hand of the user.

(4) The streamers or other fill material shall be flame retardant when tested in accordance with this section.

(5) Every individual party popper item shall bear the classification label of the State Fire Marshal, including the manufacturer's and importer/exporter's registration number. The words "party poppers" shall appear in legible print on such label.

(6) The body of every party popper shall have, in legible print, operating instructions and warning labels as may be required by the State Fire Marshal.

(c) The testing of Party Poppers shall require the submission of a minimum of ten (10) samples. The streamers or other fill material from all of the ten (10) samples shall be

arranged in a loose pile and subjected to the flame from a common paper match for not less than 5 seconds. The test material shall not continue to burn or smolder for more than 2 seconds after the match has been removed. If the streamers or other fill material fail the above tests, the device shall be rejected.

Authority: Sections 12552 and 12553, Health and Safety Code

Reference: Sections 12505, 12560-12569 and 12671, Health and Safety Code

**§986.8. Snap Caps.**

(a) General. Snap Caps as defined in Section 980, may be sold at retail outlets without requirement of a state fireworks retailer license or other retail sales restrictions so long as these Snap Caps are units of a particular manufacturer and design which have been classified by the State Fire Marshal for testing and classification in accordance with this Section. Only entities or individuals maintaining a valid Office of State Fire Marshal importer/exporter's license may import Snap Caps into California and may sell Snap Caps only to entities or individuals maintaining a valid Office of State Fire Marshal wholesaler's license.

Only entities or individuals maintaining a valid Office of State Fire Marshal wholesaler's license or Party Popper/Snap Cap Distributor permit may sell Snap Caps to a retail outlet. Entities or individuals maintaining a Party/Snap Cap Distributor Permit may purchase Snap Caps only from an individual or entity maintaining a valid Office of State Fire Marshal wholesaler's license and may sell Snap Caps only to retail outlets.

Only entities or individuals maintaining either a valid Office of State Fire Marshal wholesaler's or importer/exporter's license or Party Popper/Snap Cap Distributor Permit may transport, or cause to be transported, for sale, Snap Caps within California. All wholesaler licenses and Party Popper/Snap Cap Distributor permittees must file with the Office of State Fire Marshal by the close of the month immediately following each quarter, a list of the names and addresses of all retail outlets to whom they sold Snap Caps in the preceding quarter. Retail outlets holding valid Office of State Fire Marshal retail sales licenses for the sale of Safe and Sane fireworks within the State for the period of 12:00 noon on the 28th of June through 12:00 noon on the 6th of July of that calendar year, as is required by Health and Safety Code Section 12599, need not appear on this list filed with the Office of State Fire Marshal as required by this Section.

(b) In addition to the tests required by this Section, Snap Caps shall conform to the following:

(1) Each device typically contains less than 0.20 grams, but shall not contain more than 0.25 grams, of gravel impregnated with not more than one milligram of pyrotechnic composition.

(2) Each device shall not contain any prohibited materials specified in Section 12505 of the Health and Safety Code.

(3) Each device shall be constructed of a paper parcel which shall be flame retardant when tested in accordance with this Section.

(4) The packaging for these devices shall bear the classification label of the State Fire Marshal, including the manufacturer's and importer/exporter's registration numbers. The words "Snap Caps/Snappers" shall appear in legible print on such label.

(5) The packaging for these devices shall have, in legible print, operating instructions and warning labels as may be required by the State Fire Marshal.

(c) The testing of Snap Caps shall require the submission of a minimum of ten (10) Samples. The paper material from all of the ten (10) samples shall be arranged in a loose pile and subjected to the flame from a common paper match for not less than five (5) seconds. The test material shall not continue to burn or smolder for more than two (2) seconds, after the match has been removed. If the paper material fails the above test, the device shall be rejected.

#### **986.9. Similar Devices.**

A firecracker, as defined in Section 980(f)1, which exceeds 50 milligrams (.772 grains) in net pyrotechnic composition weight shall be classified as explosives in accordance with Health and Safety Code Section 12000.

Authority: Sections 12552, 12553, Health and Safety Code

Reference: Sections 12505(b) and (k), 12511, 12540, 12560, Health and Safety Code

### **Article 7. Seal of Registration and Labeling**

#### **§987. Seal of Registration, Description.**

(a) The State Fire Marshal's Seal of Registration required by this chapter shall conform to the provisions of this article. The Seal of Registration shall be applied to all classified fireworks and pyrotechnic devices by a licensed manufacturer, importer, exporter or wholesaler, and shall indicate the classification assigned by the State Fire Marshal or any State Fire Marshal approved laboratory.

(b) The licensee registration number shall appear in the boxes below the seal as illustrated in this article.

Authority: Section 12552, Health and Safety Code

Reference: Sections 12567 and 12568, Health and Safety Code

#### **987.1. Unlawful Use.**

No person or concern shall produce, reproduce or use the Seal of Registration in any manner or for any purpose except as provided in this chapter.

Authority: Section 12552, Health and Safety Code

Reference: Sections 12567, 12568, Health and Safety Code

## **987.2. Permissive Use.**

(a) Licensed manufacturers, importers, exporters, or wholesalers may, after review by the State Fire Marshal, use the Seal of Registration bearing their license registration number for any of the following:

- (1) Printed matter including advertising and copy for publication.
- (2) Letterhead, personal cards and similar stationery.
- (3) Stencils for any of the foregoing.

Authority: Section 12552, Health and Safety Code

Reference: Sections 12502, 12618, Health and Safety Code

## **§987.3. Reproduction.**

No person shall reproduce the fireworks Seal of Registration unless the seal reproduction conforms to the approved copy as issued at the time the license and registration number is granted. No alteration shall be made to the original or copy, or to any reproduction of the Seal of Registration unless approved by the State Fire Marshal.

Authority: Section 12552, Health and Safety Code

Reference: Sections 12502 and 12618, Health and Safety Code

## **987.4. Registration Numbers.**

Before reproduction of the Seal of Registration, there shall be inserted in the box at the bottom of the reproduction, the registration number assigned by the State Fire Marshal to designate the category of the licensee. The category shall be designated by the capital letter preceding the registration number as follows: "M" for manufacturing, "I/E" for importer/exporter, "W" for wholesaler. The designation for model rockets and signaling devices shall be as follows: "MR" for model rockets, "HPR" for high-power rocket motors, "L" for land signaling devices, "S" for sea signaling devices and "A" for air signaling devices. Signaling devices intended for more than one function shall use all of the appropriate letters.

Authority: Section 12552, Health and Safety Code

Reference: Sections 12502, 12618, Health and Safety Code

## **987.5. Cease Use Order.**

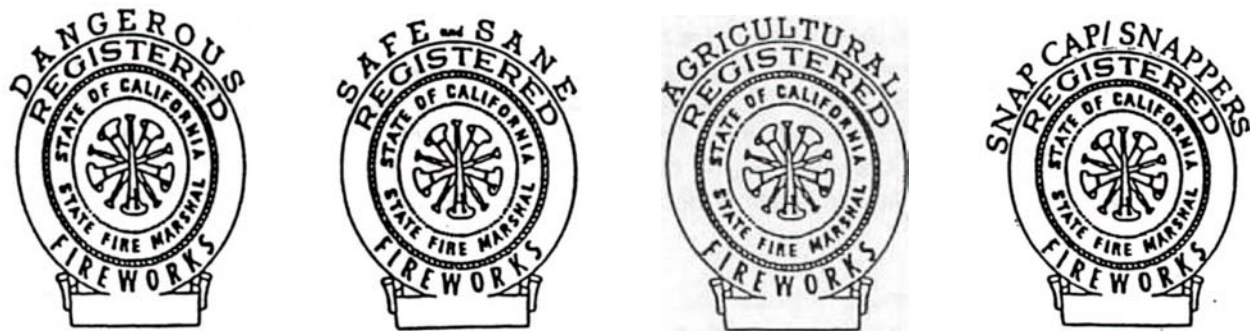
No person or concern shall continue use of the Seal of Registration in any manner or for any purpose after receipt of a notice in writing from the State Fire Marshal to discontinue such use.

Authority: Section 12552, Health and Safety Code

Reference: Sections 12502, 12618, Health and Safety Code

## §987.6. State Fire Marshal's Seal of Registration.

The Seal of Registration shall appear in a format illustrated by the following samples below:



1. Enter one of the appropriate classification titles above the seal (see preceding samples) as listed below:

- (a) Dangerous
- (b) Safe and Sane
- (c) Agricultural/Wildlife
- (d) Model Rocket Motor
- (e) Emergency Signaling Device (L), (S), or (A)
- (f) Exempt
- (g) Party Popper
- (h) High Power Rocket Motor
- (i) Snap Caps/Snappers

2. Enter the Office of State Fire Marshal manufacturer's registration number in the box at the bottom of the seal. The seal that must appear on all Party Poppers and the seal that must appear on all packaging for all Snap Caps must also include the Office of State Fire Marshal importer/exporter's registration number.

3. On or before May 15 of the first year an importer intends to distribute in California, which ever comes later, an importer of Safe and Sane fireworks shall be required to file with the Office of State Fire Marshal in Sacramento, a notarized list of all Safe and Sane firework devices which: (1) they have previously submitted for testing and which have been classified as Safe and Sane by the Office of State Fire Marshal; and (2) indicate by placing an asterisk(\*) before the name of each Safe and Sane firework device they intend to distribute in California for retail sale between June 28th and July 6th of that year.

On or before May 15 of each year thereafter, each importer shall be required to file with the Office of State Fire Marshal in Sacramento, a notarized list of all Safe and Sane firework devices they intend to distribute in California for retail sales between June 28th and July 6th of that year including all new Safe and Sane firework devices which have been submitted for testing and which have been classified as Safe and Sane by the Office of State Fire Marshal since that importer filed its first list with the Office of State Fire Marshal in accordance with this Section.

These lists must include the name and address of the importer and the importer/exporter's registration number. The devices on these list must be segregated by type of device [i.e., cone fountains, base fountains, wheels, smoke items, ground spinners, hand-held items, and other devices which have been classified as Safe and Sane by the Office of State Fire Marshal]. These firework devices must be listed by the name as it appears on each item and within each firework device category, these items must be segregated into two subcategories: (1) those items to which this importer has exclusive trademark and/or distribution rights; and (2) those items to which this importer does not have exclusive trademark and/or distribution rights.

On or by June 20 of each year, the Office of State Fire Marshal shall distribute a master list or compilation of all said individual lists, segregated by importer, to all members of the fire service in California. This list shall also include a listing of snap cap and party popper devices which have been submitted for testing and classified as a "Snap Cap" or "Party Popper" by the Office of State Fire Marshal. This listing of snap caps and party poppers must include the name and address of the importer and the importer/exporter's registration number.

On or before June 1 of each year, the Office of State Fire Marshal shall supply each importer who submitted an individual list, a draft copy of how that importer's list will appear on the forthcoming master list. That importer shall then have ten (10) business days from its receipt of this draft list to review, approve and/or request any corrections in its listing. Any request for corrections must be submitted along with appropriate documentation to the Office of State Fire Marshal in Sacramento.

The failure of an importer to timely file its individual list and/or to file a timely request for substantiated corrections to the draft copy of how that importer's list will appear on the master list, as required by this Section, shall subject any item which does not appear on the Office of State Fire Marshal's master list to immediate seizure by any law enforcement or fire service entity in California at any location where these devices are being offered for retail sale.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§988. Labeling, General Provisions.**

(a) All fireworks or pyrotechnic devices classified by the State Fire Marshal, in addition to bearing the State Fire Marshal Seal of Registration, shall be labeled in accordance with the provisions of this article. Such labeling may be by stamp, stencil or printing or by a

firmly attached printed adhesive label. The entire label shall appear in legible type.

Exceptions: (1) Special Effects items developed and compounded on location for single time usage.

(2) Set pieces used for public display. (3) Any device that is too small for practical single-item labeling such that it would render the label illegible, as determined by the State Fire Marshal.

Authority: Sections 12552 and 12553, Health and Safety Code  
Reference: Sections 12560-12569, Health and Safety Code

### **§988.1. Labeling of Dangerous Fireworks.**

All dangerous fireworks, in addition to bearing the State Fire Marshal's Seal of Registration showing the classification and registration number as required in this article, shall bear a warning label with the wording: "Warning: Do Not Hold in Hand."

Authority: Section 12552, Health and Safety Code  
Reference: Sections 12560 and 12560, Health and Safety Code

### **§988.2. Labeling of Agricultural and Wildlife Fireworks, Model Rocket Motors, High Power Rocket Motors, and Emergency Signaling Devices.**

All agricultural and wildlife fireworks, model rocket motors, high power rocket motors and emergency signaling devices offered for sale, sold or used in this state shall bear, in addition to the seal, classification, and registration number required in this article, a warning label indicating to the user where and how the item is to be used and necessary safety precautions to be taken.

Authority: Section 12552, Health and Safety Code  
Reference: Sections 12560 and 12560, Health and Safety Code

### **§988.3. Instruction Labeling. Safe and Sane Fireworks.**

(a) The following fireworks classified as "safe and sane" shall be labeled as indicated herein. Any "safe and sane" fireworks device not required to have a specific label as indicated below shall carry a legible warning label clearly indicating to the user where and how the item is to be used and necessary safety precautions to be observed. The use of the word "close" is optional.

(1) Fountains, Spike Fountains, and Whistles.

**WARNING (OR CAUTION)**  
**EMITS SHOWERS OF SPARKS**  
**DO NOT HOLD IN HAND**  
**Use only under (close) adult supervision**  
**For outdoor use only**



**Place on level surface**  
**Stick firmly in ground in an upright position (Spike items only)**  
**Light fuse and get away**

(2) Handle Fountains, California Candles

**WARNING (OR CAUTION)**  
**EMITS SHOWERS OF SPARKS**  
**Use only under (close) adult supervision**  
**For outdoor use only**  
**Hold in hand at bottom of tube or handle**  
**Point away from body so that neither ends points toward body or another person**

(3) Ground Spinners or Ground Spinning Devices

**WARNING (OR CAUTION) - SPINS ON GROUND**  
**DO NOT HOLD IN HAND**  
**EMITS SHOWERS OF SPARKS (either on the side, front, back, top, or bottom panel)**  
**Use only under (close) adult supervision**  
**For outdoor use only**  
**Place on hard, flat, smooth, and level surface**  
**Light fuse and get away**

(4) Wheels-Vertical

**WARNING (OR CAUTION)**  
**EMITS SHOWERS OF SPARKS**  
**DO NOT HOLD IN HAND**  
**Use only under (close) adult supervision**  
**For outdoor use only**  
**Attach securely by means of a nail through the hole**  
**Light fuse and get away**

(5) Wheels-Horizontal

**WARNING (OR CAUTION)**  
**EMITS SHOWER OF SPARKS**  
**Use only under (close) adult supervision**  
**For outdoor use only**  
**Attach string to object so that item hangs freely**  
**Do not hold in hand**  
**Light fuse and get away**

(6) Toy smoke devices and flitter devices

**WARNING (OR CAUTION)**

**FLAMMABLE (OR EMITS SHOWERS OF SPARKS, IF MORE DESCRIPTIVE)**  
**Use only under (close) adult supervision**  
**For outdoor use only**  
**Do not hold in hand**  
**Light fuse and get away**

Authority: Sections 12552 and 12553, Health and Safety Code  
Reference: Sections 12562, 12567 and 12568, Health and Safety Code

## **Article 8. Storage**

### **§989. General.**

All magazines shall meet the requirements as set forth in the Code of Federal Regulations, Title 27, Part 55, Subpart K (Storage).

Authority: Section 12552, Health and Safety Code  
Reference: Sections 12640, 12671, 12673, 12674, 12679, 12722, Health and Safety Code

### **§989.1. Storage, General Provisions.**

(a) All fireworks, pyrotechnic compositions and pyrotechnic devices shall be kept in a locked magazine and in a manner approved by the authority having jurisdiction unless they are:

- (1) In the process of being manufactured;
- (2) In the process of being used; or
- (3) Being transported to a place of storage or use by a licensee, in accordance with the Code of Federal Regulations, Title 49, Part 173, Subpart C, and Title 13, Chapter 6, Article 3 of the California Code of Regulations.

(b) Class C Common Fireworks and those devices designated as “safe and sane” fireworks shall be stored in a manner consistent with the Code of Federal Regulations, Title 49, Section 173.88.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§989.2. Access Roads and Signs.**

All magazine storage sites shall have access roads suitable for use by fire apparatus posted with the following warning sign or other sign approved by the authority having jurisdiction:

**DANGER  
NEVER FIGHT EXPLOSIVES FIRES  
EXPLOSIVES ARE STORED ON THIS SITE  
CALL \_\_\_\_\_**

The sign shall be weather-resistant with a reflective surface and lettering at least two (2) inches high.

Authority: Sections 12081, 12101, 12552 Health and Safety Code,  
Reference: Sections 12081, 12101, 12552, Health and Safety Code

**§989.3 Activities and Devices Prohibited.**

Smoking, matches, flame-producing devices, open flames, and firearms shall not be permitted inside or within fifty (50) feet of magazines.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**§989.4. Magazines in Dwelling Prohibited.**

No loaded indoor storage magazine shall be located in a residence or dwelling.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**Article 9. Shipping and Transportation**

**§990. Transportation of Fireworks.**

(a) Only fireworks and pyrotechnic devices classified by and bearing the Seal of Registration of the State Fire Marshal shall be transported within this state.

**Exceptions:** 1. Unclassified fireworks being transported to the State Fire Marshall for classification.

2. Unclassified fireworks being transported for verified out-of-state delivery.

3. Fireworks being imported and moving directly from the port of importation to the facilities of the licensed importer for purposes of application for the Seal of Registration for the State Fire Marshal.

(b) All fireworks and pyrotechnic devices being transported in this state, whether classified or unclassified, shall be packaged and transported in accordance with the Code of Federal Regulations, Title 49, Part 173, Subpart C, or with Health and Safety Code Sections 12650-12654.

Authority: Section 12552, Health and Safety Code  
Reference: Sections 12650-12654, Health and Safety Code

### **§990.1. General Safety.**

Every vehicle transporting fireworks or pyrotechnic devices shall comply with Sections 27903, 31610, and 31616 of the Vehicle Code of the State of California.

Authority: Section 12552, Health and Safety Code  
Reference: Sections 12552, Health and Safety Code  
Section 27903, Vehicle Code

## **Article 10. Reports**

### **§990.2. Filing Reports.**

Import/export licensees shall file written reports with the State Fire Marshal involving the importation of fireworks, in accordance with Health and Safety Code Sections 12619 and 12620.

(1) Prior to importing fireworks, the licensee shall file a report with the State Fire Marshal. Reports shall indicate the name and address of the manufacturer and of the shipper, the type and kind of fireworks being imported, the quantity of each type and kind of fireworks, the estimated arrival time of shipment, the name of the carrier, and the load number or other identification carton marks.

(2) Upon arrival or prior thereto, the State Fire Marshal shall be notified as to contemplated disposition of fireworks. Contemplated storage, classification, and reshipment plans shall be included in this report.

**Exception:** Import/export licensees shall not be required to file reports as outlined in this section for pyrotechnic devices and materials used solely for special effects.

