

Title 19 California code of Regulations

Section 1030

Article 18

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§ 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.

Note: Authority cited: 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.

Note: Authority cited: 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.

Note: Authority cited: 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.

Note: Authority cited: 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.

Note: Authority cited: 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.

§ 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 degrees) 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 of Rocket	Radial Distance From Launcher
0-320 Newton-Seconds [FNa1]	30 feet
320.01-1280 Newton-Seconds [FNa1]	150 feet
1280.01-2560 Newton-Seconds [FNa1]	200 feet
2560.01-5120 Newton-Seconds [FNa1]	300 feet
5120.01-10240 Newton Seconds [FNa1]	500 feet
10241-20480 Newton Seconds [FNa1]	1000 feet

[FNa1] Rockets propelled by clusters of motors shall use the distance specified for the next higher impulse category.

Note: Authority cited: 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.

TABLE 18B

MINIMUM EXPERIMENTAL HIGH POWER ROCKET MOTOR LAUNCH SITE STANDARDS

Equivalent Motor Type	Maximum Combined Total Impulse (N-Seconds)	Minimum Launch Site Dimensions (feet)
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

Note: Authority cited: Section 12552, Health and Safety Code. Reference: Section 12552, Health and Safety

§ 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.

Note: Authority cited: 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 sites 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.

Note: Authority cited: Section 12552, Health and Safety Code . Reference: Section 12552, Health and Safety Code.

§ 1040. Launch Site Standards. [Repealed]

[s 1041. Testing. \(Repealed\)](#)s 1041. Testing. (Repealed)

§ 1042. Supervision. [Repealed]