

I. INTRODUCTION

- A. Purpose: The possession, storage and use of model rocket engines within the jurisdictional area of the Department is governed by the regulations of the State Fire Marshal and the Department.
- B. Scope: This Regulation shall pertain to all individuals who plan to sell, purchase, possess or fire model rocket engines within the jurisdiction of this Department. Specific limitations pertain to minors in varying age groups.
- C. Author: The Deputy Chief of the Prevention Services Bureau, through the Assistant Fire Chief (Fire Marshal) of the Fire Prevention Division, is responsible for the content, revision, and periodic review of this regulation.
- D. Authority: Chapter 6, Article 17, and Title 19 of the California Administrative Code.

II. RESPONSIBILITY

- A. All individuals who sell, purchase, possess or fire model rocket engines are responsible for compliance with this regulation.
- B. Fire Prevention Division personnel are responsible for the issuance of appropriate permits.

III. POLICY

- A. Model rocket safety is extremely important, especially since many of the users of model rockets are children. This Department will strictly enforce all laws, both state and local which pertain to the safe handling, use or sale of model rocket engines.

IV. PROCEDURES

- A. Permits: A Fire Prevention Division Fire Captain or Fire Inspector shall issue all Model Rocket Permits.
 - 1. Retail Sales: No person shall receive or possess any model rocket engine for retail sale without first securing a permit.

- a. Applicants shall obtain a Permit to Receive/Sell or use Model Rocket Motors from the Regional Fire Prevention office of the Fire Prevention Division.
 - b. Regional Fire Prevention Unit personnel shall issue all permits.
 - c. A model rocket user is prohibited from selling engines in his possession to any other person. The user shall keep all model rocket engines in his possession from the time of purchase to the time when the engine is installed in the model rocket during the preparation for firing.
2. Launch Sites: Model rockets shall not be launched from any site other than an approved launch site for which a permit has been issued. Such permits shall be issued by the Regional Fire Prevention Office, and may not be used unless the following has been complied:
- a. A plot plan shall be submitted indicating the firing area and recovery area.
 - b. A notarized statement from the owner of the property shall be submitted which must indicate the owner's awareness of this regulation and permission to launch model rockets on the subject property.
 - c. A physical inspection of the proposed launch site shall be made prior to the issuance of the permit.
 - d. Launch Site Permits may specify special provisions such as:
 - (1) Lines or barriers may be required to restrain spectators from encroaching upon required clearances.
 - (2) The Fire Department may require notification each time rockets are to be fired.
 - (3) Launch site may have to be secured in such a manner as to prevent unauthorized use in the absence of the permittee.

3. If a fire official determines that this regulation has been violated, it shall be just cause for the revocation of applicable permit to Receive/Sell or Use Model Rocket Motors.
 4. Any person who desires to manufacture, import, export, or sell model rocket engines at wholesale shall comply with the requirements of the State Fire Marshal. Information may be obtained by contacting the State Fire Marshal's Office in Monrovia, Phone (626) 305-1908.
- B. Age Restrictions: Model rocket engines shall not be sold, given or delivered to any person under 18 years of age with the exception that engines bearing the standardized engine coding 1/4A, 1/2A, A, B or C may be sold to any person not less than 14 years of age. See Figure 1.
1. Children not less than 12 years of age who are taking part in a model rocket education program may receive and fire approved model rocket engines when under the direct supervision and control of an adult. The approved model rocket engines must be obtained only from the adult in charge of the firing. Rocket engines for this exception are limited to engine codings 1/4A, 1/2A, A, B or C.
- C. Launch Sites shall meet the following requirements:
1. A launch site shall consist of a firing area and a recovery area.
 2. The firing area is that area immediately surrounding the launching devices within a radius of 10 feet.
 3. The firing area shall not be closer than 25 feet to the boundary of the launch site.
 4. The recovery area shall include the firing area and the minimum area determined necessary to retrieve the launched rocket. This minimum area shall be based upon the estimated height achieved by the model rocket. Use Figure 1 to evaluate the estimated height for various payloads and model rocket engine types.
 5. Launch sites shall not be located in grain fields, dry grass, brush and forest covered lands.
 6. Launch sites shall not include any buildings or structures unless approved by the Fire Prevention Division.

7. Launch sites shall not be operated in a manner that creates a hazard to persons or property.
8. Launch sites shall not contain or be located near any high voltage lines, major highways or any other obstacles deemed hazardous by the fire official.
9. The permittee or authorized representative designated on the permit shall be responsible for the safety of all spectators and other persons connected with the firing of model rockets and shall supervise the arming of the rocket with the rocket engine and the firing and disposing of all unfired or defective rocket engines.

D. Launching Requirements -- No launching of model rockets shall take place unless the following conditions are met:

1. Model rockets shall be launched only during daylight hours except where specifically approved by the Regional Fire Prevention office.
2. Surface wind at the launch site shall not exceed 20 mph and vertical visibility from the firing area shall be at least 2,000 feet.
3. A launching guide (tube, wire, or other suitable device) shall be used to restrict the horizontal motion of the rocket until sufficient flight velocity is achieved to maintain stability during flight. Model rocket engine ignition shall be by remote electrical means only and under the control of the persons launching the model and properly supervised.
 - a. A launching angle of not less than 60 degrees from the horizontal shall be used.
4. The recovery device material (parachute or other) ejected from the rocket during the launch-flight sequence shall be of flame resistant material meeting the standards established by the provisions of Subchapter 8 of the California Administrative Code.
5. All personnel conducting the firing shall maintain a clear distance of 10 feet from the launch platform during countdown and firing. All personnel assisting or observing the firing shall maintain a clear distance of 25 feet from the launch platform during countdown and firing.

- E. Testing: Model rocket engines may be fired on the ground for the purpose of determining performance. Testing locations shall be approved by the Regional Fire Prevention office and shall conform to the following minimum conditions:
1. The model rocket engine shall be affixed to a testing device or to an immovable structure in such a manner that the engine may not become free during the conduct of such test or experiment.
 2. The model rocket engine shall be ignited only by remotely operated electrical means fully under the control of the person conducting the test.
 3. When tests are conducted indoors, each model rocket engine tested shall be in a closed noncombustible hood or booth with a vent that shall lead directly to the outside of the building.
 4. Before a model rocket engine may be tested or fired, its exhaust path shall be cleared of all flammable objects prior to the igniting of such engine.
 5. Persons who conduct, participate in, or observe the testing or firing of a model rocket engine shall maintain a safe distance from such engine, and particularly its exhaust path.
- F. Storage: When kept in any dwelling, apartment house, lodging house or hotel, model rocket engines shall be stored in a stout wooden box or equivalent container. Storage of over 20 pounds shall be in a Class II magazine.

FIGURE 1

MODEL ROCKET LAUNCH SITE STANDARDS*

*Circular Areas - Minimum = Diameter in Feet: Rectangular Area - Minimum = Shortest

Engine Types All Time Delays	Minimum Dimension in Feet	Maximum Total Weight in Ounces of Rocket With Engine and any Payload	Longest Time Delay in Seconds Permitted For Maximum Total Weight**
1/4A -1/2 A	50	3	2
A	100	4	3
B	200	6	2
C	400	6	3
D	500	13	3
E	1000	17.66	4
F	1000	17.66	4

**Add one (1) second to time delays listed for each ounce the rocket (w/engine) weighs less than the maximum weights listed.

Example: For "B" engine in a rocket weighing 4 ounces total the time delay would be 2+2 = 4 seconds. Longest time delay permitted.