Authority: Sections 12552 and 12620, Health and Safety Code  
Reference: Sections 12619 and 12620, Health and Safety Code

### **§991. Safety Inspection.**

Retail fireworks stands and sales areas are subject to inspection by the authority having jurisdiction. All areas where fireworks, pyrotechnic compositions or devices are used, stored or discharged shall be free from any condition which increases, or may cause an increase of, the hazard or menace of fire or explosion to a greater degree than customarily recognized as normal by persons in the public service of preventing, suppressing or extinguishing fire, or which may become the cause of any obstruction, delay or hindrance to the prevention, suppression or extinguishment of fire.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12682, Health and Safety Code

### **§991.1. Disposition Unsold Stock.**

All retail fireworks licensees shall return unsold fireworks stocks to the wholesaler from whom they were purchased. The retail licensee may store unsold stock in a place and manner approved by the fire authority having jurisdiction until stock is returned to the wholesaler. Such return of stock shall be accomplished no later than the thirty-first of July of each year.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§991.2. Personnel.**

The employer or permittee shall be responsible for instructing his or her personnel who handle fireworks, pyrotechnic compositions or devices in any capacity, in the hazards of and safety procedures relating to fireworks, pyrotechnic compositions or devices as contained in this chapter.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§991.3. Smoking, Storage and Handling Facilities.**

Smoking shall be prohibited and “No Smoking” signs posted in all portions of the premises or locations where fireworks, pyrotechnic compositions, or devices are stored, or handled.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§991.4. Smoking, Sales Facilities.**

Smoking shall be prohibited and signs bearing the words “No Smoking” shall be posted on and in every building, mobile facility, or structure used for the sale of fireworks. Signs shall be positioned at the entrance to and inside such buildings, mobile facilities, or structures and at such other locations as designated by the authority having jurisdiction. Lettering shall be red in color on a white background. Letters shall be at least 3 inches in height with a stroke of at least 1/2 inch.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§991.5. Prohibited Substances.**

Intoxicating liquids, narcotics, and controlled substances are prohibited within the area of the firing site as determined by the authority having jurisdiction, and shall not be used by any person handling fireworks or special effects at any time during transportation, set-

up, firing or removal.

**Exception:** Prescription drugs not impairing the motor functions and/or judgment of the persons affected by this section. Drugs must be taken as directed and specifically prescribed for the individual to be covered by this exception.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§992. Electric Firing Circuits, General.**

Connecting any electric firing circuit to any power supply, is prohibited until all special effects devices, fireworks, and pyrotechnics in the sequence are connected to firing leads and the firing area is clear of all unauthorized personnel.

**Exception:** Circuit testing as described in section 992.3.

Authority: Sections 12552 and 12553, Health and Safety Code  
Reference: Sections 12532 and 12552, Health and Safety Code

#### **§992.1. Power Sources.**

Power sources for firing special effects devices, fireworks, and pyrotechnics shall be restricted to batteries or individually isolated, ungrounded generators used for firing purposes only. Commercial or house power may be used provided the firing system is electrically isolated from the commercial or house power through the use of such items as isolation transformers. Under no condition may commercial or house power be used directly for firing purposes.

Authority: Sections 12552 and 12553, Health and Safety Code  
Reference: Sections 12532 and 12552, Health and Safety Code

#### **§992.2. Firing Systems Safeguards.**

All firing systems, including battery and power circuit types, shall be designed to insure against accidental firing by providing a shunt or other control method in which no firing power may be applied to any firing circuits unless the operator intentionally enables or arms the firing system before applying firing power.

Authority: Sections 12552, 12553, Health and Safety Code  
Reference: Sections 12532, 12552, Health and Safety Code

#### **§992.3. Circuit Tests.**

All electrically fired pyrotechnic circuits shall be tested with a galvanometer or other test device in which the test current is not capable of firing the pyrotechnic device being tested.

Authority: Sections 12552, 12553, Health and Safety Code,

Reference: Sections 12532, 12552, Health and Safety Code

**§992.4. Sight Firing.**

Special effects devices and pyrotechnics shall not be fired unless the area involved with the firing is in the continuously unobstructed full view of the pyrotechnic operator or his/her assistant at the time of firing.

Authority: Sections 12552, 12553, Health and Safety Code  
Reference: Sections 12532, 12552, Health and Safety Code

**Article 14. Special Effects**

**§992.5. Scope.**

This article shall govern all “Special Effects Devices/ Materials” including those materials which have been classified and described by the regulations of the Department Of Transportation, Title 49, parts 172, 173 and 177 as Special Fireworks Class B Explosives and Common Fireworks Class C Explosives and such additional items as listed in Table 14A.

Authority: Section 12552, Health and Safety Code  
Reference: Sections 12552, 12553, 12560 and 12651, Health and Safety Code

**§992.6. Responsibility.**

The company representative shall provide to the authority having jurisdiction the name and license number of the special effects operator who shall have the authority, responsibility and be in charge of handling all Special Effects Materials. The company representative shall also allocate sufficient time to the Special Effects Pyrotechnic Operator to prepare for the transportation, packing, storing, securing daily, discharging, disposing of, or otherwise handling of fireworks, pyrotechnic devices, or materials in a safe manner. Upon completion of firing, no unauthorized person shall be permitted access to the firing area until the licensed pyrotechnic operator has determined the area to be safe and secure.

Authority: Section 12552, Health and Safety Code  
Reference: Sections 12552, 12583 and 12600, Health and Safety Code

**§992.7. Orientation Meeting.**

Prior to the activity, a discussion of the events planned and all aspects and ramifications concerning safety issues as they relate to the safe use of fireworks, pyrotechnic devices and materials shall be held among all appropriate parties, as determined by the authority having jurisdiction.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§992.8. Special Effects Materials.**

(a) Materials described in this chapter as Special Effects Materials can be used as special effects. Other hazardous materials may be used when so authorized by the authority having jurisdiction.

Authority: Section 12552, Health and Safety Code

Reference: Sections 12532, 12578, 12603, Health and Safety Code

### **§992.9. Storage and Working Supplies.**

(a) Special Effects Materials storage facilities shall be used exclusively for the storage of Special Effects Materials. Storage facilities shall not be used for the assembling, compounding, or manufacture of Special Effects Materials or any other item of fireworks. Magazines shall be kept locked at all times except when supplies are being withdrawn or replenished. Special Effects Materials shall be stored in accordance with the Code of Federal Regulations, Title 27, Part 55, Subpart K.

Authority: Sections 12552 and 12553, Health and Safety Code

Reference: Sections 12532, 12578 and 12603, Health and Safety Code

### **§992.10. Quantities.**

(a) The quantities of Special Effects Materials removed from magazines shall be limited to the amount necessary for immediate use. Under no condition shall any surplus or excess be permitted to remain outside a magazine, unless under the direct supervision of a licensed pyrotechnic operator.

Authority: Sections 12552, 12553, Health and Safety Code

Reference: Section 12552, Health and Safety Code

### **§992.11. Equipment.**

All tools, scoops and devices used in loading and handling Special Effects Materials shall be made of non-sparking materials.

Authority: Sections 12552, 12553, Health and Safety Code

Reference: Section 12552, Health and Safety Code

### **§992.12. Mixing.**

No person shall mix any Special Effects Material except a licensed manufacturer or a licensed Special Effects Pyrotechnic Operator--First Class. All mixing, assembling, or compounding when done by other than a licensed manufacturer shall be conducted in accordance with the applicable provisions of this chapter and with approval of the authority having jurisdiction.



**EXCEPTION:** Binary A & B Flash composition pre-packaged by a licensed manufacturer may be mixed and utilized according to manufacturer's instructions by a Pyrotechnic Operator Special Effects--Second Class, or Pyrotechnic Operator, Theatrical.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**§992.13. Special Effects Water Locations.**

All special effects devices and explosive charges set in or on the surface of water, either salt or fresh, or any other liquid, shall be fired by a separate, individual, ungrounded, and uncommon two-wire circuit.

Authority: Sections 12552, 12553, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**992.14. Special Effects Not Allowed To Be Carried In Wearing Apparel.**

No Special Effects Materials other than blank cartridges may be carried within the wearing apparel of a person. This shall not apply to actors in portraying a scene in a theatrical, television, or film production.

Authority: Sections 12552, 12553, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**992.15. Special Effect Packaging.**

All Special Effects Materials shall be packaged in accordance with Department of Transportation standards as contained in Title 49 of the Code of Federal Regulations, Parts 172, 173, and 177, and shall remain in the prescribed containers until used or placed in a magazine.

Authority: Sections 12552, 12553, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**§992.16. Special Effects Mortars.**

Mortars and other items used to hold special effects, pyrotechnic or explosive materials during discharge shall be made of a material having a thickness proportional to the strength of the explosive or pyrotechnic material being used, and in every case sufficient to prevent distortion in service. Tubular mortars for firing aerial pyrotechnic and fireworks shells shall conform to the requirements of article 15 of this chapter.

Authority: Sections 12552 and 12553, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§992.17. Flash Powder Mortars.**

The use of special effects flash powder mortars consisting of converted switch boxes, sockets, or similar components is prohibited.

Authority: Sections 12552, 12553, Health and Safety Code

Reference: Section 12552, Health and Safety Code

### **§992.18. Special Effects Reports.**

(a) Verbal reports shall be made to the State Fire Marshal within 24 hours after a firing under this article when either of the following events occur:

(1) Injury or death to the public or the crew as a result of the firing.

2) Fires requiring emergency action or response.

(b) Within ten (10) working days following an incident giving rise to a verbal report, the licensed pyrotechnician in charge of the activity shall submit a complete, accurate and factual report directly to the State Fire Marshal on the episode.

Authority: Sections 12552, 12553 Health and Safety Code

Reference: Section 12552, Health and Safety Code

### **TABLE 14A Special Effects Materials**

The following materials, when used in the motion picture/television/theatrical industry by licensed special effects pyrotechnicians and when permitted by the authority having jurisdiction, are to be regulated under this chapter as fireworks, pyrotechnic materials and devices and not as explosives under Health and Safety Code Section 12000.

#### **BULK POWDER COMPOSITIONS AND DEVICES**

Black Powder  
Smokeless Powder  
Smoke Flash Compositions  
Common Photo Flash Compositions  
Illuminating Compositions  
Atomized Flash Compositions  
Two Component Flash Powder  
Flash Paper  
Flash Cotton  
Flash Powder  
Simulated Phosphorus  
Sparking Granules  
Lifters

## **SMOKE POWDER COMPOSITION AND DEVICES**

All Colors  
Smoke Compositions  
Smoke Pellets  
Smoke Granules  
Smoke Candles  
Smoke Cookies  
Smoke Grenade  
Smoke Pots  
Smoke Signals

## **MATCHES AND FUSES**

Quick Match  
Black Match  
Arcing Match  
Silver Match  
Cannon Fuse  
Safety Fuse  
Thermalite  
Instantaneous Fuse  
Igniter Cord

## **SQUIBS AND DETONATORS**

Bullet Hits  
Electric Match  
Soft Detonators  
Squibs  
Detonators  
Igniters

## **FIREWORKS**

Common Class C Safe and Sane Fireworks  
Common Class C Dangerous Fireworks  
Special Class B Fireworks

## **OTHER MATERIALS**

Primacord or Detonating Cord  
Exploding Bolts and Cable Cutters  
Non Electric Fuse  
Shape Charges  
Trick Noise Makers

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

## Article 15. Public Display

### §993. Insurance.

(a) Any person, firm, or corporation applying for a public display license shall furnish to the State Fire Marshal a policy of public liability and property damage insurance. The policy may have a deductible not to exceed fifteen thousand dollars (\$15,000). The policy shall provide limits of bodily injury and property damage liability of not less than one million dollars (\$1,000,000.00) combined single limits for each occurrence annually as payment for damages to persons or property which may result from or be caused by such public display of fireworks, or any negligence on the part of the licensee or his or its agents, servants, employees, or subcontractors presenting such public display.

Exception: A deductible in excess of fifteen thousand dollars (\$15,000) may be permitted provided a security deposit, such as, but not limited to a surety bond, pledge of assets or bank letter of credit covering the value of the excess, is approved by the State Fire Marshal.

(b) The certificate of insurance shall provide all of the following:

(1) That the insurer will not cancel the insured's coverage without 15 days prior written notice to the State Fire Marshal.

(2) That the duly licensed pyrotechnic operator required by law to supervise and discharge the public display, acting either as an employee of the insured or as an independent contractor and the State of California, its officers, agents, employees, and servants are included as additional insurers, but only insofar as any operations under this chapter are concerned.

(3) That the State shall not be responsible for any premium or assessments on the policy.

Authority: Section 12552, Health and Safety Code

Reference: Section 12552, Health and Safety Code

### §993.1. Reports.

General public display and special public display licensees shall report to the State Fire Marshal prior to date of each display all public displays of fireworks contemplated under their license. Licensee must report to the State Fire Marshal at least 72 hours prior to each display on state-owned or state-occupied property. Applicants for limited public display licenses shall report at the time of applying for their license. The report shall contain the information set forth in Section 982.

**Exception:** A general public display licensee conducting special effects activities for motion picture, television, and theatrical productions need not comply with any of the above reporting requirements.

Authority: Sections 12552 and 12553, Health and Safety Code

Reference: Sections 12532 and 12552, Health and Safety Code

**§997. Pyrotechnic Operators, Basic Commercial, Responsibilities.**

(a) No basic commercial public display permit shall be granted unless there is a licensed basic commercial pyrotechnic operator and at least one additional experienced person present. Pyrotechnic Operators, Basic Commercial, shall:

- (1) Be responsible for and have control over on-site unloading, storing, and security of all fireworks;
- (2) Be responsible for placement of mortars, set pieces, and all other fireworks on-site as approved by the authority having jurisdiction. No fireworks shall be discharged over areas occupied by spectators;
- (3) Insure that no person under the age of 18 is in the firing or fireworks storage sites;
- (4) Be in possession of a current basic commercial license at the time of display; and
- (5) Be responsible for and have control over the safe return of all unfired fireworks, misfires and duds.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**§999. Mortars, Aerial Shells.**

**(a) General.**

- (1) Electric firing shall be required for all mortars eight inches (8") or greater in diameter.
- (2) Multiple-break shells that include a salute as one of the breaks shall be fired in HDPE mortars only.

**(b) Steel Mortars.**

(1) Steel Mortars shall be constructed of commercially manufactured, first quality electric resistance weld (ERW) or drawn over mandrel (DOM) steel tubing conforming to ASTM Standard A135-83, which is incorporated by reference. Mortars constructed of cast iron, other fragmenting types of steel, and all other types of metal are prohibited. Salutes shall not be fired from metallic mortars.

(2) Steel mortars shall have a base plate the same thickness of the mortar

wall, welded continuously around its perimeter.

(3) The inside length of steel mortars shall meet the minimum specifications set forth below:

<b>Shell Size</b>	<b>Inside Length</b>
1.99 inches or less	8 inches
2 inches	13 inches
2 1/2 inches	13 inches
3 inches	15 inches
4 inches	20 inches
5 inches	25 inches
6 inches	30 inches
7 inches	32 inches
8 inches	32 inches
10 inches	40 inches
12 inches	40 inches
16 inches	64 inches
24 inches	96 inches

(4) Mortars shall not have any visible cracks in the body of the tube, nor any cracks or voids in the weld around the base plug. Mortars shall not be dented or distorted beyond the point that such distortion interferes with the smooth and unimpeded travel of the shell throughout the entire length of the mortar.

**(c) Paper Mortars.**

(1) Reusable paper mortars shall be of spiral or convolute wound kraft paper or chipboard, and shall meet the minimum specifications set forth below.

**Shell Wall Inside Base  
Size Thickness Length Plugs\***

Less than 2"	1/8 inch	8 inches	1 inch
2 inches	1/4 inch	13 inches	2 inches
2 1/2 inches	3/8 inch	13 inches	3 inches
3 inches	3/8 inch	15 inches	3 inches
4 inches	1/2 inch	20 inches	3 inches
5 inches	1/2 inch	25 inches	4 inches
6 inches	1/2 inch	30 inches	4 inches
7 inches	3/4 inch	32 inches	4 inches
8 inches	3/4 inch	32 inches	4 inches

\* Sizes for base plugs are nominal.

(2) Base plugs for paper mortars shall be wooden and securely glued, as well as nailed, screwed or bolted to the base of the mortar. Base plugs shall be discarded and replaced when damaged. Minor cracks and checks are acceptable.

(3) Multiple-break shells shall not be fired from paper mortars.

**(d) HDPE Mortars.**

(1) High Density Polyethylene (HDPE) mortars shall meet the minimum specifications set forth below:

**Shell Size Wall Thickness Inside Length Base Plug\***

Less than 2"	1/8 inch	10 inches	1 inch
2 inches	1/4 inch	13 inches	2 inches
2 1/2 inches	1/4 inch	13 inches	3 inches
3 inches	1/4 inch	15 inches	3 inches
4 inches	1/4 inch	20 inches	3 inches
5 inches	1/4 inch	25 inches	4 inches
6 inches	3/8 inch	30 inches	4 inches
7 inches	3/8 inch	32 inches	4 inches
8 inches	3/8 inch	32 inches	6 inches

\* Base plug sizes are nominal.

HDPE Mortars shall not be reloaded for a period of at least one (1) hour after use. All base plugs for HDPE mortars shall be wooden, and securely glued, as well as nailed, screwed, or bolted to the base of the mortar. Base plugs shall be discarded and replaced when damaged. Minor cracks and checks are acceptable.

**(e) Other Materials.**

(1) Recognizing that new materials for the construction of mortars may be developed, such materials may be used when specifically approved by the State Fire Marshal. Persons wishing to use material not specifically covered in this section shall submit the material in an amount sufficient for testing to the State Fire Marshal for determination of its safety and its inclusion in this section.

**Note:** For illustrations of typical mortar racks, troughs and drums, see Diagrams A, B, and C following Section 1002.

Authority: Section 12552 Health and Safety Code  
Reference: Section 12552 Health and Safety Code

## §1001. Setting Mortars.

(a) Metallic, re-usable paper and HDPE mortars shall be securely buried to a minimum of 2/3 of their minimum legal length in earth or in drums or troughs filled with moist earth or sand essentially free of debris.

(b) Mortars other than metallic mortars may be placed in wooden finale racks.

(c) Planking below mortars shall be required when the base of the mortar, trough, or drum is not on a stable and level surface.

(d) Mortars in non-electrically-fired shows shall meet all of the following requirements:

(1) Mortars up to five inches in diameter and buried in earth or placed in troughs or drums shall be spaced a minimum of 3 inches apart or from the sides of the drum or trough.

(2) Mortars six inches or larger in diameter and buried in earth or placed in troughs or drums shall be spaced a minimum of 5 inches apart or from the sides of the drum or trough. When a mortar requiring 5 inches of space is placed adjacent to a mortar requiring only 3 inches of spacing, the larger spacing shall apply.

(e) Mortars in electrically-fired shows shall meet all of the following requirements:

(1) All mortars buried in earth or placed in drums and troughs shall be nominally spaced 2 inches apart or from the sides of the drum or trough.

(2) All technicians shall be positioned a minimum of 100 feet from any mortar and positioned so as to be protected from the direct line of fire.

