JUS-601175
(SOR/DORS)

Her Excellency the Governor General in Council, on the recommendation of the Minister of Natural Resources, pursuant to section 5[a] of the *Explosives Act*, hereby makes the annexed *Rocketry Regulations*.

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[a] S.C. 1993, c. 32, s. 3

**IMPORTANT INFORMATION**

*(This note is for information purposes and does not form part of the Rocketry Regulations.)*

The *Rocketry Regulations* establish safety standards specifically related to model rockets and high-power rockets. The *Rocketry Regulations* are part of a larger regulatory scheme of regulations made under the *Explosives Act* generally for the safety of the public.

Rocket motors and igniters are explosives

Rocket motors and igniters are "explosives" as defined in the *Explosives Act*. You must therefore comply with the requirements in that Act.

Basic requirements

You must also comply with the *General Explosives Regulations*, which set out the basic requirements for activities relating to all explosives, as well as information on importing explosives.

The use of high-power rockets is covered by the *Canadian Aviation Regulations* made under the *Aeronautics Act*. For more information about the use of high-power rockets contact Transport Canada, Canadian Launch Safety Office, P.O. Box 8550, 344 Edmonton Street, Winnipeg, Manitoba, R3C 0P6, tel. (204) 984-2005.

Definitions

The following terms are defined in the *Explosives Act* and are used in the *Rocketry Regulations*:

"inspector"

"inspector" means the Chief Inspector, an inspector of explosives, a deputy inspector of explosives and any other person who is directed by the Minister to inspect an explosive, a vehicle, factory or magazine or to hold an inquiry in connection with any accident caused by an explosive;

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"licensed magazine"

"licensed magazine" means a magazine in respect of which a licence issued under section 7 is in force;

"magazine"

"magazine" means any building, storehouse, structure or place in which any explosive is kept or stored, but does not include

(*a*) a place where an explosive is kept or stored exclusively for use at or in a mine or quarry in a province in which provision is made by the law of that province for efficient inspection and control of explosives stored and used at or in mines and quarries,

(*b*) a vehicle in which an authorized explosive is being conveyed in accordance with this Act,

(*c*) the structure or place in which is kept for private use, and not for sale, an authorized explosive to an amount not exceeding that authorized by regulation,

(*d*) any store or warehouse in which are stored for sale authorized explosives to an amount not exceeding that authorized by regulation, or

(*e*) any place at which the blending or assembling of the inexplosive component parts of an authorized explosive is allowed under section 8; **[Refer to comments re "lightening up" text re magazines: We cannot change definition in Act except to narrow it. Another solution?]**

Magazine repair

No section of the *Rocketry Regulations* deals with minor repair work on magazines. If you are considering major work that would constitute an alteration or addition to a magazine, or the rebuilding of any part of a magazine, the written authority of an inspector is required. **[We don't have any such section.]**

Information

To obtain the *List of Authorized Explosives* or for any other information related to model rockets, contact the Department of Natural Resources at the following address:

**Note to drafters: Add reference to internet site in all files:**

Chief Inspector of Explosives
Explosives Branch
Department of Natural Resources
580 Booth Street
Ottawa, Ontario
K1A 0E4
Tel. (613) 995-8415
FAX (613) 995-0480
http://www.nrcan.gc.ca/mms/explosif/

# ROCKETRY REGULATIONS

## TABLE OF CONTENTS

# ROCKETRY REGULATIONS[1]

## PART 1

## GENERAL

*Definitions*

Definitions

**1.** The definitions set out below apply in these Regulations.

"high-power rocket"

"high-power rocket" means a rocket that is

(*a*) constructed of balsa, wood, paper, fibreglass and breakable plastics and has a minimum of metal parts required to maintain airframe integrity depending on the installed total impulse;

(*b*) equipped with one or more high-opower rocket motors that will generate a total impulse exceeding 160 N-s or that contains more than 125 gm propellant;

(*c*) of a gross weight, including motors, exceeding 1500 gm;

(*d*) equipped with a parachute or other device capable of retarding its descent, so that no hazard is created to persons or property on the ground and if equipêd with recovery wadding, it must be flame retardant and biodegradable; and

(*e*) in the case of a rocket that weighs over 5 kg loaded, or it has a redundant recovery system that can be activated independently from the motor or ejection charge to provide safe recovery in the event of primary system failure.

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[1] The text that appears in footnotes is for information purposes and does not form part of these Regulations.

"high-power
rocket motor"

"high-power rocket motor" means a rocket motor that has a maximum total impulse of more than 160 N-s.

