No. 705.2-AR

ADMINISTRATIVE
REGULATION

TURKEYFOOT VALLEY AREA
SCHOOL DISTRICT

705.2-AR MODEL ROCKETS

As used in this regulation, “model rocket” means an aero-model that ascends into the air without the use of aerodynamic lifting forces against gravity and is propelled by means of a model rocket engine, and “model rocket engine” means a device or combination of devices which provide the necessary force or motive power to cause the model rocket to move through the air.

Model rockets shall comply with the following requirements prior to launch, operation and flight:

1. Gross weight, including the model rocket engine, shall not exceed five hundred grams.

2. No more than four (4) ounces of propellant materials shall be contained in a model rocket engine at the moment of launch.

3. Model rockets shall be so constructed as to be capable of repeated flights and shall contain means for retarding descent to the ground so that the structure shall not be substantially damaged and no hazard shall be created to persons and property on the ground.

4. Construction shall be wood, plastic, paper, rubber or similar materials and without substantial metal parts.

5. Design and construction shall include attached surfaces with will provide aerodynamic stabilizing and restoring forces necessary to maintain a substantially true and predictable flight path.

6. A model rocket shall not contain any type of explosive or pyrotechnic warhead.

Model rocket engines which supply the propulsive force for a model rocket shall conform to the following standards:

1. A model rocket engine shall be a commercially-manufactured device or combination of devices wherein all chemical ingredients of a combustible nature are premixed and ready for use.

2. The force or motive power shall be created by a rearward discharge of gas generated by the combustion or other operation of materials contained solely within such device or combinations of devices.

3. Engines for model rockets must be certified by the National Association of Rocketry (NAR) for sales and use throughout the Commonwealth.

4. A model rocket engine shall be so designed and constructed as to be incapable of spontaneous ignition or combustion in air, water, under pneumatic or hydraulic pressure, as a result of motion or jarring, when subjected to a temperature of 170 degrees Fahrenheit or less, or in glycerine.

Model rockets may be launched, operated and flown only in a location, not otherwise restricted by law, which shall comply with the following minimum standards:

1. There shall be a ground area whose shortest dimension is no less than one-fourth (1/4) the anticipated maximum altitude of the rocket to be flown.

2. Flight areas shall be located in such places so as not to create a hazard to persons and property in the vicinity of the area.

3. Flight areas shall not contain or be located adjacent to high voltage power lines, major highways, multi-story buildings or other obstacles.

Model rockets may be launched upon compliance with the following conditions:

1. A device or mechanism shall be used which shall restrict the horizontal motion of the model until sufficient flight velocity shall have been attained for reasonably safe, predictable flight.

2. Launching or ignition shall be conducted by remote electrical means fully under the control of the person launching the model.

3. A launching angle of more than sixty degrees (60°) from the horizontal shall be used.

4. At least one (1) professional staff member shall inspect each model rocket before flight and shall supervise the launching of each model rocket.

5. All persons in the vicinity of the launching shall be advised that a launching is imminent before a model rocket may be ignited and launched.

6. Winds shall be less than twenty (20) miles per hour and visibility shall be greater than two thousand feet.

7. Model rockets in flight shall not create a hazard to aircraft. Rockateers must comply with the Federal Aviation Act of 1958 covering Federal Aviation Regulations Part 101, Subpart A, pp. 101.1 a. 3.ii a through d.

8. A model rocket shall not be used as a weapon against ground or air targets.

Model rocket engines may be tested on the ground for the purpose of determining performance or may be used as the motive power of an experiment conducted on the ground under the following minimum conditions:

1. The model rocket engine shall be affixed to a testing device or to an immovable structure in such manner that such 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 or experiment.

3. When tests or experiments are conducted indoors, the exhaust from each model rocket engine so tested shall be directed into a nonflammable hood or vent which shall lead directly to the outside of the building.

4. Before a model rocket engine may be tested or used experimentally on the ground, its exhaust path shall be cleared of all inflammable objects prior to the igniting of such engine.

5. Persons who conduct, participate in or observe static or ground testing of a model rocket engine shall stand a safe distance away from such engine, and particularly its exhaust path, at all times during the conduct of the testing.

6. At least one (1) professional staff member shall inspect each model rocket engine to be tested and the testing device to be used before such test may be conducted.

7. No model rocket engine shall be tested on the ground or shall be used as the motive power of an experiment conducted on the ground unless the conduct of such test or experiment is supervised by at least one (1) professional staff member.

The following activities are prohibited:

1. The use of model rocket engines for pyrotechnic purposes or for the primary purpose of producing a spectacular display of color, sound, light or any combination thereof.

2. Tampering with or making use of model rocket engine in any manner or degree which is contrary to the purpose for which such engine is designed and intended to be used, or contrary to the provisions of this act.

3. The ignition of any model rocket engine with such instantaneous and violent expansion of gas or relinquishment of energy as to cause rupture of the casing.

4. The launching, operating, discharging, flying or otherwise activating of a model rocket without first having fully complied with the foregoing provisions of this act.

Adopted: March 18, 2013