(3) No one shall be allowed to enter the firing area during the firing of the display.

(f) Mortars shall be set in a stable and secure manner so that accidental impact and shell discharge will not change the trajectory of adjacent unfired shells.

**Note:** For illustrations of typical mortar racks, troughs and drums, see Diagrams A, B, and C following Section 1002.

Authority: Section 12552 Health and Safety Code,  
Reference: Section 12552, Health and Safety Code

## 1002. Design Specifications for Mortar Racks, Troughs, Drums, and Ready Boxes.

(a) Mortar racks shall be limited to a maximum of 10 tubes per unit. The base and ends of the rack shall be nominal 2 inch thick lumber. The inside width shall be



equal to the outside diameter of the mortar tube. Each mortar tube shall be separated by horizontal or vertical blocks nominally 2 inches thick and 4 inches wide. Side braces for mortar racks of 3 inch size mortars and up shall be 1 inch x 6 inch nominal lumber or 1/2 inch x 4 inch plywood securely fastened by nails, screws, or attached with construction grade staples along the top and bottom of the rack. A diagonal side brace must be employed on all mortar racks with more than 5 mortar tubes. Mortar racks shall not incorporate steel brackets or other metallic parts in their construction with the exception of nails, screws, or construction-grade staples. Metallic braces shall not be fastened to mortar racks at the firing site.

(b) Troughs shall not be more than 8 feet in length. Troughs may be placed in a continuous row provided they are stable and secure. The sides, bottom and ends of troughs shall be minimum 3/4 inch plywood or nominal 2 inch lumber, except in cases where the surface at the bottom of the trough is sufficiently stable to support the firing of the mortar, no bottom shall be required. Troughs shall be secured by minimum 3/8 inch through bolts, rods or angle iron "U" brackets at each end and center to prevent bulging.

(c) Drums shall be constructed of steel, aluminum or plastic.

(d) Ready boxes shall be constructed of wood not less than 1/2 inch thickness or 3/8 inch plywood, chipboard or presswood. Ready boxes shall not be equipped with any type of hold open device.

**Note:** For illustrations of typical mortar racks, troughs and drums, see Diagrams A, B, and C immediately following this section.

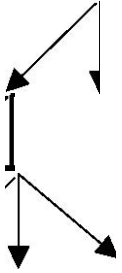
Authority: Section 12552, Health and Safety Code

Reference: Section 12552, Health and Safety Code

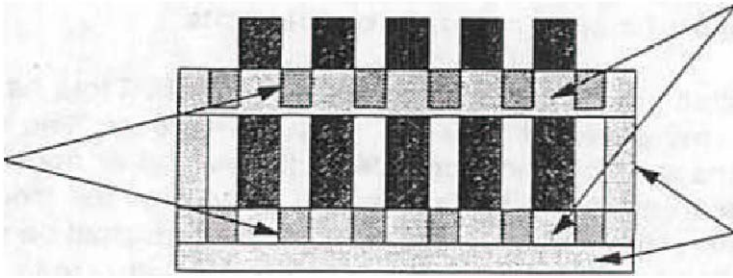
Section 55.200, 27 Code of Federal Regulations

**DIAGRAM A**  
**DIAGRAM OF A TYPICAL RACK**

MORTARS

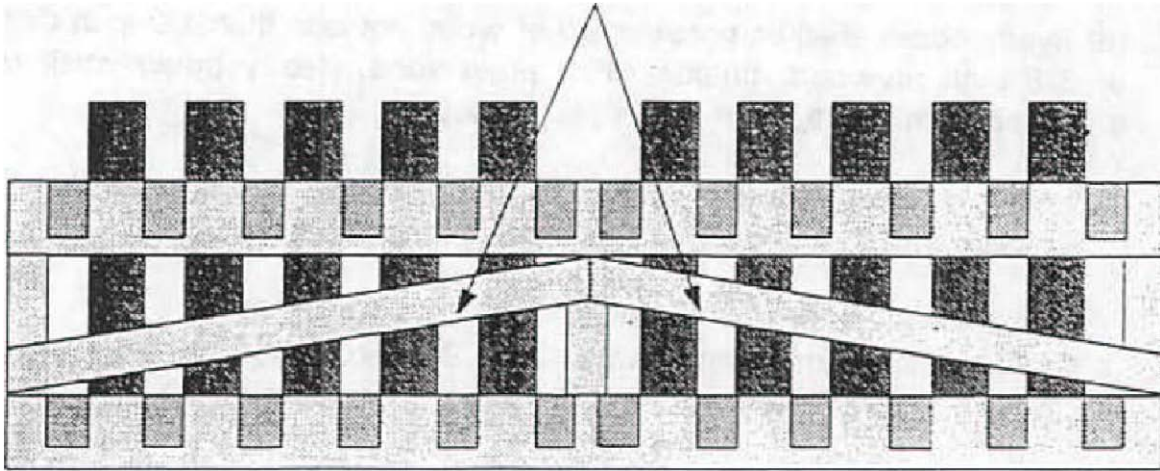


SIDE BRACE

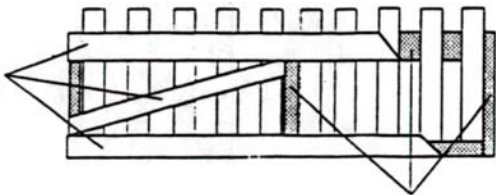


SPACER BLOCKS

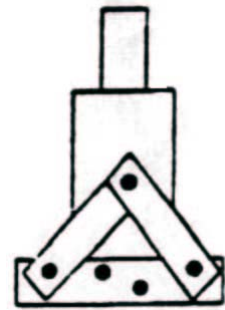
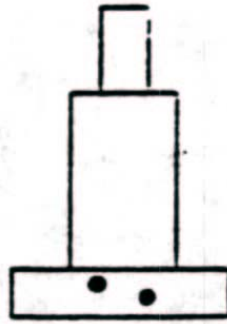
DIAGONAL BRACE



1/2" Plywood



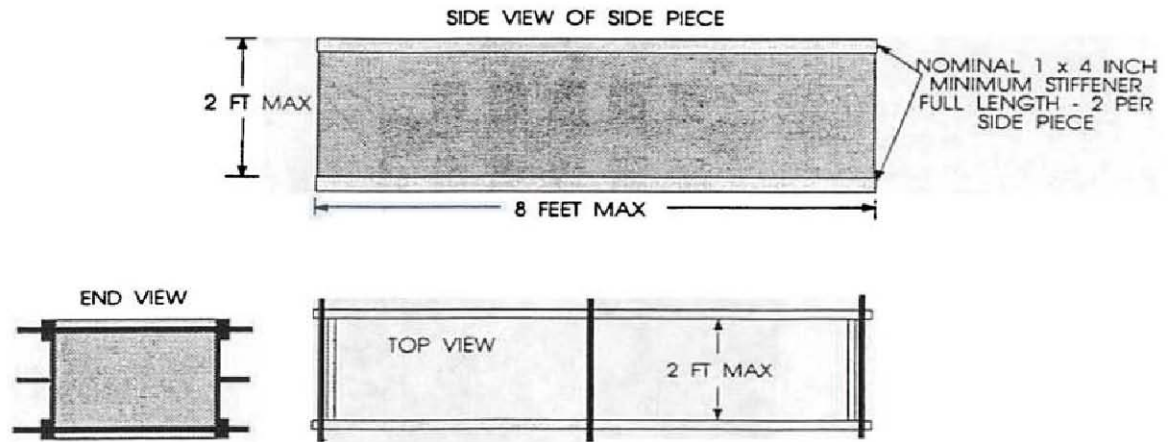
2 x 4's



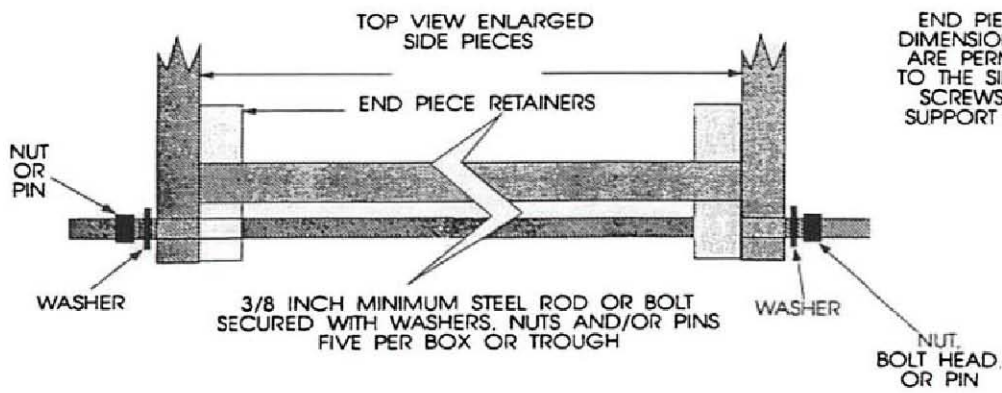
6D nails are used to secure the rack feet **DIAGRAM B**

BASEANDEND

# DIAGRAM OF A TYPICAL TROUGH SETTING



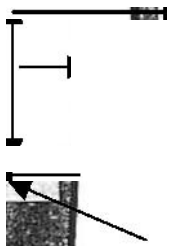
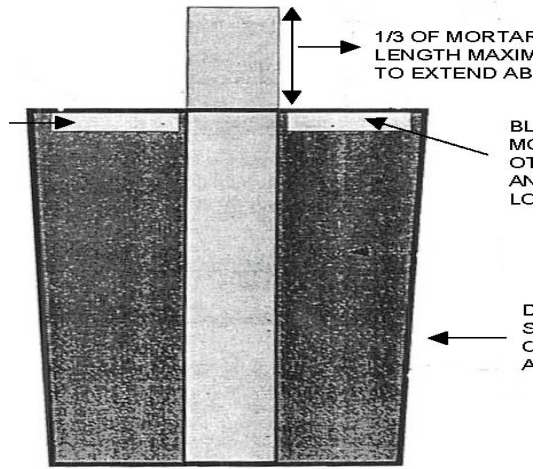
(STIFFENERS ARE NOT SHOWN FOR CLARITY)



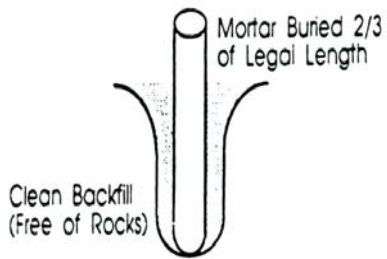
END PIECE RETAINERS ARE DIMENSIONAL LUMBER WHICH ARE PERMANENTLY SECURED TO THE SIDE PIECES BY NAILS, SCREWS OR STAPLES AND SUPPORT THE END PIECES IN PLACE.

# DIAGRAM C

## DIAGRAM OF A TYPICAL DRUM SETTING



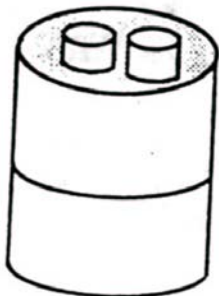
Buried Setting



BLOCKING REQUIRED IF MORTAR IS SET AT ANGLE OTHER THAN 90 DEGREES AND MORTAR IS TO BE LOADED

Drum Setting

DRUM TO BE FILLED WITH SAND OR CLEAN EARTH AND CONSTRUCTED OF STEEL, ALUMINUM, OR PLASTIC



## BLOCKS



Mortars Covered 2/3 of  
Legal Length

Clean Backfill of rock-Free Sand or Soft Dirt

Planking  
(if necessary)

### §1003. Operation of Display.

#### (a) General.

- (1) All fireworks at a display site shall be stored in a place and manner secure from fire, accidental discharge, and theft. All storage shall be approved by the authority having jurisdiction.
- (2) Shells shall be sized for proper fit and for damaged lift charge bags, lead fuse tears, tears in the piping of the quick match leaders, and missing safety caps.
- (3) Safety caps protecting the fuse shall not be removed until firing or electric hookup.

#### (b) Ready Boxes.

- (1) Shells used for reloading shall be placed in ready boxes prior to the start of the display.
- (2) Ready boxes shall not be located less than 25 feet upwind from the nearest mortar prior to any firings.
- (3) Ready boxes shall be divided into separate compartments for each shell size.
- (4) When containing shells, ready boxes shall be set with the bottom facing the mortars with the front elevated, or set on the bottom with the hinges towards the mortar, providing the lid cannot be opened fully.
- (5) Once in place, the ready box shall be covered with a flame-resistive water-repellant canvas cover.

**(c) Loading Mortars.**

- (1) At no time shall any person place any part of their body over the mortar muzzle during loading or firing.
- (2) Mortars shall be cleaned of debris or burning material prior to loading, and prior to reloading, as necessary.
- (3) Mortar racks may be reloaded with non-chained single-break shells when there is no longer any burning material in the racks.
- (4) Finale racks shall have tape placed over the mortar muzzles when loaded with finale chained shells.
- (5) Salutes and detonating shells shall not be fired from steel mortars.
- (6) Multiple-break shells that include a salute as one of the breaks shall be fired from HDPE mortars only.

**(d) Firing.**

- (1) All firing shall be done upon order or signal of the licensed pyrotechnic operator controlling the display.
- (2) Electric firing, if utilized, shall comply with all of the requirements of Article 13.5 of this chapter.
- (3) Upon conclusion of firing, no unauthorized person shall be permitted access to the firing area until the licensed pyrotechnic operator has determined the area to be safe and secure.
- (4) Electric firing shall be required for all mortars eight inches (8") or greater in diameter.

**(e) Ground Effects.**

- (1) Set pieces, wheels, and mechanical devices shall be braced, guyed and securely attached or set as required to prevent displacement.
- (2) Low level Roman Candles, multiple batteries and projectiles shall be securely set to prevent accidental displacement.

**(f) Duds.**

- (1) The licensed pyrotechnic operator shall account for and retrieve all duds immediately following the display.
- (2) The entire firing range shall be inspected immediately following the display to

locate any duds. Any shells found shall be immediately doused with water before handling. The shell shall then be placed in a separate container filled halfway with water.

**(g) Misfires.**

(1) When a shell misfires, and the fuse has burned, but the lift change has not functioned, the mortar shall be identified and marked, and left undisturbed for a minimum of 5 minutes, then filled halfway with water.

(2) When the shell misfires due to electric malfunction, and the fuse has not yet burned, the shell shall be removed and stored pursuant to the permit.

(3) When the display is concluded, the misfired shell shall be placed in a safe area pursuant to the permit.

(h) Unfired shells, including duds and misfires, must be removed immediately following the display and returned directly to the wholesaler/manufacturer unless provision has been made for storage and/or destruction with the authority having jurisdiction.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**1004. Safety Tools and Equipment.**

(a) Tools required at the display site shall be at a minimum a shovel, a serviceable pressurized water fire extinguisher, a bucket or other container to soak duds, and any other equipment as required by the authority having jurisdiction.

(b) Any person manually discharging aerial shells shall wear at a minimum a hard hat, eye protection, long sleeved shirt, gloves, long pants, and shoes or boots, and have available ear protection, as required by the authority having jurisdiction.

Authority: Section 12552 Health and Safety Code,  
Reference: Section 12552, Health and Safety Code

**§1005. Post Display.**

**(a) Reports.**

(1) Within ten (10) working days following any public display, the licensed pyrotechnician in charge of the display shall submit a complete, accurate and factual written report directly to the State Fire Marshal, covering:

(A) A brief report of any duds or misfires including manufacturer's name, type and size;



(B) A brief account of the cause of injury to any person from fireworks and such person's name and address;

(C) A brief account of any fires caused by fireworks;

(D) Any violations of the Health and Safety Code or of these regulations relating to public display fireworks; and

(E) The names of all licensed and unlicensed assistants.

**Exception:** A general public display licensee conducting special effects activities for motion picture, television, and theatrical productions need not comply with the requirements of subsections (A) and (E).

**(b) Notification.**

Verbal reports are required within 24 hours to the State Fire Marshal when any of the following occur:

- (1) Fire requiring emergency action or response as a result of the firing; or
- (2) Injury or death to the public or crew.

Within ten (10) working days following an incident giving rise to a verbal report, the licensed pyrotechnician in charge of the activity shall submit a complete, accurate and factual report directly to the State Fire Marshal on the event.

**(c) Unfired Shells.**

Unfired shells shall either be removed following the display and returned directly to the wholesaler or supplier or stored in a manner approved by the authority having jurisdiction until such time as the shells can be transported directly to the wholesaler or supplier.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**§1006. Smoking.**

No person shall smoke in any area where fireworks are handled or stored.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**Article 16. Experimental Rockets/Unlimited**

**§1010. General.**

This article applies to all rockets except approved model rockets as defined in Article 14

and experimental high power rockets and experimental high power rocket motors as defined in Article 2.

Authority: Section 12552 Health and Safety Code  
Reference: Section 12552 Health and Safety Code

### **§1011. Test Areas.**

(a) Experimental rockets unlimited shall not be launched within this State from any site other than test areas approved for such purpose by the fire authority having jurisdiction.

(b) These test areas shall meet the following minimum requirements:

(1) Test areas shall consist of a launching site and an impact range.

(2) The launching site is that area immediately surrounding the launching devices, including positions to protect all personnel.

(3) The impact range is that area over which rockets may travel by design or accident and upon which they fall. Its length should be not less than the maximum calculated ideal ballistic range of any rocket to be fired from its launching site and extends as the radius of a circular section  $90^\circ$  from the launching site apex into the prevailing wind.

(c) Test areas should include no dwellings or structures other than those provided for operating and non-operating personnel protection and loading rockets.

(d) Operating personnel protection shall consist of a bunker, blockhouse or similar protection designed to withstand shrapnel and mass impact equal to the potential created by the heaviest rocket intended to be fired, and falling from its zenith or exploding at any point. This bunker when located not less than 50 feet distant from the launching device shall afford minimum protection equal to a 2 foot wide slit trench not less than 5 feet deep and parapet observation ports with protection equal to a double thickness of sand bags. Overhead protection should consist of substantial structural materials, and these materials shall be covered to afford protection equivalent to that of a double layer of filled sandbags. Non-operating personnel minimum protection when located not less than 250 feet distant from the launching device shall consist of construction at least equal to the slit trench shelter described above.

(e) Rocket loading facilities shall be housed in a lightly constructed and covered structure located not less than 100 feet distant from any other structure including any or launching device. Within this State, all fuel or propellant compounding or loading of experimental rockets unlimited shall be performed by licensed pyrotechnic operators or by experienced persons directly supervised by these pyrotechnic operators.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§1012. Rocket Launchers.**

Rocket launchers shall have a minimum length sufficient to insure stabilization to any rocket fired from them and shall be constructed of appropriate material such as metal or rigid flame-resistant plastic and designed for the specific intended purpose and use. Special protection shall be provided for persons setting and arming all rockets. The use of any two rail, "V" or "U" trough launcher, which depends solely on gravity to control the rocket during launching is prohibited.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§1013. Setting Rocket Launchers.**

All adjustments and alignments of the rocket launcher and connections shall be completed before the rocket is armed. Final rocket launcher adjustments shall be checked by the licensed pyrotechnic operator in charge.