"igniter"

"igniter" means an electrical igniter that is used to ignite a rocket motor.... **(Drafters: We need to add a footnote like that following "rocket motor" defn.)**

"model rocket"

"model rocket" means a rocket that is propelled by one or more model rocket motors and that has a total installed impulse of 160 N-s or less. **(Note: changing the definition from 80 to 160 N-s affects the definition "model rocket"/"modèle réduit de fusée" in the *Canadian Aviation Regulations*, which states "means a rocket (a) equipped with model rocket <u>engines</u> that will not generate a total impulse exceeding 80 N-s (b) of a gross weight, including engines, not exceeding 500 g; and (c) equipped with a parachute or other device capable of retarding its descent." The *Can. Aviation Regs* have to be amended to follow new definition of model rocket -- less than 160 N-s, etc. [Client has agreed to speak to Transport Canada in this regard.)**

"model rocket
motor"

"model rocket motor" means a rocket motor that has a maximum total impulse of 160 N-s or less.

"recognized
rocketry
association"

"recognized rocketry association" means a rocketry association that has been declared by the Chief Inspector of Explosives, on the basis of the certification, safety and training programs the association uses to determine if its members have the necessary qualifications to use rockets of various grades, to be a recognized rocketry association.

"reloadable
rocket motor"

"reloadable rocket motor" means a model rocket motor or a high-power rocket motor that has a commercially manufactured reusable motor casing that is designed to be loaded and reloaded with a solid propellant unit. **(Client has agreed to check if there is anything in the Transport Canada publication "Launching High Power Rockets..." definition "reloadable rocket motor" that could be useful here?)**

"rocket"

"rocket" means a projectile or missile that contains its own rocket motor and whose flight is dependant on the reaction set up by the release of rapidly expanding gases of combustion.

"rocket motor"

"rocket motor" means a device that is commercially manufactured, or that is manufactured privately by hobbyists for non-commercial use under a "certificate" issued under the *Explosive Manufacturing Regulations*[2]

"solid propellant"

"solid propellant" means fuel and oxidizer in solid form, comprised of either compressed black powder or composite propellant.

"total installed impulse"

"total installed impulse" means the total power output of all rocket motors that are installed in a rocket and intended to be ignited during the launching and flight of the rocket.

*Weight*

Gross weight

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[2] Rocket motors that are declared to be authorized explosives under the *Authorization of Explosives Regulations* are listed in the *List of Authorized Explosives*. The List is updated by the Department of Natural Resources four times a year. Be sure to consult the most recent List. www.nrcan.gc.ca/mms/explosif/

**2.** In these Regulations, every reference to the weight of a rocket motor or igniter means its gross weight, including any packaging.

*Acceptable Distance*

Determination

**3.** Whenever these Regulations require rocket motors or igniters to be located at an acceptable distance from any site, that distance is determined by the Chief Inspector of Explosives based on the type and quantity of rocket motors and the surrounding structures and infrastructure. **("Acceptable distance" occurs in sections 19 and 24, re storage units and magazines; seems to be required.)**

*No Smoking or Open Flame*

Prohibition

**4.** It is prohibited to smoke or use an open flame, such as a lighter or match where rocket motors are stored or displayed for sale. **(Client: Are you suggesting we remove "welding equipment" reference in all other regulations?)**

Operator's
responsibility

**5.** (1) Every operator of a place where rocket motors are stored or an area where rocket motors are displayed for sale must make certain that the requirement in section 4 is met.

Post signs

(2) Every operator of a place where rocket motors are stored or an area where rocket motors are displayed for sale must post a clearly visible sign prohibiting smoking, in letters or symbols at least 10 cm high, in the area where rocket motors are displayed for sale and on each door to the magazine or storage unit, or on the container, if a container serves as a storage unit.

Exception

(3) An operator does not have to post the sign described in subsection (2) if a similar sign has already been posted in accordance with provincial or municipal law.

## PART 2

## PROHIBITED USES

*Prohibitions*

Only as designed

**6**. It is prohibited to use a rocket motor or igniter for any purpose other than that for which it was designed.

**7**. (1) No person shall use a rocket motor to propel a rocket at a living or inanimate target.

(2) No person shall attach an explosive, incendiary or live animal payload to a rocket.

**8**. No person shall manufacture rocket motors unless they hold a Factory Licence or, in the case of rocket motors by lobbyists, a certificate, issued under the *Explosives Manufacturing Regulations*.

## PART 3

## STORAGE

*Places of Storage*

Quantity and Place

**9**. (1) It is permitted to store the quantity of rocket motors set out in column 1 of an item in the table to this section in a place described in column 2 of that item, provided that the rocket motors are intended for private use and not for sale.

(2) When calculating the quantity of items described in column 1, the weight of the rocket motors and of the igniters, if any, must be combined.