Authority: Section 12552 Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§1014. Firing Procedure.**

A definite ordered firing procedure shall be established by the licensed pyrotechnic operator in charge. Both visible and audible signals shall be used to alert all persons in the test area. Any launch or firing code used shall be reduced to writing and posted conspicuously in the test area.

Authority: Section 12552 Health and Safety Code  
Reference: Section 12552 Health and Safety Code

### **§1015. Launching Rockets.**

(a) Rockets may not be armed or launched except by an experienced pyrotechnic operator, who, if he or she is not licensed, shall be directly responsible to the licensed pyrotechnic operator in charge. The actual arming operation shall be accomplished by a competent person. During all arming operations all personnel shall take shelter when launching, excepting only the individual arming the rocket and his or her necessary assistants. All internal self-contained firing circuits (within the rocket) including, but not by way of limitation, multiple stage ignition, parachute releases, bursting charges, etc., shall be provided with an arming and disarming device operable remotely from without the assembled rocket in the launching position.

(b) The firing circuit shall be shunted at both the control center and the launching site by the pyrotechnic operator assigned to arm the rocket. Both shunts shall be in place and he or she shall test them to insure that the firing circuit is effectively short-circuited, before the rocket is set in the launching position.

(c) The single special key, which removes the launching site shunt from the firing circuit, shall be the sole means for competing the firing circuit at the control center. The arming operator shall retain the shunt key in his or her personal possession from the time the circuit is initially shunted until the arming operations are completed and he or she removes the last shunt in the control center and establishes a ready firing circuit.

(d) No other means or device than a remotely controlled electric circuit of an approved design may be used to launch single stage rockets or the first stage of multistage rockets.

Authority: Health and Safety Code Section 12552  
Reference: Health and Safety Code Section 12552

## **Article 17. Model Rockets**

### **§1020. General.**

Nothing in this article is intended to regulate the sale or the construction of model rockets, provided that such model rockets are not equipped with a model rocket motor.

Authority: Section 12552 Health and Safety Code,  
Reference: Sections 12552, Health and Safety Code

### **§1021. Classification and Labeling.**

(a) All types of model rocket motors shall be submitted to the State Fire Marshal by a licensed model rocket motor manufacturer, importer/exporter, or wholesaler for classification. A copy of a certificate of classification indicating the item has been classified as a model rocket motor by a laboratory approved by the Department of Transportation shall accompany the request for classification by the State Fire Marshal. Three samples of each motor type shall be submitted to the State Fire Marshal for classification. Standards for the classification for model rocket motors shall conform to the National Fire Protection Association (N.F.P.A.) 1122 (1987), Code for Unmanned Rockets, Sections 3-1.1, 3-1.2, 3-1.3, 3-1.4, 3-1.5, 3-1.6, 3-1.7, 3-1.8, 3-1.9, 3-1.10.

(b) Individual engines shall bear the California State Fire Marshal seal and the registration number of the licensee.

Authority: Section 12552 Health and Safety Code  
Reference: Section 12552, 12560, 12565, Health and Safety Code

### **§1022. Model Rocket Standards and Use.**

(a) Model rocket standards and use shall comply with NFPA 1122, the Code for Unmanned Rockets, Chapter 3, Sections 3-1.1 through 3-1.10, Chapter 4, Chapter 5, Chapter 6, and Appendix A-2-(1987), which is incorporated by reference herein except for Appendices A-2.3 and A-2.4.

Authority: Section 12552 Health and Safety Code  
Reference: Section 1255 Health and Safety Code

### **§1023. Storage and Sale.**

No model rocket motors shall be stored, sold or offered for sale at retail unless such model rocket motors have been classified by the California State Fire Marshal.

Authority: Section 12552 Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§1024 Restrictions.**

The provisions of this article shall not be used to establish the authority to possess, launch or use experimental unlimited or experimental/high powered rocket motors.

Authority: Section 12552 Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§1025. Authorization.**

(a) No model rocket user shall launch any model rocket from any site without first securing authorization from the authority having jurisdiction. The authority having jurisdiction may require notification each time that model rockets are to be launched.

(b) It shall be the responsibility of the model rocket user to secure permission of the owner of private lands when such land is intended to be used to launch model rockets.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§1026. Revocation of Permits and Authorized Use of Launching Area.**

The authority having jurisdiction may immediately revoke a permit to sell model rocket motors at retail if it is found that those persons granted a permit have violated these regulations. The authority having jurisdiction may immediately revoke its authorization to use a firing area if it is found that an undue hazard exists, including, but not limited to, fire safety hazards or life safety hazards.

Authority: Section 12552, Health and Safety Code

Reference: Section 12552, Health and Safety Code

**§1027. Minimum Age.**

(a) No model rocket motors shall be sold, given, or delivered to any person under 18 years of age.

**EXCEPTIONS:**

(1) Model rocket motors bearing the standardized coding 1/4A, 1/2A, A, B, C, and D may be sold, given, or delivered to any person 14 years of age or older.

(2) Persons who are 12 years of age or older and who are taking part in a model rocket education program may receive model rocket motors and launch approved model rockets motors when under the direct supervision and control of a person 18 years of age or older. Model rocket motors must be obtained only from the adult in charge of the launching. Approved model rocket motors for this exception shall bear the motor coding 1/4A, 1/2A, A, B, C or D.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**§1028. Supervision.**

The permittee shall be responsible for the safety of all spectators and other persons connected with the launching of model rockets.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**Article 18. Experimental High Power Rockets and Motors**

**§1030. General.**

This article is intended to regulate the sale, storage, construction and use of experimental high power rocket motors and experimental high power rockets.

Authority: Section 12552 Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**§1031. Classification and Labeling.**

(a) All types of experimental high power rocket motors shall be submitted by a

licensed experimental high power rocket motor manufacturer, importer/exporter, or wholesaler to the State Fire Marshal for classification.

(b) All motors shall bear the State Fire Marshal seal and the registration number of the licensee. Classified motors contained within packages may have the State Fire Marshal seal and registration number on the package, provided that such packages are sealed.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§1032. Experimental High Power Rocket Motor Standards and Use.**

(a) Experimental high power rocket motor design and construction standards shall comply with all of the following:

(1) The maximum total impulse per rocket motor shall not exceed 10,240 Newton-seconds (2302.2 lb.-seconds).

(2) When more than one rocket motor is utilized, the combined total impulse shall not exceed 20,480 Newton-seconds (4604.4 lb.-seconds).

(b) If an experimental high power rocket is equipped with an experimental high power rocket motor, then the rocket shall:

(1) be constructed of paper, plastic, rubber, aluminum or wood except that minor components such as screw eyes or motor mounts may be of other light-gauge metals; and

(2) include an effective means or device for returning the rocket safely to the ground without causing personal injury or property damage; and

(3) The rocket shall not contain any type of explosive or pyrotechnic warhead of any type.

(c) An experimental high power rocket shall not be used as a weapon.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

### **§1033. License Required.**

No person shall possess, receive, transport, store, or launch any experimental high power rocket motor without first securing a valid license as a Pyrotechnic Operator--Rockets First, Second, or Third Class from the State Fire Marshal. No person shall sell an experimental high power rocket motor to any person unless the seller possesses a valid license as a wholesaler or retailer under this chapter.

Authority: Section 12552 Health and Safety Code  
Reference: Section 12552 Health and Safety Code

**§1034. Local Permit Required--Seller.**

No person shall sell an experimental high power rocket motor without first securing a permit from the authority having jurisdiction. This permit shall be in addition to, not in lieu of, a valid license issued by the State Fire Marshal for the sale of these motors. This permit shall be deemed separate from a local permit allowing the launching of rockets utilizing such motors.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**§1035. Local Permit Required--Launch.**

(a) No experimental high power rocket motor user shall launch any experimental high power rocket motor from any site without first securing a permit from the authority having jurisdiction.

(b) The authority having jurisdiction may require notification by the permittee each time an experimental high power rocket motor is to be launched. It shall be the responsibility of the experimental high power rocket motor user to also secure the permission of the owner of private land when such land is intended to be used as a launch site.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

**§1036. Launching Facilities.**

(a) Experimental high power rocket motors shall be launched from platforms meeting the following specifications:

(1) A launch guide (tube, rod, tower or other suitable device) shall be used to restrict the horizontal motion of the rocket until flight velocity sufficient to maintain stability during flight is achieved.

(2) A launch angle of not more than twenty degrees (20°) from the vertical shall be used.

(b) Rocket motor launching shall be by remote electrical means only, and under the supervision and control of an individual properly licensed in accordance with this chapter.

(c) Surface wind at the launch site shall not exceed twenty miles per hour (20 m.p.h.), and visibility above the launching area shall be at least five thousand feet (5,000 ft.).



(d) The recovery device wadding ejected from the rocket during the launch flight sequence, if used, shall be of flame retardant material meeting the standards of Title 19, California Code of Regulations, Chapter 8, Sections 1171 through 1355.

(e) Experimental high power rocket motors shall be launched only during daylight hours unless specifically approved by the authority having jurisdiction.

(f) All personnel, including those conducting the actual launching of the experimental high power rocket motor(s), shall maintain a clear radial distance from the launch platform during the countdown and launch, pursuant to the guidelines in Table 18A.

**TABLE 18A**  
**REQUIRED LAUNCH DISTANCES**

**TOTAL IMPULSE RADIAL DISTANCE  
OF ROCKET FROM LAUNCHER**

(in Newton Seconds)\*

0--320 30 feet

320.01--1280 150 feet

1280.01--2560 200 feet

2560.01--5120 300 feet

5120.01-10240 500 feet

10241---20480 1000 feet

\*Rockets propelled by clusters of motors shall use the distance specified for the next higher impulse category.

Authority: Section 12552, Health and Safety Code

Reference: Section 12552, Health and Safety Code

**§1037. Launch Site Standards.**

(a) The launch site shall consist of a launching area and a recovery area. The launching area shall consist of an area surrounding the launching devices a radial distance from the launching device as specified in Table 18A above. The recovery area shall consist of the launching area and the minimum area necessary to retrieve the rocket, based on the estimated altitude likely to be achieved by the rocket. These calculations shall take into account the weight of the rocket and the specific type of motor used (or combined total impulse). Table 18B shall be used to determine the minimum launch site dimensions for the various classes of experimental high power rockets.

(b) The launch site shall not be located in any grain field, dry grass, brush or forest

covered lands.

(c) The launch site shall not contain any buildings or structures, unless specifically approved in advance by the authority having jurisdiction, and under no circumstances shall such buildings or structures be less than one thousand five hundred feet (1,500 ft.) from the launch site.

(d) The launch site shall not contain any high voltage electrical lines or major highways.

(e) The launch site shall not contain any natural or artificially constructed obstacle deemed by the authority having jurisdiction to pose a hazard during launching .

(f) The launching area shall be located as near as possible to the center of the launch site but in no case less than seven hundred fifty feet (750 ft.) from the boundary of the launch site.

(g) The launching area shall have appropriate barriers around it such that spectators will be restrained from encroaching upon it. These barriers may be of any type approved by the authority having jurisdiction.

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

#### TABLE 18B

#### MINIMUM EXPERIMENTAL HIGH POWER ROCKET MOTOR LAUNCH SITE STANDARDS

<b>Equivalent Motor Type</b>	<b>Max. Total Impulse (N-Seconds)</b>	<b>Combined Min. Launch Site Dimensions (feet)</b>
H 320	1,500	
I 640	2,500	
J 1,280	3,500	
K 2,560	5,000	
L 5,120	7,000	
M 10,240	10,000	
N 20,480	15,000	

Authority: Section 12552, Health and Safety Code  
Reference: Section 12552, Health and Safety Code

#### §1038. Testing.

At locations approved by the authority having jurisdiction, experimental high power rocket motors may be ignited on the ground for the purpose of determining their

performance. All of the following procedures shall be followed during the firing of these motors:

- (a) The experimental high power rocket motor shall be affixed to a testing device or to an immovable structure in such a manner that the motor will not work itself free during the testing or the experimentation process.
- (b) The experimental high power rocket motor shall be ignited only by remotely operated electrical means fully under the control and supervision of the licensed pyrotechnic operator conducting the testing or experimentation.
- (c) The exhaust path of the motor shall be cleared of all flammable objects prior to its firing.
- (d) All persons, whether they are conducting, participating in or observing the testing or experiment, shall stand away from the motor, and particularly its exhaust path, at all times during the test or experiment.
- (e) Under no circumstances shall testing or experimentation of experimental high power rocket motors be conducted indoors.

Authority: Section 12552 Health and Safety Code

Reference: Section 12552, Health and Safety Code

#### **§1039. Supervision and Responsibility.**

The licensed pyrotechnic operator in charge of the launch site or test site shall supervise the arming of every experimental high power rocket motor, the launching of all motors, and the disposal of all unwanted or defective motors. The licensed pyrotechnic operator shall also be responsible for the safety of all spectators or observers and all other persons connected with the launching of experimental high power rocket motors.

Authority: Section 12552 Health and Safety Code

Reference: Section 12552, Health and Safety Code

### **Article 19. Emergency Signaling Devices**

#### **§1045. Fire Hazard.**

Whenever the authority having jurisdiction declares that the use of an emergency signaling device would create a fire hazard, no emergency signaling device shall be used regardless of its indicated registration and labeling. This prohibition shall continue as long as the fire hazard condition exists in the specific area, as determined by the authority having jurisdiction.

Authority: Section 12552 Health and Safety Code

Reference: Section 12552, Health and Safety Code

**§1046. License Required.**

Manufacturers of emergency signaling devices whose manufacturing operations take place in California must possess a valid fireworks manufacturing license from the State Fire Marshal to manufacture emergency signaling devices.

Authority: Section 12552, Health and Safety Code

Reference: Sections 12526, 12552 and 12571, Health and Safety Code

Title 27, Code of Federal Regulations, Part 55,  
Sub-part K

# STORAGE

## **Sec. 55.201 General.**

(a) Section 842(j) of the Act and Sec. 55.29 of this part require that the storage of explosive materials by any person must be in accordance with the regulations in this part. Further, section 846 of this Act authorizes regulations to prevent the recurrence of accidental explosions in which explosive materials were involved. The storage standards prescribed by this subpart confer no right or privileges to store explosive materials in a manner contrary to State or local law.

(b) The Director may authorize alternate construction for explosives storage magazines when it is shown that the alternate magazine construction is substantially equivalent to the standards of safety and security contained in this subpart. Any alternate explosive magazine construction approved by the Director prior to August 9, 1982, will continue as approved unless notified in writing by the Director. Any person intending to use alternate magazine construction shall submit a letter application to the regional director (compliance) for transmittal to the Director, specifically describing the proposed magazine. Explosive materials may not be stored in alternate magazines before the applicant has been notified that the application has been approved.

(c) A licensee or permittee who intends to make changes in his magazines, or who intends to construct or acquire additional magazines, shall comply with Sec. 55.63.

(d) The regulations set forth in Sec. Sec. 55.221 through 55.224 pertain to the storage of display fireworks, pyrotechnic compositions, and explosive materials used in assembling fireworks and articles pyrotechnic.

(e) The provisions of Sec. 55.202(a) classifying flash powder and bulk salutes as high explosives are mandatory after March 7, 1990: Provided, that those persons who hold licenses or permits under this part on that date shall, with respect to the premises covered by such licenses or permits, comply with the high explosives storage requirements for flash powder and bulk salutes by March 7, 1991.

(f) Any person who stores explosive materials shall notify the authority having jurisdiction for fire safety in the locality in which the explosive materials are being stored of the type, magazine capacity, and location of each site where such explosive materials are stored. Such notification shall be made orally before the end of the day on which storage of the explosive materials commenced and in writing within 48 hours from the time such storage commenced.

## **Sec. 55.202 Classes of explosive materials.**

For purposes of this part, there are three classes of explosive materials. These classes, together with the description of explosive materials comprising each class, are as follows:

(a) High explosives. Explosive materials which can be caused to detonate by means of a blasting cap when unconfined, (for example, dynamite, flash powders, and bulk salutes). See also Sec. 55.201(e)

(b) Low explosives. Explosive materials which can be caused to deflagrate when confined (for example, black powder, safety fuses, igniters, igniter cords, fuse lighters, and "display fireworks" classified as UN0333, UN0334, or UN0335 by the U.S. Department of Transportation regulations at 49 CFR 172.101, except for bulk salutes).

(c) Blasting agents. (For example, ammonium nitrate-fuel oil and certain water-gels (see also Sec. 55.11)).

### **Sec. 55.203 Types of magazines.**

For purposes of this part, there are five types of magazines. These types, together with the classes of explosive materials, as defined in Sec. 55.202, which will be stored in them, are as follows:

(a) Type 1 magazines. Permanent magazines for the storage of high explosives, subject to the limitations prescribed by Secs. 55.206 and 55.213. Other classes of explosive materials may also be stored in type 1 magazines.

(b) Type 2 magazines. Mobile and portable indoor and outdoor magazines for the storage of high explosives, subject to the limitations prescribed by Secs. 55.206, 55.208(b), and 55.213. Other classes of explosive materials may also be stored in type 2 magazines.

(c) Type 3 magazines. Portable outdoor magazines for the temporary storage of high explosives while attended (for example, a "day-box"), subject to the limitations prescribed by Secs. 55.206 and 55.213. Other classes of explosives materials may also be stored in type 3 magazines.

(d) Type 4 magazines. Magazines for the storage of low explosives, subject to the limitations prescribed by Secs. 55.206(b), 55.210(b), and 55.213. Blasting agents may be stored in type 4 magazines, subject to the limitations prescribed by Secs. 55.206(c), 55.211(b), and 55.213. Detonators that will not mass detonate may also be stored in type 4 magazines, subject to the limitations prescribed by Secs. 55.206(a), 55.210(b), and 55.213.

(e) Type 5 magazines. Magazines for the storage of blasting agents, subject to the limitations prescribed by Secs. 55.206(c), 55.211(b), and 55.213.

### **Sec. 55.204 Inspection of magazines.**

Any person storing explosive materials shall inspect his magazines at least every seven days. This inspection need not be an inventory, but must be sufficient to determine whether there has been unauthorized entry or attempted entry into the magazines, or unauthorized removal of the contents of the magazines.

### **Sec. 55.205 Movement of explosive materials.**

All explosive materials must be kept in locked magazines meeting the standards in this subpart unless they are:

- (a) In the process of manufacture;
- (b) Being physically handled in the operating process of a licensee or user;
- (c) Being used; or
- (d) Being transported to a place of storage or use by a licensee or permittee or by a person who has lawfully acquired explosive materials under Sec. 55.106.

**Sec. 55.206 Location of magazines.**

(a) Outdoor magazines in which high explosives are stored must be located no closer to inhabited buildings, passenger railways, public highways, or other magazines in which high explosives are stored, than the minimum distances specified in the table of distances for storage of explosive materials in Sec. 55.218.

(b) Outdoor magazines in which low explosives are stored must be located no closer to inhabited buildings, passenger railways, public highways, or other magazines in which explosive materials are stored, than the minimum distances specified in the table of distances for storage of low explosives in Sec. 55.219, except that the table of distances in Sec. 55.224 shall apply to the storage of display fireworks. The distances shown in Sec. 55.219 may not be reduced by the presence of barricades.

(c)(1) Outdoor magazines in which blasting agents in quantities of more than 50 pounds are stored must be located no closer to inhabited buildings, passenger railways, or public highways than the minimum distances specified in the table of distances for storage of explosive materials in Sec. 55.218.

(2) Ammonium nitrate and magazines in which blasting agents are stored must be located no closer to magazines in which high explosives or other blasting agents are stored than the minimum distances specified in the table of distances for the separation of ammonium nitrate and blasting agents in Sec. 55.220. However, the minimum distances for magazines in which explosives and blasting agents are stored from inhabited buildings, etc., may not be less than the distances specified in the table of distances for storage of explosives materials in Sec. 55.218.

**Sec. 55.207 Construction of type 1 magazines.**

A type 1 magazine is a permanent structure: a building, an igloo or "Army-type structure", a tunnel, or a dugout. It is to be bullet-resistant, fire-resistant, weather-resistant, theft-resistant, and ventilated.

(a) Buildings. All building type magazines are to be constructed of masonry, wood, metal, or a combination of these materials, and have no openings except for entrances and ventilation. The ground around building magazines must slope away for drainage or other adequate drainage provided.

(1) Masonry wall construction. Masonry wall construction is to consist of brick,



concrete, tile, cement block, or cinder block and be not less than 6 inches in thickness. Hollow masonry units used in construction must have all hollow spaces filled with well-tamped, coarse, dry sand or weak concrete (at least a mixture of one part cement and eight parts of sand with enough water to dampen the mixture while tamping in place). Interior walls are to be constructed of, or covered with, a non-sparking material.

(2) Fabricated metal wall construction. Metal wall construction is to consist of sectional sheets of steel or aluminum not less than number 14-gauge, securely fastened to a metal framework. Metal wall construction is either lined inside with brick, solid cement blocks, hardwood not less than four inches thick, or will have at least a six inch sand fill between interior and exterior walls. Interior walls are to be constructed of, or covered with, a non-sparking material.

(3) Wood frame wall construction. The exterior of outer wood walls is to be covered with iron or aluminum not less than number 26-gauge. An inner wall of, or covered with non-sparking material will be constructed so as to provide a space of not less than six inches between the outer and inner walls. The space is to be filled with coarse, dry sand or weak concrete.

(4) Floors. Floors are to be constructed of, or covered with, a non-sparking material and shall be strong enough to bear the weight of the maximum quantity to be stored. Use of pallets covered with a non-sparking material is considered equivalent to a floor constructed of or covered with a non-sparking material.

(5) Foundations. Foundations are to be constructed of brick, concrete, cement block, stone, or wood posts. If piers or posts are used, in lieu of a continuous foundation, the space under the buildings is to be enclosed with metal.

(6) Roof. Except for buildings with fabricated metal roofs, the outer roof is to be covered with no less than number 26-gauge iron or aluminum, fastened to at least (7/8) inch sheathing.

(7) Bullet-resistant ceilings or roofs. Where it is possible for a bullet to be fired directly through the roof and into the magazine at such an angle that the bullet would strike the explosives within, the magazine is to be protected by one of the following methods:

(i) A sand tray lined with a layer of building paper, plastic, or other nonporous material, and filled with not less than four inches of coarse, dry sand, and located at the tops of inner walls covering the entire ceiling area, except that portion necessary for ventilation.

(ii) A fabricated metal roof constructed of 3/16-inch plate steel lined with four inches of hardwood. (For each additional 1/16 inch of plate steel, the hardwood lining may be decreased one inch.)

(8) Doors. All doors are to be constructed of not less than 1/4 inch plate steel and lined with at least two inches of hardwood. Hinges and hasps are to be attached to

the doors by welding, riveting or bolting (nuts on inside of door). They are to be installed in such a manner that the hinges and hasps cannot be removed when the doors are closed and locked.

(9) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlock fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a casehardened shackle of at least 3/8 inch diameter. Padlocks must be protected with not less than 1/4 inch steel hoods constructed so as to prevent sawing or lever action on the locks, hasps, and staples. These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be actuated from the outside.

(10) Ventilation. Ventilation is to be provided to prevent dampness and heating of stored explosive materials. Ventilation openings must be screened to prevent the entrance of sparks. Ventilation openings in sidewalls and foundations must be offset or shielded for bullet-resistant purposes. Magazines having foundation and roof ventilators with the air circulating between the side walls and the floors and between the side walls and the ceiling must have a wooden lattice lining or equivalent to prevent the packages of explosive materials from being stacked against the side walls and blocking the air circulation.

(11) Exposed metal. No sparking material is to be exposed to contact with the stored explosive materials. All ferrous metal nails in the floor and sidewalls, which might be exposed to contact with explosive materials, must be blind nailed, countersunk, or covered with a non-sparking latticework or other non-sparking material.

(b) Igloos, "Army-type structures", tunnels, and dugouts. Igloo, "Army-type structure", tunnel, and dugout magazines are to be constructed of reinforced concrete, masonry, metal, or a combination of these materials. They must have an earth mound covering of not less than 24 inches on the top, sides and rear unless the magazine meets the requirements of paragraph (a)(7) of this section. Interior walls and floors must be constructed of, or covered with, a non-sparking material. Magazines of this type are also to be constructed in conformity with the requirements of paragraph (a)(4) and paragraphs (a)(8) through (11) of this section.

#### **Sec. 55.208 Construction of type 2 magazines.**

A type 2 magazine is a box, trailer, semi trailer, or other mobile facility.

##### **(a) Outdoor magazines**

(1) General. Outdoor magazines are to be bullet-resistant, fire-resistant, weather-resistant, theft-resistant, and ventilated. They are to be supported to prevent direct contact with the ground and, if less than one cubic yard in size, must be securely fastened to a fixed object. The ground around outdoor magazines must slope away for drainage or other adequate drainage provided. When unattended,

vehicular magazines must have wheels removed or otherwise effectively immobilized by kingpin locking devices or other methods approved by the Director.

(2) Exterior construction. The exterior and doors are to be constructed of not less than 1/4-inch steel and lined with at least two inches of hardwood. Magazines with top openings will have lids with water-resistant seals or which overlap the sides by at least one inch when in a closed position.

(3) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside of door). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

(4) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least 3/8-inch diameter. Padlocks must be protected with not less than 1/4-inch steel hoods constructed so as to prevent sawing or lever action on the locks, hasps, and staples. These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be actuated from the outside.

#### (b) Indoor magazines

(1) General. Indoor magazines are to be fire-resistant and theft-resistant. They need not be bullet-resistant and weather-resistant if the buildings in which they are stored provide protection from the weather and from bullet penetration. No indoor magazine is to be located in a residence or dwelling. The indoor storage of high explosives must not exceed a quantity of 50 pounds. More than one indoor magazine may be located in the same building if the total quantity of explosive materials stored does not exceed 50 pounds. Detonators must be stored in a separate magazine (except as provided in Sec. 55.213) and the total quantity of detonators must not exceed 5,000.

(2) Exterior construction. Indoor magazines are to be constructed of wood or metal according to one of the following specifications:

(i) Wood indoor magazines are to have sides, bottoms and doors constructed of at least two inches of hardwood and are to be well braced at the corners. They are to be covered with sheet metal of not less than number 26-gauge (.0179 inches). Nails exposed to the interior of magazines must be countersunk.

(ii) Metal indoor magazines are to have sides, bottoms and doors constructed of not less than number 12-gauge (.1046 inches) metal and be lined inside with a non-sparking material. Edges of metal covers must overlap sides at least one inch.

(3) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside of door). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

(4) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least 3/8-inch diameter. Padlocks must be protected with not less than 1/4-inch steel hoods constructed so as to prevent sawing or lever action on the locks, hasps, and staples. Indoor magazines located in secure rooms that are locked as provided in this subparagraph may have each door locked with one steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least 3/8-inch diameter, if the door hinges and lock hasp are securely fastened to the magazine. These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be actuated from the outside.

(c) Detonator boxes. Magazines for detonators in quantities of 100 or less are to have sides, bottoms and doors constructed of not less than number 12-gauge (.1046 inches) metal and lined with a non-sparking material. Hinges and hasps must be attached so they cannot be removed from the outside. One steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least 3/8-inch diameter is sufficient for locking purposes.

#### **Sec. 55.209 Construction of type 3 magazines.**

A type 3 magazine is a "day-box" or other portable magazine. It must be fire-resistant, weather-resistant, and theft-resistant. A type 3 magazine is to be constructed of not less than number 12-gauge (.1046 inches) steel, lined with at least either 1/2-inch plywood or 1/2-inch Masonite-type hardboard. Doors must overlap sides by at least one inch. Hinges and hasps are to be attached by welding, riveting or bolting (nuts on inside). One steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least 3/8-inch diameter is sufficient for locking purposes. Explosive materials are not to be left unattended in type 3 magazines and must be removed to type 1 or 2 magazines for unattended storage.

#### **Sec. 55.210 Construction of type 4 magazines.**

A type 4 magazine is a building, igloo or "Army-type structure", tunnel, dugout, box, trailer, or a semi trailer or other mobile magazine.

##### **(a) Outdoor magazines**

(1) General. Outdoor magazines are to be fire-resistant, weather-resistant, and theft-resistant. The ground around outdoor magazines must slope away for

drainage or other adequate drainage be provided. When unattended, vehicular magazines must have wheels removed or otherwise be effectively immobilized by kingpin locking devices or other methods approved by the Director.

(2) Construction. Outdoor magazines are to be constructed of masonry, metal-covered wood, fabricated metal, or a combination of these materials. Foundations are to be constructed of brick, concrete, cement block, stone, or metal or wood posts. If piers or posts are used, in lieu of a continuous foundation, the space under the building is to be enclosed with fire-resistant material. The walls and floors are to be constructed of, or covered with, a non-sparking material or lattice work. The doors must be metal or solid wood covered with metal.

(3) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside of door). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

(4) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and case-hardened shackle of at least 3/8 inch diameter. Padlocks must be protected with not less than 1/4 inch steel hoods constructed so as to prevent sawing or lever action on the locks, hasps, and staples. These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be actuated from the outside.

(b) Indoor magazine

(1) General. Indoor magazines are to be fire-resistant and theft-resistant. They need not be weather-resistant if the buildings in which they are stored provide protection from the weather. No indoor magazine is to be located in a residence or dwelling. The indoor storage of low explosives must not exceed a quantity of 50 pounds. More than one indoor magazine may be located in the same building if the total quantity of explosive materials stored does not exceed 50 pounds. Detonators that will not mass detonate must be stored in a separate magazine and the total number of electric detonators must not exceed 5,000.

(2) Construction. Indoor magazines are to be constructed of masonry, metal-covered wood, fabricated metal, or a combination of these materials. The walls and floors are to be constructed of, or covered with, a non-sparking material. The doors must be metal or solid wood covered with metal.

(3) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside of door). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

(4) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point

lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least 3/8 inch diameter. Padlocks must be protected with not less than 1/4 inch steel hoods constructed so as to prevent sawing or lever action on the locks, hasps, and staples. Indoor magazines located in secure rooms that are locked as provided in this subparagraph may have each door locked with one steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least 3/8 inch diameter, if the door hinges and lock hasp are securely fastened to the magazine. These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be actuated from the outside.

### **Sec. 55.211 Construction of type 5 magazines.**

A type 5 magazine is a building, igloo or "Army-type structure", tunnel, dugout, bin, box, trailer, or a semi trailer or other mobile facility.

#### **(a) Outdoor magazines**

(1) General. Outdoor magazines are to be weather-resistant and theft-resistant. The ground around magazines must slope away for drainage or other adequate drainage be provided. When unattended, vehicular magazines must have wheels removed or otherwise be effectively immobilized by kingpin locking devices or other methods approved by the Director.

(2) Construction. The doors are to be constructed of solid wood or metal.

(3) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside of door). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

(4) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least 3/8 inch diameter. Padlocks must be protected with not less than 1/4 inch steel hoods constructed so as to prevent sawing or lever action on the locks, hasps, and staples. Trailers, semi trailers, and similar vehicular magazines may, for each door, be locked with one steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least 3/8 inch diameter, if the door hinges and lock hasp are securely fastened to the magazine and to the door frame. These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be actuated from the outside.

(5) Placards. The placards required by Department of Transportation regulations at 49 CFR part 172, subpart F, for the transportation of blasting agents shall be displayed on all magazines.

(b) Indoor magazines

(1) General. Indoor magazines are to be theft-resistant. They need not be weather-resistant if the buildings in which they are stored provide protection from the weather. No indoor magazine is to be located in a residence or dwelling. Indoor magazines containing quantities of blasting agents in excess of 50 pounds are subject to the requirements of Sec. 55.206 of this subpart.

(2) Construction. The doors are to be constructed of wood or metal.

(3) Hinges and hasps. Hinges and hasps are to be attached to doors by welding, riveting, or bolting (nuts on inside). Hinges and hasps must be installed so that they cannot be removed when the doors are closed and locked.

(4) Locks. Each door is to be equipped with (i) two mortise locks; (ii) two padlocks fastened in separate hasps and staples; (iii) a combination of a mortise lock and a padlock; (iv) a mortise lock that requires two keys to open; or (v) a three-point lock. Padlocks must have at least five tumblers and a case-hardened shackle of at least 3/8 inch diameter. Padlocks must be protected with not less than 1/4 inch steel hoods constructed so as to prevent sawing or lever action on the locks, hasps, and staples. Indoor magazines located in secure rooms that are locked as provided in this subparagraph may have each door locked with one steel padlock (which need not be protected by a steel hood) having at least five tumblers and a case-hardened shackle of at least 3/8 inch diameter, if the door hinges and lock hasps are securely fastened to the magazine and to the door frame. These requirements do not apply to magazine doors that are adequately secured on the inside by means of a bolt, lock, or bar that cannot be actuated from the outside.

**Sec. 55.212 Smoking and open flames.**

Smoking, matches, open flames, and spark producing devices are not permitted:

- (a) In any magazine;
- (b) Within 50 feet of any outdoor magazine; or
- (c) Within any room containing an indoor magazine.

**Sec. 55.213 Quantity and storage restrictions.**

(a) Explosive materials in excess of 300,000 pounds or detonators in excess of 20 million are not to be stored in one magazine unless approved by the Director.

(b) Detonators are not to be stored in the same magazine with other explosive materials, except under the following circumstances:

- (1) In a type 4 magazine, detonators that will not mass detonate may be stored with electric squibs, safety fuse, igniters, and igniter cord.

- (2) In a type 1 or type 2 magazine, detonators may be stored with delay devices and any of the items listed in paragraph (b)(1) of this section.

**Sec. 55.214 Storage within types 1, 2, 3, and 4 magazines.**

(a) Explosive materials within a magazine are not to be placed directly against interior walls and must be stored so as not to interfere with ventilation. To prevent contact of stored explosive materials with walls, a non-sparking lattice work or other non-sparking material may be used.

(b) Containers of explosive materials are to be stored so that marks are visible. Stocks of explosive materials are to be stored so they can be easily counted and checked upon inspection.

(c) Except with respect to fiberboard or other nonmetal containers, containers of explosive materials are not to be unpacked or repacked inside a magazine or within 50 feet of a magazine, and must not be unpacked or repacked close to other explosive materials. Containers of explosive materials must be closed while being stored.

(d) Tools used for opening or closing containers of explosive materials are to be of non-sparking materials, except that metal slitters may be used for opening fiberboard containers. A wood wedge and a fiber, rubber, or wooden mallet are to be used for opening or closing wood containers of explosive materials. Metal tools other than non-sparking transfer conveyors are not to be stored in any magazine containing high explosives.

**Sec. 55.215 Housekeeping.**

Magazines are to be kept clean, dry, and free of grit, paper, empty packages and containers, and rubbish. Floors are to be regularly swept. Brooms and other utensils used in the cleaning and maintenance of magazines must have no spark-producing metal parts, and may be kept in magazines. Floors stained by leakage from explosive materials are to be cleaned according to instructions of the explosives manufacturer. When any explosive material has deteriorated it is to be destroyed in accordance with the advice or instructions of the manufacturer. The area surrounding magazines is to be kept clear of rubbish, brush, dry grass, or trees (except live trees more than 10 feet tall), for not less than 25 feet in all directions. Volatile materials are to be kept a distance of not less than 50 feet from outdoor magazines. Living foliage which is used to stabilize the earthen covering of a magazine need not be removed.

**Sec. 55.216 Repair of magazines.**

Before repairing the interior of magazines, all explosive materials are to be removed and the interior cleaned. Before repairing the exterior of magazines, all explosive materials must be removed if there exists any possibility that repairs may produce sparks or flame. Explosive materials removed from magazines under repair must be



(a) placed in other magazines appropriate for the storage of those explosive materials under this subpart, or

(b) placed a safe distance from the magazines under repair where they are to be properly guarded and protected until the repairs have been completed.

**Sec. 55.217 Lighting.**

(a) Battery-activated safety lights or battery-activated safety lanterns may be used in explosives storage magazines.

(b) Electric lighting used in any explosives storage magazine must meet the standards prescribed by the "National Electrical Code," (National Fire Protection Association, NFPA 70-81), for the conditions present in the magazine at any time. All electrical switches are to be located outside of the magazine and also meet the standards prescribed by the National Electrical Code.

(c) Copies of invoices, work orders or similar documents which indicate the lighting complies with the National Electrical Code must be available for inspection by ATF officers.

**Sec. 55.219 Table of distances for storage of low explosives.**

Pounds		From inhabited building distance (feet)	From public railroad and highway distance (feet)	From above ground magazine (feet)
Over	Not over			
0	1,000	75	75	50
1,000	5,000	115	115	75
5,000	10,000	150	150	100
10,000	20,000	190	190	125
20,000	30,000	215	215	145
30,000	40,000	235	235	155
40,000	50,000	250	250	165
50,000	60,000	260	260	175
60,000	70,000	270	270	185
70,000	80,000	280	280	190
80,000	90,000	295	295	195
90,000	100,000	300	300	200
100,000	200,000	375	375	250
200,000	300,000	450	450	300

Pounds		From building distance (feet)	From public highway distance (feet)	From public railroad and ground distance (feet)	From above ground magazine (feet)
Over	Not over				
0	1,000	75	75	50	

1,000	5,000	115	115	75
5,000	10,000	150	150	100
10,000	20,000	190	190	125
20,000	30,000	215	215	145
30,000	40,000	235	235	155
40,000	50,000	250	250	165
50,000	60,000	260	260	175
60,000	70,000	270	270	185
70,000	80,000	280	280	190
80,000	90,000	295	295	195
90,000	100,000	300	300	200
100,000	200,000	375	375	250
200,000	300,000	450	450	300

**Sec. 55.220 Table of separation distances of ammonium nitrate and blasting agents from explosives or blasting agents.**

Donor weight (pounds)		Minimum separation distance of acceptor from donor when barricaded (ft.)		Minimum thickness of artificial barricades (in.)
Over	Not over	Ammonium nitrate	Blasting agent	
Donor weight (pounds)	Minimum separation distance of acceptor from donor when barricaded (ft.)	Minimum thickness of artificial barricades (in.)	Ammonium nitrate	Blasting agent
Over	Not over	Ammonium nitrate	Blasting agent	
0	100	3	11	12
100	300	4	14	12
300	600	5	18	12
600	1,000	6	22	12
1,000	1,600	7	25	12
1,600	2,000	8	29	12
2,000	3,000	9	32	15
3,000	4,000	10	36	15
4,000	6,000	11	40	15
6,000	8,000	12	43	20
8,000	10,000	13	47	20
10,000	12,000	14	50	20
12,000	16,000	15	54	25
16,000	20,000	16	58	25

20,000	25,000	18	65	25
25,000	30,000	19	68	30
30,000	35,000	20	72	30
35,000	40,000	21	76	30
40,000	45,000	22	79	35
45,000	50,000	23	83	35
50,000	55,000	24	86	35
55,000	60,000	25	90	35
60,000	70,000	26	94	40
70,000	80,000	28	101	40
80,000	90,000	30	108	40
90,000	100,000	32	115	40
100,000	120,000	34	122	50
120,000	140,000	37	133	50
140,000	160,000	40	144	50
160,000	180,000	44	158	50
180,000	200,000	48	173	50
200,000	<b>220,000</b>	52	187	60
<b>220,000</b>	250,000	56	202	60
250,000	275,000	60	216	60
275,000	300,000	64	230	60

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 Sec. 55.218 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. Ammonium nitrate failing to pass the test must be stored at separation distances in accordance with the table in Sec. 55.218

(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 Sec. 55.218.

<sup>1</sup> Definition and Test Procedures for Ammonium Nitrate Fertilizer,

<sup>1</sup> Fertilizer Institute 1015-18th St. N.W. Washington, DC 20036.

**Sec. 55.221 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.

**Sec. 55.222 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)

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 (5)	Not permitted (4) (5)	Not permitted (4)

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

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

(3) While 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.

(4) A 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.

(5) A 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.

**Sec. 55.223 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 firework (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

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

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

(2) While 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.

(3) This table does not apply to the separation distances between fireworks process buildings (see Sec. 55.222) and between magazines (see Secs. 55.218 and 55.224).

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

(5) No 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 Sec. 55.222 or this section, tables of distances.

**Sec. 55.224 Table of distances for the storage of display fireworks (except bulk salutes).**

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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 Sec 55.218	

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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 Sec 55.218	

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

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

(3) For 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.

(4) This table does not apply to the storage of bulk salutes. Use table at Sec. 55.218.

Title 13, California Code of Regulations,  
Selected Sections

# HAZARADOUS MATERIALS TRANSPORTATION



**CALIFORNIA  
VEHICLE CODE**

**Safety Regulations**

**Div. 14.8**

**§34500. Vehicles to which applicable**

The department shall regulate the safe operation of the following vehicles:

- (a) Motortrucks of three or more axles that are more than 10,000 pounds gross vehicle weight rating.
- (b) Truck tractors.
- (c) Buses, schoolbuses, school pupil activity buses, youth buses, and general public paratransit vehicles.
- (d) Trailers and semitrailers designed or used for the transportation of more than 10 persons, and the towing motor vehicles.
- (e) Trailers and semitrailers, pole or pipe dollies, auxiliary dollies, and logging dollies used in combination with vehicles listed in subdivisions (a), (b), (c), or (d). This subdivision does not include camp trailers, trailer coaches, and utility trailers.
- (f) Any combination of a motortruck and any vehicle or vehicles set forth in subdivision (e) that exceeds 40 feet in length when coupled together.
- (g) Any truck, or any combination of a truck and any other vehicle, transporting hazardous materials.
- (h) Manufactured homes which, when moved upon the highway, are required to be moved under a permit as specified in Section 35780 or 35790.
- (i) A park trailer, as described in subdivision (b) of Section 18010 of the Health and Safety Code, which, when moved upon a highway, is required to be moved under a permit pursuant to Section 35780.
  
- (j) Any other motortruck not specified in subdivisions (a) to (h), inclusive, or subdivision (k), that is regulated by the Public Utilities Commission or the Interstate Commerce Commission, but only for matters relating to hours of service and logbooks of drivers.
- (k) Any commercial motor vehicle with a gross vehicle weight rating of 26,001 or more pounds or any commercial motor vehicle of any gross vehicle weight rating towing any vehicle described in subdivision (e) with a gross vehicle weight rating of more than 10,000 pounds, except combinations including camp trailers, trailer coaches, or utility trailers. For purposes of the subdivision, the term "commercial motor vehicle" has the meaning defined in subdivision (b) of Section 15210.

**TITLE 13  
CALIFORNIA CODE OF REGULATIONS  
SELECTED SECTIONS**

**§1150. Applicability.**

This article shall apply to the transportation of explosives subject to Division 14 (commencing with Section 31600) of the Vehicle Code.

**§1150.1. Designation of Routes and Stopping Places.**

(a) The highways, safe stopping places, and inspection stops to be used for transportation of commodities listed in Section 1150 are set forth in Sections 1151.1 through 1153.12 (Maps 1 through 17A). Safe parking places are listed in Section 1154.

(b) Definitions.

(1) Safe Stopping Place. "Safe stopping place" means any place where a driver may stop for food, fuel, or other reason, provided the vehicle is attended at all times.

(2) Attended Vehicle. A vehicle is "attended" when the driver or person in charge of it is awake and occupies any part of it except the sleeper berth; or is within 100 ft. of the vehicle and has an unobstructed view of it.

(3) Safe Parking Place. "Safe parking place" means any off-highway location or terminal where the driver may park and leave a vehicle unattended.

(4) Inspection Stop. "Inspection stop" means any location specially designated as such in this article or any safe parking place or safe stopping place where vehicle inspections required by Section 31607 of the Vehicle Code may be performed.

(5) Required Inspection Stop. "Required inspection stop" means any place designated as such or any other place where vehicle inspection is mandatory.

**§1150.2. Routes Traveled and Stopping.**

(a) Routes. No person shall drive or permit the driving of any vehicle transporting commodities listed in Section 1150 upon any highway not designated by this article. For pickup and delivery not over designated routes, the route selected must be the shortest-distance route from the pickup location to the nearest designated route entry location, and the shortest-distance route to the delivery location from the nearest designated route exit location.

(b) Access to Inspection Stops and Safe Stopping Places. If highway access is not provided, a highway other than one designated herein may be used to permit a vehicle or vehicle combination to proceed to and from an inspection stop or safe stopping place, provided the most direct route is used avoiding, to the extent practicable, places where crowds are assembled, streetcar tracks, tunnels, viaducts, and dangerous crossings.

(c) Stopping. No person shall stop a vehicle or vehicle combination transporting commodities listed in Section 1150 at any place not designated as a safe stopping place, safe parking place, improved public rest area as described in (d) of this section or inspection stop, except to comply with orders of a peace officer or an official traffic control device or unless the vehicle or vehicle combination is disabled.

(d) Public Rest Areas. An improved public rest area contiguous to a highway is deemed part of the highway for the purpose of this article.

### **§1150.3. En Route Inspections.**

Inspection of tires and brakes required by Section 31607(c) of the Vehicle Code shall be performed at the following locations:

(a) En Route Inspection Stops. Inspection shall be performed at an inspection stop at least every four hours or 150 miles traveled, whichever occurs first, or as close thereto as is practicable, depending upon the proximity of such inspection stops.

(b) Top-of-Grade Inspection Stops. Regardless of elapsed time or miles traveled, vehicles shall be inspected at the top of and prior to descending any grade upon which the Department of Transportation has declared a speed limit for trucks of less than 55 miles per hour as provided by Section 22407 of the Vehicle Code. Such inspection shall be made off the roadway.

(c) Required Inspection Stops. Regardless of elapsed time or miles traveled, vehicles shall be inspected at any location designated herein as a required inspection stop.

### **§1150.4. Detours.**

Detours established on highways designated in this article may be used for transportation of commodities listed in Section 1150 pending subsequent revision of this article or designation of emergency routes as provided by Section 31617 of the Vehicle Code.

### **§1150.5. Services and Products.**

Services available at safe stopping places are indicated for purposes of convenience, but no recommendation of any product, service, or location is intended or should be inferred.

### **§1160. Application.**

This article shall apply to the transportation of hazardous materials in vehicles listed in Vehicle Code Section 34500 and in any other vehicle for which the display of placards is required pursuant to Vehicle Code Section 27903 as prescribed in Vehicle Code Section 31309.

## **§1160.1. Exceptions and Special Applications.**

(a) Application to Shippers. Shippers are subject to all provisions of this article except Sections 1160.4(g), 1162.1, 1166 and 1167, and are subject to Section 1164 only when loading or directing the loading of any vehicle.

(b) Application to Non-commercial Transportation. Except for subsection (d), the exceptions contained in this section shall only apply to the transportation of hazardous materials by carriers when not directly subject to federal jurisdiction pursuant to 49 CFR Part 171 (i.e., transporting hazardous materials in intrastate, interstate or foreign commerce [transported for a fee or used for commercial purposes]).

(c) Alternative Exceptions for Non-commercial Carriers. Private carriers transporting hazardous materials for non-commercial purposes (i.e., transporting hazardous materials for personal use or by a federal, state or local government agency) may utilize the exceptions contained in subsections (e) through (m) of this section or the exceptions contained in either 49 CFR 173.6 or 49 CFR 173.8(c), but not both the exceptions in subdivisions (e) through (m) and the referenced 49 CFR exceptions at one time on the same vehicle or combination of vehicles.

(d) Liquefied Petroleum Gas. Except as provided in Sections 1160.4(g), 1160.5, 1161, 1161.3, 1161.6, 1161.7, 1162, 1163(d), 1166, and 1167, this article shall not apply to the transportation of liquefied petroleum gas in cargo tanks subject to regulations of the Division of Occupational Safety and Health, Department of Industrial Relations contained in Title 8, California Code of Regulations, Chapter 4, Subchapter 1 (Unfired Pressure Vessel Safety Orders), but it shall apply to liquefied petroleum gas transported in cylinders and portable tanks.

(e) Incidentally Transported Materials. This article shall not apply to the transportation of the following:

- (1) Batteries in vehicle or auxiliary equipment ignition or lighting systems.
- (2) Flammable compressed gases or flammable and/or combustible liquids used exclusively in vehicle or auxiliary equipment fuel, heating, refrigeration, or cooking systems.
- (3) Batteries, compressed air in cylinders or tanks not exceeding 200 psi, inflated tires or less than 10 gallons of flammable liquid fuels on tow trucks or similar roadside service or repair vehicles or otherwise transported in private (not for-hire) carriage. Containers used to transport flammable liquids under this subsection shall not exceed 5 gallons capacity each, and shall be constructed and maintained in conformance with a nationally recognized fuel storage and dispensing standard for the fuel being transported (e.g., U.S. Department of Transportation (DOT), United Nations (UN), National Fire Protection Association (NFPA), American National Standards Institute (ANSI), American Society for Testing and Materials (ASTM), Underwriter Laboratories (UL), Factory Mutual (FM), or U.S. Department of Defense (military) specifications (U.S. Mil. Spec.).

(4) Highway fusees, and liquid-burning emergency flares and/or red electric lanterns that conform to 49 CFR 393.95(f)(1), being transported expressly for highway warning purposes or as authorized for use pursuant to Vehicle Code Section 25301, unless otherwise prohibited by this Division or the Vehicle Code. This exception does not apply to broken fusees or fusees with missing protective caps.

(5) Fire extinguishers being transported expressly for in-transit emergency fire suppression purposes.

(6) Flammable or combustible distillate fuels transported in a single compartmentalized or noncompartmentalized metal cargo tank of 450 liters (119 gallons) or less total volumetric capacity, or both flammable and combustible distillate fuels transported in a single compartmentalized metal cargo tank of 450 liters (119 gallons) or less total volumetric capacity, by a private carrier and used to service other vehicles or equipment. The tank shall be in compliance with 49 CFR 173.24(b), and the tank, its components, and attached equipment must be secured to the vehicle and protected from damage or leakage of the lading should the vehicle overturn.

(f) Consumer Commodity Exception. The outside packaging and marking exception contained in 49 CFR 173.156 for hazardous materials authorized to be renamed "Consumer commodity" and reclassified ORM-D is extended to transportation by a private carrier from either a distribution center or retail outlet, or subsequent transportation for incidental use.

(g) Shipping Paper Exception. Section 1161, pertaining to shipping papers, shall not apply to a private carrier transporting any one of the following:

(1) Not more than 227 kilograms (500 pounds) aggregate gross weight (including the packaging) of hazardous materials other than:

(A) Any materials listed in 49 CFR 172.504(a), Table I, or

(B) Any materials for which an INFECTIOUS SUBSTANCE, KEEP AWAY FROM FOOD, ORGANIC PEROXIDE, SPONTANEOUSLY COMBUSTIBLE, POISON or RADIOACTIVE label is required, or

(C) Any materials which require a Uniform Hazardous Waste Manifest pursuant to Section 25160 of the Health and Safety Code.

(2) Anhydrous ammonia in a single cargo tank of not more than 4,524 liters (1,200 gallons) capacity transported not more than 30 miles from the filling point or in a trailer-mounted cargo tank in compliance with Section 1163(f)(1) of this article.

(3) Not more than 1 cylinder each of argon, oxygen, carbon dioxide, acetylene, helium, or nitrogen if the gross weight is less than 454 kilograms (1,001 pounds), provided containers and labeling comply with Sections 1161.2 and 1163 of this article.

(h) Storage Tanks. Storage tanks used only for off-highway storage and dispensing of flammable and/or combustible distillate fuels and which contain only residue are excepted from specified provisions of this article as indicated below, when transported in accordance with the following:

(1) Except for subsection (d), Section 1163 shall not apply to portable or stationary above ground storage tanks when in conformance with 49 CFR 173.24(b).

(2) Except for Section 1163(d), this article shall not apply to underground storage tanks when prepared for shipment in accordance with American Petroleum Institute Recommended Practice 1604, Second Edition, December 1987. (This publication may be obtained from the American Petroleum Institute, 1220 L Street, Northwest, Washington D.C. 20005.)

(3) For purposes of this subsection, "residue" means the material remaining after the tank has been unloaded to the maximum extent practicable via the normal discharge opening. In no event shall the tank contain more than 454 liters (120 gallons) of any liquid.

(4) Storage tanks shall not be transported on the same vehicle with any other hazardous materials.

(i) Traffic Paint Applicator. Traffic paint applicator systems containing flammable paint are excepted from the provisions of Section 1163, except subsection (d), when in conformance with 49 CFR 173.24(b).

(j) Mobile Meter Calibration Units. Mobile meter calibration units containing flammable distillate fuel residue or liquefied petroleum gas residue are excepted from the provisions of Section 1163, except subsection (d), when in conformance with 49 CFR 173.24(b) and emptied to the maximum extent practicable via the normal discharge opening.

(k) Self Contained Breathing Apparatus. Compressed air breathing apparatus transported solely for in-transit emergencies or for the safety of persons conducting loading or unloading operations are not subject to this article, except Sections 1161.2, 1161.3 and 1163, when the compressed gas cylinders are mounted or otherwise secured to the vehicle during transit to prevent sliding, falling, tipping, rolling, or damage to the valving should the vehicle overturn.

(l) Breathing Air Recharge Units. Air cylinders or tanks operating under a Division of Occupational Safety and Health, Department of Industrial Relations operating permit and used to fill/recharge breathing air cylinders are not subject to Section 1163, except subsection (d), when in conformance with 49 CFR 173.24(b).

## **§1160.2. U.S. Department of Transportation Regulations.**

(a) Incorporation by Reference. This article incorporates by reference portions of 49 CFR Part 107, Parts 171 through 180, and Part 393 to the extent specified in this article. Unless otherwise specified, all references to 49 CFR in this article are those regulations published on October 1, 1999.

(b) Federal Preeminence. Provisions of the Hazardous Materials Transportation Act recodified into Title 49 U.S. Code (49 U.S.C.) Section 5125, preempt any requirements of any state or political subdivision thereof inconsistent with the act or federal Hazardous Material Regulations relating to hazardous materials transported in commerce. The U.S. Department of Transportation (DOT), Research and Special Programs Administration (RSPA) may except any material from being classed as hazardous, or change any classification or transportation requirement in accordance with authority granted that agency, and such action shall govern the application of this article. In lieu of compliance with the provisions of this article, hazardous materials shipment preparation and transportation in compliance with a later promulgated RSPA requirement, exemption or exception than that adopted by reference in this article is permitted. This includes compliance with a later promulgated requirement prior to its effective date during any period of time where earlier compliance is authorized in the applicable final rulemaking.

(c) Limited Applications. 49 CFR Parts 174 and 179 shall apply only as referenced in 49 CFR Parts 173, 177, and 178.

(d) Motor Carrier Safety Requirements. Provisions of 49 CFR Part 393 applies as incorporated in cargo tank specifications referenced in 49 CFR Part 178, but 49 CFR Parts 390 through 397 shall not otherwise apply to transportation subject to this article.

(e) Referenced Regulations. Copies of 49 CFR, can be obtained from:

SUPERINTENDENT OF DOCUMENTS  
U.S. GOVERNMENT PRINTING OFFICE  
PO BOX 371954  
PITTSBURG, PA 15250-7954  
(202) 512-1800  
Internet purchases: [http://www.access.gpo.gov/su\\_docs/sale.html](http://www.access.gpo.gov/su_docs/sale.html)

Copies of 49 CFR Part 107 and Parts 171 through 180 may also be obtained from:

BUREAU OF EXPLOSIVES PUBLICATIONS  
PO BOX 866  
ANNAPOLIS, MD 21404-0688  
(412) 741-1096

Copies of 49 CFR Part 107, Parts 171 through 180, and Parts 390 through 397 may also be obtained from:

AMERICAN TRUCKING ASSOCIATIONS, INC.  
SAFETY DEPARTMENT  
2200 MILL ROAD  
ALEXANDRIA, VA 22314-4677  
(800) 282-5463 OR (703) 838-1847

Internet Access. Title 49 CFR may also be accessed through the internet at the National Archives and Records Administration's web site at "<http://www.access.gpo.gov/nara/cfr/>" or through the U.S. Department of Transportation, Office of Hazardous Materials Safety's web site at "<http://hazmat.dot.gov/>".

### **§1160.3. Definitions.**

(a) The meanings of terms contained in this article and not defined in this article are the same as those contained in 49 CFR 171.8.

(b) "Carrier" means any person who transports hazardous materials subject to this article.

(c) "Department" means Department of the California Highway Patrol.

(d) "Hazardous material" means a substance or material, which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated. The term includes hazardous substances, hazardous wastes, marine pollutants, and elevated temperature materials as defined in 49 CFR 171.8, materials designated as hazardous under the provisions of 49 CFR Sections 172.101 and 172.102, and materials that meet the defining criteria for hazard classes and divisions in 49 CFR Part 173.

(e) "Private carrier" means any carrier who transports cargo for use in his/her occupation or for other purpose without reward or compensation.

(f) "Shipper" means any person who prepares or offers hazardous materials for transportation. A shipper who also transports its own material is both a shipper and a carrier.

### **§1160.4. General Provisions.**

(a) Applicability. Shippers shall not offer and carriers shall not transport any shipment of a hazardous material not prepared for transportation in accordance with this Article.

(b) References to Statutes and Regulations. Any reference to provisions of these regulations or to statutes shall apply to all amendments and additions made to such regulatory or statutory provisions.



(c) Alternate Method of Compliance. Upon a finding that an alternate method of compliance provides protection to the public equal to or exceeding that afforded by compliance with provisions of this article, the department may authorize use of such alternate method subject to the following:

(1) Any alternate method of compliance shall be permitted only after application has been made to and written authorization obtained from the department.

(2) Written authorization shall be carried in each transporting vehicle or combination.

(3) No authorization for an alternate method of compliance shall be accorded any highway carrier subject to federal jurisdiction, nor shall such authorization apply to the preparation of hazardous materials for interstate transportation.

(4) No authorization for an alternate method of compliance shall be granted when a special permit or exemption has been issued by the U.S. Department of Transportation, Associate Administrator for Hazardous Materials Safety authorizing the requested alternate method.

(d) Special Permits and Exemptions. Compliance with requirements of special permits and exemptions issued by the U.S. Department of Transportation, Associate Administrator for Hazardous Materials Safety in accordance with 49 CFR Part 107, shall be deemed in compliance with equivalent provisions of this article.

(e) Inspection by Department. Carriers and shippers shall afford duly authorized employees of the department reasonable opportunity to enter terminals and other locations to determine compliance with the provisions of this article.

(f) Unsafe Transportation Prohibited. Authorized employees of the department shall declare and mark any vehicle out-of-service when the condition, securement, preparation of lading, filling, closures, or protective devices on cylinders and tanks would be hazardous to life and property during transportation.

(1) No carrier shall require or permit any person to operate nor shall any person operate any vehicle marked out-of-service until all necessary corrections have been completed.

(2) No person shall remove any out-of-service notice from any vehicle prior to the completion of all corrections required by the notice.

(g) Hazardous Materials Transportation License.

(1) Fees. The fee for a new license is one hundred dollars (\$100) and the fee for a renewal license is seventy-five dollars (\$75).

(2) Original License. The original valid license shall be kept at the licensee's place of business as indicated on the license and presented to any duly authorized employee of the Department upon request.

(3) Copy in each vehicle. A legible copy shall be carried in any vehicle or combination of vehicles transporting hazardous materials and shall be presented to any traffic officer upon request.

(4) Temporary License. Carriers who have paid the license fee, may use either of the following as a temporary license for not more than 60 days when carried in the vehicle:

(A) A copy of the carrier's completed application for license to transport hazardous materials and a copy of the check or money order indicating payment of fee.

(B) A telegraphic money order receipt, or copy thereof, made payable to the California Highway Patrol, indicating payment of fee for license to transport hazardous materials.

(5) Exceptions. Federal, State, county, city, and city and county agencies, and other political subdivisions of the State including, but not limited to, school, irrigation, and fire protection districts are exempt from the licensing requirements of Vehicle Code Section 32000.5.

Internet Access. The California Highway Patrol form CHP 361M (Rev. 01-00), Application for Hazardous Materials Transportation License, instructions for completing the application and related documents are available on the Internet at <http://www.chp.ca.gov/html/forms.html>.

#### **§1160.5. Hazard Classification and Shipping Names.**

Hazardous materials shall be classified and described (proper shipping name) in accordance with 49 CFR Parts 172 and 173.

#### **§1161. Shipping Papers.**

(a) Applicability. Shippers and carriers shall comply with the shipping paper requirements contained in 49 CFR Part 172, Subpart C and 49 CFR 177.817.

(b) Retention - Shippers and carriers subject to federal jurisdiction. Shippers and carriers of hazardous materials transported in commerce shall comply with the one year shipping paper retention requirements contained in 49 U.S.C. Section 5110 and shall make them available for inspection by any duly authorized employee of the department.

(c) Retention - Shippers and carriers not subject to federal jurisdiction. Shippers and carriers not subject to federal jurisdiction shall retain copies of shipping papers for at least six months and shall make them available for inspection by any duly authorized employee of the department.

#### **§1161.1. Shipping Certification.**

(a) Shipper Certificate Required. Shippers shall not offer and initial carriers (other than private carriers) shall not accept for transportation hazardous materials in any form other than bulk shipments in cargo tanks furnished by the carrier, unless the shipper provides a signed certificate prepared in conformance with 49 CFR 172.204.

(b) Retention. Certificates need not be carried with the material enroute, however, copies of shipper certificates shall be retained for at least six months and shall be subject to inspection by any authorized employee of the department.

### **§1161.2. Hazard Labels.**

(a) Applicability. Shippers and carriers shall comply with the labeling requirements contained in 49 CFR Part 172, Subpart E (commencing with Section 172.400).

(b) As specified in 49 CFR 172.401(b), no labels shall be used when they may be confused by reason of shape, size, or color with the hazard labels prescribed by this section unless authorized by 49 CFR 172.401(c).

(c) As specified in 49 CFR 172.401(a), hazard labels prescribed by this section shall not be affixed to packagings which do not contain hazardous materials or when the label does not represent the hazard of the hazardous material in the package, unless authorized by 49 CFR 172.401(c).

(d) All labels and decals on packages shall be replaced before they become illegible.

### **§1161.3. Marking.**

(a) Applicability. Shippers and carriers shall comply with the marking requirements contained in 49 CFR Part 172, Subpart D (commencing with Section 172.300), and 49 CFR 177.823.

(b) Hazardous materials proper shipping names and identification numbers shall not be marked on packagings when prohibited by 49 CFR 172.303.

### **§1162. Placards.**

(a) Applicability. Shippers and carriers shall comply with the placarding requirements contained in 49 CFR Part 172, Subpart F (commencing with Section 172.500) and 49 CFR 177.823.

(b) Exclusions. This section does not apply to the transportation of small quantities of explosives as provided by Vehicle Code Section 27903.

(c) Placards shall not be affixed to a packaging, freight container, motor vehicle, etc. when prohibited by 49 CFR 172.502(a).

(d) Placards may be affixed even when not required by this section when displayed in accordance with 49 CFR 172.502(c).

## §1162.1. Vehicle Safety Equipment.

### (a) Fire Extinguishers.

(1) Every three-axle motortruck or combination of vehicles shall be equipped with one fire extinguisher with at least a 4B:C rating, except as provided in (2) or (3).

(2) Every motor vehicle shall be equipped with one fire extinguisher rated at least 10B:C if the motor vehicle, or any vehicle in a combination of which it is a part, transports cargo requiring placards (Section 1162). Two fire extinguishers with a combined rating of 10B:C may be used, provided the rating of neither unit is less than 4B:C.

(3) Every tank vehicle or combination of tank vehicles used to transport flammable or combustible liquids shall be equipped with at least one fire extinguisher having a rating of not less than 20B:C. A fire extinguisher rated 12B:C and in service prior to July 1, 1970, may continue in use if it is in good working order. Fire extinguishers required by this subsection shall be serviced annually in accordance with Title 19, California Code of Regulations Chapter 1, Subchapter 3, commencing with Section 550.

(4) Each fire extinguisher shall have been rated and labeled by one of the following test labs approved by the State Fire Marshal to test and label portable fire extinguishers for sale in California.

(A) Underwriter's Laboratories, Northbrook, Illinois. All sizes and classifications.

(B) Factory Mutual Research Corporation, Norwood, Massachusetts. Sizes 10B:C, 1A 10B:C, 2A 40B:C, 3A 40B:C, and 4A 80B:C fire extinguishers filled with Halon 1211 or Halon 1301.

(5) Fire extinguishers using any carbon tetrachloride, chlorobromomethane, or methyl bromide as extinguishing agents shall not be carried for use in or about any vehicle.

(6) Each fire extinguisher shall be securely mounted on a motor vehicle or trailer in a conspicuous place or in a clearly marked compartment and readily accessible.

(7) Fire extinguishers shall be maintained in efficient operating condition and shall be equipped with means for determining if they are fully charged.

### (b) Emergency Warning Devices.

(1) Every vehicle or combination of vehicles transporting Division 1.1, 1.2 or 1.3 explosives shall carry 3 red emergency reflectors.

(2) Liquid burning flares, fusees, oil lanterns, or any signal produced by a flame shall not be carried on any vehicle or vehicle combination transporting Division 1.1, 1.2 or 1.3 (explosives) hazardous materials; or any cargo tank vehicle or in any other vehicle operated in combination with a cargo tank vehicle and used for the transportation of Division 2.1 (flammable gas), Class 3 (flammable liquid) or combustible liquid materials whether loaded or empty.

### **§1163. Shipment Preparation.**

Shipment preparation of hazardous materials shall be governed by the following:

(a) Shipment Preparation and Transportation. Shipments shall be prepared for transportation and transported in accordance with provisions of 49 CFR Part 173.

(b) Authorized Packages-General. Only packagings authorized for shipment of specific commodities by 49 CFR Parts 172 and 173, shall be used, except when otherwise authorized by Sections 1160.1, 1160.4(c) or (d), or 1163(c) or (f) of this article.

(c) Previously Authorized State Fire Marshal Cargo Tanks. Cargo tanks that were authorized by Title 19, California Code of Regulations, (19 CCR), Section 1609.1 on April 1, 1984, which were manufactured and placed into service prior to April 1, 1984, may continue to be used by intrastate carriers, who are not directly subject to federal jurisdiction prior to the October 1, 1998, effective date of RSPA Docket HM-200, to transport flammable liquids under the conditions listed below. Cargo tanks having a capacity of less than 13,250 liters (3,500 gallons) used for the transportation of flammable liquid petroleum products may continue to be used under the provisions of 49 CFR 173.8(b). Cargo tanks transporting flammable liquids other than petroleum products, or having a capacity of 13,250 liters or more, may continue to be used under the following requirements pursuant to 49 CFR 173.8(a) until July 1, 2000.

(1) The flammable liquid has no secondary hazard(s) for which transportation in a MC-306 cargo tank is not authorized.

(2) The cargo tanks are maintained, retested, inspected and marked in accordance with 49 CFR 173.24(b), (e), (f), (g) and (h); 173.24b(a)(1) and (2), (c) and (d)(1); and 49 CFR Part 180 applicable to a MC-306 DOT specification cargo tank.

(d) Leaking packages. Package closures shall be adequate to prevent leakage of contents, and leaking packages shall not be transported.

(e) Qualification and Maintenance of Packagings. Except as provided in subsections (c) and (f), the maintenance, retesting, inspection and qualification of packages shall be in accordance with 49 CFR Part 173, Subpart B and 49 CFR Part 180. Copies of certificates, reports, and records of retesting shall be subject to inspection by any authorized employee of the department.

(f) Anhydrous Ammonia--Additional Packagings. Truck-mounted cargo tanks manufactured before 1970, or manufactured before 1972 and having a capacity of

7,571 liters (2,000 gallons) or less, may be continued in service by private carriers to transport anhydrous ammonia between a filling point and a ranch, or between two locations on one ranch, or between ranches, and need not meet specifications in 49 CFR Part 178, provided:

- (1) The tank meets design, construction, repair and operational requirements for anhydrous ammonia transportation tanks in the Unfired Vessels Safety Orders, Chapter 4, Title 8, California Code of Regulations; and
- (2) The tank is operated by a carrier not subject to federal jurisdiction.

#### **§1163.1. Prohibited Transportation.**

Shippers shall not offer and carriers shall not transport any of the following:

- (a) Materials designated as "Forbidden" by 49 CFR 172.101.
- (b) Any package containing any materials or combinations of materials that is forbidden to be tendered for transportation by the provisions of 49 CFR 173.21.
- (c) Hazardous materials prepared or offered for shipment in a manner specifically prohibited or restricted by 49 CFR Part 173 or 177.

#### **§1164. Vehicle Loading.**

- (a) Loading Requirements. Load securement, loading, unloading and vehicle utilization shall comply with 49 CFR Part 177, Subparts B and C.
- (b) Packages. Packages shall be secured during transit by use of bracing, chocks, or tiedowns to prevent their sliding, falling, tipping, or rolling with normal vehicle acceleration, deceleration, or change in direction. Ends, sidewalls, or doors of van bodies, or racks on flatbed vehicles shall not be relied upon for the securement of portable tanks.

#### **§1166. Reporting of Incidents Involving Hazardous Materials or Hazardous Wastes.**

- (a) Carriers directly subject to federal jurisdiction pursuant to 49 CFR Part 171 shall comply with the detailed written incident reporting requirements contained in 49 CFR 171.16.
- (b) Carriers not directly subject to federal jurisdiction shall report incidents involving hazardous materials or hazardous wastes during transportation, loading or unloading, or temporary storage on carrier premises as follows:

(1) Reports Required. A written report is required of incidents that result in:

(A) Any spill or discharge of hazardous materials or hazardous wastes from any package container, or tanker

(B) Fatality, injury, or hospitalization of any person due to fire, explosion of, or exposure to any hazardous material or hazardous wastes.

(C) Continuing danger to life, health or natural resources at the scene of the incident.

(D) Estimated property damage exceeding \$50,000.

(2) Report Content and Routing. The written report shall, within 30 days of the date of incident discovery, be submitted to the Department of the California Highway Patrol, Commercial Vehicle Section, Post Office Box 942898, Sacramento, CA 94298-0001. The report shall include time and date of occurrence, injuries, property damage, continuing danger to life at the scene of the incident, identification of the commodity and its classification, and other pertinent details. The report may be prepared utilizing DOT Form F5800.1 (Rev. 6/89), Hazardous Materials Incident Report.

(3) Report Retention. A copy of each hazardous materials or hazardous waste spill report shall be retained by the carrier for at least six months, and shall be subject to inspection by duly authorized employees of the department.

(4) Exceptions. The requirements of subsection (b) do not apply to incidents involving the spill or discharge of materials:

(A) Transported under the following proper shipping names:

(i) Consumer commodity

(ii) Battery, electric storage, wet, filled with acid or alkali

(iii) Paint and paint related material when shipped in packagings of five gallons or less.

(B) Prepared and transported as a limited quantity shipment in accordance with this article.

(5) The exceptions to incident reporting provided in paragraph (4) of this subsection do not apply to:

(A) Materials in Packing Group I other than consumer commodities.

(B) Incidents involving the transportation of hazardous waste, or:

(C) Incidents where any of the following occur as a direct result of hazardous

materials release or threatened release:

- (i) A person is killed; or
- (ii) A person receives injuries requiring his or her hospitalization; or
- (iii) Estimated carrier or other property damage exceeds \$50,000; or
- (iv) An evacuation of the general public occurs lasting one or more hours; or
- (v) One or more major transportation arteries or facilities are closed or shut down for one hour or more.

(c) The DOT Hazardous Materials Incident Report form F5800.1 (Rev. 6/89), a guide for completing the report and text of the reporting requirements are available at the following internet sites respectively: <http://hazmat.dot.gov/5800.pdf>, <http://hazmat.dot.gov/5800guid.pdf>, and <http://hazmat.dot.gov/spills.htm#171.16>. Alternatively, the form F5800.1 and the guide document for assisting in the completion of DOT Form F5800.1 may be obtained from the Office of Hazardous Materials Transportation, DHM-51, U.S. Department of Transportation, Washington, DC 20590-0001.

#### **§1167. Delivery of Shipments; Action in Event of Accidents.**

The delivery of hazardous materials shipments and required driver action in the event of accidents shall be governed by provisions of 49 CFR Part 177, Subpart D (commencing with Section 177.854). Notwithstanding the provisions of Section 1163(d), a leaking packaging which develops or is discovered subsequent to the commencement of transportation may be transported in accordance with 49 CFR Part 177, Subpart D.



NFPA, Code 1122, Referenced Sections

# MODEL ROCKETRY

## EXCERPTS FROM NFPA 1122

### CHAPTER 3 Definitions

#### **3.1 General.**

The definitions contained in this chapter shall apply to the terms used in this code. Where terms are not included, common usage of the terms shall apply.

#### **3.2 NFPA Official Definitions.**

**3.2.1\* Approved.** Acceptable to the authority having jurisdiction.

**3.2.2\* Authority Having Jurisdiction (AHJ).** The organization, office, or individual responsible for approving equipment, materials, an installation, or a procedure.

**3.2.3\* Code.** A standard that is an extensive compilation of provisions covering broad subject matter or that is suitable for adoption into law independently of other codes and standards.

**3.2.4 Labeled.** Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner.

**3.2.5\* Listed.** Equipment, materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.

**3.2.6 Shall.** Indicates a mandatory requirement.

**3.2.7 Should.** Indicates a recommendation or that which is advised but not required.

#### **3.3 General Definitions.**

**3.3.1 Certified Motor.** A commercially manufactured rocket motor that has been certified by a recognized testing organization acceptable to the authority having jurisdiction to meet the certification requirements set forth in NFPA 1125, Code for the Manufacture of Model Rocket and High Power Rocket Motors.

**3.3.2 Commercial Manufacturer.** Any individual, firm, partnership, joint venture, corporation, or other business entity engaged in research, development, production, preparation, testing, maintenance, or supply of rockets, rocket motors, rocket

propellant chemicals, rocket propellant, delay or ejection modules, or rocket components or parts.

**3.3.3 High Power Rocket.** A rocket that (1) is propelled by one or more high power rocket motors; (2) is propelled by a combination of model rocket motors having an installed total impulse of more than 320 N-sec (71.9 lb-sec); (3) is propelled by a combination of model rocket motors having more than a total of 125 g (4.4 oz) of propellant weight; or (4) weighs more than 1500 g (53 oz) with motor(s) installed.

**3.3.4 High Power Rocket Motor.** A rocket motor that has more than 160 N-sec (36 lb-sec) but no more than 40,960 N-sec (9208 lbs-sec) of total impulse or an average thrust greater than 80 N (18 lbf) or more than 62.5 g (2.2 oz) of propellant, and that otherwise meets the other requirements set forth in NFPA 1125, Code for the Manufacture of Model Rocket and High Power Rocket Motors.

**3.3.5 Installed Total Impulse.** The combined total impulse of all rocket motors installed in a rocket and intended to be ignited during the launch and flight of the rocket.

**3.3.6\* Model Rocket.** A rocket that (1) weighs no more than 1500 g (53 oz) with motors installed; and (2) is propelled by one or more model rocket motors having an installed total impulse of no more than 320 N-sec (71.9 lb-sec); and (3) contains no more than a total of 125 g (4.4 oz) of propellant weight.

**3.3.7 Model Rocket Engine.** See 3.3.8, Model Rocket Motor.

**3.3.8\* Model Rocket Motor.** A rocket motor that has a total impulse of no greater than 160 N-sec (36 lb-sec), an average thrust of no greater than 80 N (18 lbf), and a propellant weight of no greater than 62.5 g (2.2 oz), and that otherwise meets the other requirements set forth in NFPA 1125, Code for the Manufacture of Model Rocket and High Power Rocket Motors.

**3.3.9 Module.** A pyrotechnic component of a reloadable model rocket motor in which the chemical composition is loaded into a finished assembly by the manufacturer.

**3.3.10\* Motor Reloading Kit.** A product manufactured by a commercial manufacturer that contains the components and parts used to reload and reuse a reloadable rocket motor casing.

**3.3.11 Propellant.** The material(s) utilized in a rocket motor that produces thrust by the discharge of a working fluid generated by combustion, decomposition, change of state, or other operation of such material contained within the rocket motor.

**3.3.12 Rocket.** A device that ascends into the air without the use of aerodynamic lifting forces acting against gravity and that is propelled by one or more rocket motor(s).

**3.3.13 Rocket Engine.** See 3.3.14, Rocket Motor.

**3.3.14\* Rocket Motor.** A device containing propellant that provides the force or thrust to cause a rocket to move.

**3.3.14.1 Reloadable Rocket Motor.** A rocket motor that has been manufactured so that the user can load, reload, and reuse the pressure-resisting body or casing using the parts and components of a motor reloading kit.

**3.3.14.2 Solid Propellant Rocket Motor.** A rocket motor that contains a fuel and an oxidizer in solid form and whose force or thrust is produced by the combustion of the fuel and oxidizer.

**3.3.15 Structural Parts.** The load-bearing parts of a model rocket, specifically, the nose cone, body tube, and fins.

## **CHAPTER 4 Requirements for Model Rocket Construction, Operation, and Motor Storage**

### **4.1\* Model Rocket Operations.**

A model rocket shall comply with the requirements of construction and operation as set forth in 14 CFR 101.1 through 101.25, "Federal Aviation Administration Regulations."

### **4.2 Model Rocket Materials.**

**4.2.1** A model rocket's structural parts, including the body, nose cone, and fins, shall be made of paper, wood, or plastic and shall contain no metal parts.

**4.2.2** A model rocket motor casing that is metallic, reloadable, and meets the specifications in this code shall be permitted.

**4.2.3** A model rocket motor shall be assembled with all pyrotechnic ingredients preloaded into a cylindrical paper or similarly constructed nonmetallic tube that does not fragment into sharp, hard pieces.

### **4.3\* Model Rocket Recovery.**

**4.3.1** A model rocket shall have a means for returning it to the ground (for example, a parachute) so it can be flown again.

**4.3.2** All recovery wadding used in a model rocket shall be flame resistant.

### **4.4\* Model Rocket Weight Limits.**

**4.4.1** A model rocket shall weigh no more than 453 g (16 oz) at lift-off, including propellant.

**4.4.2** A model rocket shall use no more than 113 g (4 oz) of propellant, unless one of the following is met:

- (1)\* A model rocket that weighs in excess of 453 g (16 oz) but not more than 1500 g (53 oz), including propellant, shall be permitted if the Federal Aviation Administration notice requirements are met.
- (2) A model rocket that uses more than 113 g (4 oz) but less than or equal to 125 g

(4.4 oz) of propellant, shall be permitted if the Federal Aviation Administration notice requirements are met.

#### **4.5 Model Rocket Power Limits.**

A model rocket's installed motor(s) shall produce a total impulse of no more than 320 N-sec (72 lb-sec).

#### **4.6 Model Rocket Payloads.**

A model rocket shall not carry a payload that is designed to be flammable, explosive, or harmful to persons or property.

#### **4.7 Model Rocket Flight Paths.**

A model rocket shall not be launched on a flight path aimed at a target.

#### **4.8 Model Rocket Launch Site.**

A model rocket shall be launched outdoors in a cleared area, free of tall trees, power lines, buildings, and dry brush and grass.

#### **4.9 Model Rocket Launch Site Size.**

The launch site shall be at least as large as specified in Table 4.9.

**Table 4.9 Minimum Launch Site Dimensions**

<b>Installed Total Impulse (N-sec)</b>	<b>Equivalent Motor Type</b>	<b>Minimum Site Dimension</b>
<b>m</b>		<b>ft</b>
0 – 1.25	¼A and ½A	50
1.26 – 2.50	A	100
2.51 – 5.00	B	200
5.01 – 10.00	C	400
10.01 – 20.00	D	500
20.01 – 40.00	E	1000
40.01 – 80.00	F	1000
80.01 – 160.00	2F (or 1G)	1000
160.01 – 320.00	4F (or 2G)	1500

**4.9.1** For a circular area, the minimum launch site dimension shall be the diameter, and for a rectangular area it shall be the shortest side.

**4.9.2** A model rocket with an installed total propellant weight exceeding 113 g (4 oz) but less than or equal to 125 g (4.4 oz) shall comply with the additional operating notice requirements as set forth in 14 CFR 101.3 through 101.25, "Federal Aviation Administration Regulations."

**4.9.3** Type G motors with an installed total impulse of more than 80 N-sec (18 lb-sec), but not more than 160 N-sec (36 lb-sec), shall be permitted to be used by individuals 18 years old and older.

**4.9.4** As an alternative to the minimum launch site dimensions of Table 4.9, the size of the launch site shall meet one of the following criteria:

- (1) It shall be not less than one-half the maximum altitude as stated by the manufacturer for the model rocket and motor(s) combination being flown.
- (2) It shall be of a size approved by the authority having jurisdiction based on flight demonstration or data required to substantiate the anticipated altitude.

#### **4.10 Model Rocket Launchers.**

A model rocket shall be launched from a stable launch device that provides rigid guidance until it has reached a speed adequate to ensure a safe flight path.

#### **4.11 Model Rocket Launcher Eye Safety.**

**4.11.1** To prevent accidental eye injury, the launcher shall be placed so the end of the rod is above eye level, or the end shall be capped when approaching it.

**4.11.2** The launch rod shall be capped or disassembled when not in use and shall not be stored in an upright position.

#### **4.12 Model Rocket Launch Safety.**

**4.12.1** The launcher shall have a blast deflector device to prevent the motor exhaust from hitting the ground directly.

**4.12.2** The area around a launch device shall be cleared of brown grass, dry weeds, or other easy-to-burn materials.

#### **4.13 Model Rocket Ignition System.**

**4.13.1** The system used to launch a model rocket shall be remotely controlled and electrically operated.

**4.13.2** The system shall have a launching switch that returns to the "off" position when released.

**4.13.3** The system shall be equipped with a removable safety interlock in series with

the launch switch.

#### **4.14 Spectator Distances.**

**4.14.1** All persons shall remain at least 4.6 m (15 ft) from the model rocket during ignition of a model rocket motor with an installed total impulse of 30 N-sec (6.7 lb-sec) or less.

**4.14.2** All persons shall remain at least 9 m (30 ft) from the model rocket during ignition of a model rocket motor with an installed total impulse of more than 30 N-sec (6.7 lb-sec).

#### **4.15 Spectator Notification.**

**4.15.1** All people in the launch area shall be made aware of the pending model rocket launch.

**4.15.2** An audible 5-second countdown to launch shall take place.

#### **4.16 Model Rocket Misfires.**

If a model rocket misfires, no person shall approach the launcher until 1 minute has elapsed and the safety interlock has been removed or the battery has been disconnected from the ignition system.

#### **4.17 Model Rocket Launch Conditions.**

**4.17.1** A model rocket shall not be launched in a wind of more than 32 km/h (20 mph).

**4.17.2** A model rocket shall not be launched into a cloud.

**4.17.3** A model rocket shall not be launched near an aircraft in flight.

**4.17.4** A model rocket shall not be launched at an angle greater than 30 degrees from vertical.

#### **4.18\* Model Rocket Retrieval Safety.**

No attempt shall be made to retrieve a model rocket from a power line or other life-threatening area.

#### **4.19 Model Rocket Motor Requirements.**

**4.19.1** Only commercially manufactured, certified model rocket motors or motor reloading kits or components as specified in NFPA 1125, Code for the Manufacture of Model Rocket and High Power Rocket Motors, shall be used.

**4.19.2** No person shall dismantle, reload, or alter a single-use model rocket motor.

**4.19.3** No person shall alter the components of a reloadable model rocket motor or use the contents of a reloadable rocket motor reloading kit for a purpose other than those

specified by the manufacturer's instructions for the reloadable rocket motor or reloading kit.

#### **4.20 Residential Storage of Model Rocket Motors and Motor Components.**

**4.20.1** Not more than 23 kg (50 lb) net weight of solid propellant model rocket motors, motor reloading kits, or motor components shall be stored at a residence.

**4.20.2** Not more than 11 kg (25 lb) net weight of solid propellant model rocket motors, motor reloading kits, or motor components stored at a residence shall be permitted to be stored in the living quarters.

**4.20.3** Provisions for the storage of more than 23 kg (50 lb) net weight of solid propellant model rocket motors, motor reloading kits, or motor components at a residence shall be subject to the approval of the authority having jurisdiction.

### **CHAPTER 5 Prohibited Activities**

#### **5.1 Prohibited Activities.**

The following activities shall be prohibited by this code:

- (1) Using model rocket motors, motor reloading kits, or components for the primary purpose of producing a spectacular display of color, light, sound, or any combination thereof
- (2) Using a model rocket or model rocket motor, motor reloading kit, or component as a weapon
- (3) Using a model rocket, model rocket motor, motor reloading kit, or component contrary to the instructions for its use
- (4) Tampering with any model rocket motor or motor reloading kit or component in any manner or to any degree that is contrary to the purpose for which the model rocket motor, motor reloading kit, or component is designed and intended to be used
- (5) Making, operating, launching, flying, testing, activating, discharging, or other experimentation with model rocket motors, motor reloading kits, or motor components that have not been certified in accordance with NFPA 1125, Code for the Manufacture of Model Rocket and High Power Rocket Motors
- (6) Selling, offering for sale, exposing for sale, purchasing, making, or using fuse, wick, or other ignition devices intended to be activated by a handheld flame for the purpose of starting or igniting a model rocket motor
- (7) Exhibiting statements in writing, in advertising, or on packaging that certification in accordance with NFPA 1125, Code for the Manufacture of Model Rocket and High Power Rocket Motors, has been obtained, when such certification has not been obtained, has been withdrawn, or has been denied
- (8) Reloading any expendable solid propellant model rocket motor with any



material after that motor has been operated

- (9) Reloading any reloadable model rocket motor with any material or by any means not specifically provided or recommended by the manufacturer
- (10) Purchasing or using by persons 17 years old or younger of Type G model rocket motors that do not meet the specifications of 16 CFR 1500.85(8) and (9), “Consumer Product Safety Commission Regulations.”
- (11) Purchasing or using by persons 17 years old or younger of reloadable model rocket motors or motor reloading kits that do not meet the specifications of 16 CFR 1500.85(8) and (9), “Consumer Product Safety Commission Regulations.”

## **ANNEX A EXPLANATORY MATERIAL**

Annex A is not a part of the requirements of this NFPA document but is included for informational purposes only. This annex contains explanatory material, numbered to correspond with the applicable text paragraphs.

**A.3.2.1 Approved.** The National Fire Protection Association does not approve, inspect, or certify any installations, procedures, equipment, or materials; nor does it approve or evaluate testing laboratories. In determining the acceptability of installations, procedures, equipment, or materials, the authority having jurisdiction may base acceptance on compliance with NFPA or other appropriate standards. In the absence of such standards, said authority may require evidence of proper installation, procedure, or use. The authority having jurisdiction may also refer to the listings or labeling practices of an organization that is concerned with product evaluations and is thus in a position to determine compliance with appropriate standards for the current production of listed items.

**A.3.2.2 Authority Having Jurisdiction (AHJ).** The phrase “authority having jurisdiction,” or its acronym AHJ, is used in NFPA documents in a broad manner, since jurisdictions and approval agencies vary, as do their responsibilities. Where public safety is primary, the authority having jurisdiction may be a federal, state, local, or other regional department or individual such as a fire chief; fire marshal; chief of a fire prevention bureau, labor department, or health department; building official; electrical inspector; or others having statutory authority. For insurance purposes, an insurance inspection department, rating bureau, or other insurance company representative may be the authority having jurisdiction. In many circumstances, the property owner or his or her designated agent assumes the role of the authority having jurisdiction; at government installations, the commanding officer or departmental official may be the authority having jurisdiction.

**A.3.2.3 Code.** The decision to designate a standard as a “code” is based on such factors as the size and scope of the document, its intended use and form of adoption, and whether it contains substantial enforcement and administrative provisions.

**A.3.2.5 Listed.** The means for identifying listed equipment may vary for each organization concerned with product evaluation; some organizations do not recognize equipment as listed unless it is also labeled. The authority having jurisdiction should utilize the system employed by the listing organization to identify a listed product.

**A.3.3.6 Model Rocket.** A model rocket has structural parts made of paper, wood, and breakable plastic; it has a means for its return to the ground so it can be flown again; and its primary use is for purposes of education, recreation, and sporting competition.

**A.3.3.8 Model Rocket Motor.** Where the term model rocket motor is used in this code, it includes both assembled, reloadable model rocket motors and manufactured, expendable model rocket motors.

**A.3.3.10 Motor Reloading Kit.** The components and parts normally include a propellant module(s), a new model rocket motor nozzle, new insulation components, prepackaged delay and ejection modules, an electrical igniter, and the parts necessary to seal the casing during operation.

**A.3.3.14 Rocket Motor.** The force or thrust is created by the discharge of gas generated by combustion, decomposition, change of state, or other operation of materials contained, carried, or stored solely within the rocket motor or rocket and not dependent on the outside environment for reaction mass.

**A.4.1** The following is an excerpt from 14 CFR 101.1, “Federal Aviation Administration Regulations”:

(a) This part prescribes rules governing the operation in the United States of the following:

(1)

(2)

(3) Any unmanned rocket except:

(i) Aerial fireworks displays; and,

(ii) Model rockets:

(a) Using not more than four ounces of propellant;

(b) Using a slow-burning propellant;

(c) Made of paper, wood, or breakable plastic, containing no substantial metal parts, and weighing not more than 16 ounces, including the propellant; and

(d) Operated in a manner that does not create a hazard to persons, property, or other aircraft.

**A.4.3** Models should be launched only during daylight hours.

**A.4.4** A model rocket should weigh no more than the motor manufacturer's recommended maximum lift-off weight for the motors used or should use motors recommended by the kit manufacturer.

**A.4.4.2(1)** See 14 CFR 101.1 through 101.25, “Federal Aviation Administration Regulations.”

**A.4.18** It is recommended that, if a model rocket becomes entangled in a power line,

the utility company or other appropriate authority be notified.

## **ANNEX B MODEL ROCKET SAFETY CODE OF THE NATIONAL ASSOCIATION OF ROCKETRY**

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

### **B.1**

The Model Rocket Safety Code provides guidance applicable to activities involving model rockets for education, recreation, and sporting competition. The National Association of Rocketry also publishes an annotated version of the Model Rocket Safety Code.

- (1) **Materials.** I will use only lightweight, non-metal parts for the nose, body, and fins of my rocket.
- (2) **Motors.** I will use only certified, commercially-made model rocket motors, and will not tamper with these motors or use them for any purposes except those recommended by the manufacturer.
- (3) **Ignition System.** I will launch my rockets with an electrical launch system and electrical motor igniters. My launch system will have a safety interlock in series with the launch switch, and will use a launch switch that returns to the “off” position when released.
- (4) **Misfires.** If my rocket does not launch when I press the button of my electrical launch system, I will remove the launcher's safety interlock or disconnect its battery, and will wait 60 seconds after the last launch attempt before allowing anyone to approach the rocket.
- (5) **Launch Safety.** I will use a countdown before launch, and will ensure that everyone is paying attention and is a safe distance of at least 4.6 m (15 ft) away when I launch rockets with D motors or smaller, and 9.1 m (30 ft) when I launch larger rockets. If I am uncertain about the safety or stability of an untested rocket, I will check the stability before flight and will fly it only after warning spectators and clearing them away to a safe distance.
- (6) **Launcher.** I will launch my rocket from a launch rod, tower, or rail that is pointed to within 30 degrees of the vertical to ensure that the rocket flies nearly straight up, and I will use a blast deflector to prevent the motor's exhaust from hitting the ground. To prevent accidental eye injury, I will place launchers so that the end of the launch rod is above eye level or will cap the end of the rod when it is not in use.
- (7) **Size.** My model rocket will not weigh more than 1500 grams (53 ounces) at liftoff and will not contain more than 125 grams (4.4 ounces) of propellant or 320

N-sec (71.9 lb-s) of total impulse. If my model rocket weighs more than one point (453 grams) at liftoff or has more than 4 ounces (113 grams) of propellant, I will check and comply with Federal Aviation Administration regulations before flying.

- (8) **Flight Safety.** I will not launch my rocket at targets, into clouds, or near airplanes, and will not put any flammable or explosive payload in my rocket.
- (9) **Launch Site.** I will launch my rocket outdoors, in an open area at least as large as shown in Table B.1, and in safe weather conditions with wind speeds no greater than 20 miles per hour. I will ensure that there is no dry grass close to the launch pad and that the launch site does not present risk of grass fires.
- (10) **Recovery System.** I will use a recovery system such as a streamer or parachute in my rocket so that it returns safely and undamaged and can be flown again, and I will use only flame-resistant or fireproof recovery system wadding in my rocket.
- (11) **Recovery Safety.** I will not attempt to recover my rocket from power lines, tall trees, and other dangerous places.

**Table B.1 Launch Site Dimensions**

<b>Installed Total Impulse (N-sec)</b>	<b>Equivalent Motor Types</b>	<b>Minimum Site Dimensions (ft)</b>
0.00 - 1.25	¼A, ½A	50
1.26 - 2.50	A	100
2.51 – 5.00	B	200
5.01 – 10.00	C	400
10.01 – 20.00	D	500
20.01 – 40.00	E	1,000
40.01 – 80.00	F	1,000
80.01 – 160.00	G	1,000
160.01 – 320.00	Two Gs	1,500

**ANNEX C GLOSSARY**

This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

### **C.1 Aero Model.**

A miniature, unmanned flying device that includes the category of model rocket as defined in 3.3.6.

### **C.2 Skyrocket or Rockets with Sticks.**

Fireworks rockets not intended for re-use that meet the definition of skyrocket or missile-type rocket in the hazardous materials regulations of 49 CFR 172 and 173, "Department of Transportation Regulations." Fireworks rockets approved for transportation by DOT normally are classed as Fireworks UN 0335, Explosive 1.3G (formerly Class B Explosive, Special Fireworks) or Fireworks UN 0336, Explosive 1.4G (formerly Class C Explosive, Common Fireworks), depending on the quantity of pyrotechnic composition contained in the rocket. Skyrockets use a wooden stick for flight guidance and stability, while missile-type rockets use fins.

## ANNEX E INFORMATIONAL REFERENCES

### **E.1 Referenced Publications.**

The following documents or portions thereof are referenced within this code for informational purposes only and are thus not part of the requirements of this document unless also listed in Chapter 2.

#### **E.1.1 NFPA Publications. (Reserved)**

#### **E.1.2 Other Publications.**

**E.1.2.1 NAR Publications.** National Association of Rocketry, P.O. Box 177, 1311 Edgewood Drive, Altoona, WI 54720.

Model Rocket Safety Code of the National Association of Rocketry, 2001.

List of Certified Model Rocket Motors.

**E.1.2.2 TRA Publication.** Tripoli Rocketry Association, P.O. Box 970010, Orem, UT 84097.

List of Certified Model Rocket Motors.

**E.1.2.3 U.S. Government Publications.** U.S. Government Printing Office, Washington, DC 20402.

Title 14, Code of Federal Regulations, Parts 101.1–101.25, “Federal Aviation Administration Regulations.”

Title 49, Code of Federal Regulations, Parts 172–173, “Department of Transportation Regulations.”

### **E.2 Informational References. (Reserved)**

### **E.3 References for Extracts. (Reserved)**