(3) Rocket motors must be stored separately from igniters.
**(Client: (2) and (3) still seem contradictory in some way. To discuss proposed solution from comments.)**

TABLE

| Item | Column 1<br>Authorized Quantity | Column 2<br>Storage Place |
|---|---|---|
| 1. | up to 100 kg of model rocket motors and model rocket igniters | storage unit that is a container |
| 2. | up to 1 000 kg of model rocket motors and model rocket igniters | storage unit |
| 3. | more than 1 000 kg of model rocket motors and model rocket igniters | licensed magazine |
| 4. | up to 100 kg of high-power rocket motors and high-power rocket igniters | storage unit |
| 5. | more than 100 kg of high-power rocket motors and high-power rocket igniters | licensed magazine |

*Requirements for a Storage Unit*

Requirements

**10**. (1) A storage unit in which rocket motors or igniters are stored must meet the following requirements:

(*a*) it must be situated at an acceptable distance from any site where the presence of explosives poses an unacceptable danger to persons or property; and

(*b*) it must be constructed so that unauthorized access is prevented and the contents are protected from the weather.

Container

(2) If a container serves as a storage unit, it must be kept away from flammable goods and used only to store rocket motors or igniters.

*Limited Access*

Locked

**11**. A person who stores rocket motors or igniters in a storage unit must make certain that the unit is kept locked except when

access is required for handling the rocket motors or igniters or for any other necessary purpose.

*Storage Unit Maintenance*

Requirements

**12**. The operator of a storage unit in which rocket motors or igniters are stored must make certain that the unit is maintained as follows:

(*a*) the unit is kept clean, dry and organized; and

(*b*) the unit is kept free of grit, combustible or abrasive material, matches, any spark-producing or flame-producing device, and substances liable to ignite spontaneously.

*Storage Unit Procedures*

Requirements

**13**. A person who stores rocket motors or igniters in a storage unit must make certain that the following procedures are established and followed:

(*a*) a placard that is marked "UN Class 1.4G" or "UN Class 1.4S", as applicable where only model rocket motors are stored and "UN Class 1.3G" where high-power or both high-power and model rocket motors are stored, is posted on the outside of each door to the unit, or on the outside of the container if a container serves as a storage unit; and

(*b*) the unit is cool and dry to protect the rocket motors or igniters from deterioration and all reasonable precautions are taken to prevent fire in the unit. **[Client: Do we make the same change in all other files?]**

PART 4

STORAGE IN A LICENSED MAGAZINE

Prohibition

**14**. (1) In a magazine in which rocket motors or igniters are stored, it is prohibited to store any other type of explosives.

For handling or operation

(2) Only materials and equipment that do not endanger the explosives and that relate to the handling of the rocket motors or igniters or the operation of the magazine may be stored in a magazine in which rocket motors are stored **[Client: Do we make the same change in all other files?]**.

*Requirements for a Magazine*

Requirements

**15**. A magazine for rocket motors or igniters must meet all of the following requirements:

(*a*) it must be constructed so that unauthorized access is prevented and the contents are protected from the weather;

(*b*) if the magazine is in or attached to a building that is used for any other purpose, it must

(i) be separated from the other parts of the building by a wall, made of concrete or similarly resistant material, that meets the standards in the applicable building codes, and

(ii) be equipped with a smoke detector and sprinkler system; and

(*c*) it must be located at an acceptable distance[3] from any site at which the presence of explosives could pose a danger to persons or property.

*Limited Access*

Lock and key

(*a*) ensuring that all doors to the magazine are locked, except when access is required for handling the rocket motors or igniters or for any other necessary purpose, during which time the magazine must be monitored; and

(*b*) establishing a key-control plan for the magazine and ensuring that it is followed.

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[3] "acceptable distance"; see section 4.

*Magazine Maintenance*

Requirements

**17**. The operator of a magazine in which rocket motors or igniters are stored must make certain that the magazine is maintained as follows:

(*a*) the magazine is kept clean, dry and organized;

(*b*) the magazine is kept free of grit, combustible or abrasive material, matches, any spark-producing or flame-producing device, and substances liable to ignite spontaneously; and

(*c*) the area within 10 m of the magazine is kept free of all combustible material, including brush, dried grass, fallen leaves and anything else that could be a fire hazard.

*Magazine Procedures*

Requirements

**18**. The operator of a magazine in which rocket motors or igniters are stored must make certain that the following procedures are established and followed:

(*a*) a sign indicating the maximum quantity permitted by the licence is posted inside the magazine so that it can be easily read;

(*b*) packages or containers of rocket motors or igniters are stacked in a stable manner so that the stacks will not fall over or collapse and no containers are crushed or deformed;

(*c*) all portable lighting used in the magazine is impact-resistant;

(*d*) a placard that is marked "UN Class 1.4G" or "UN Class 1.4S", as applicable, where only model rocket motors are stored, and "UN Class 1.3G" in all other cases, is posted on the outside of each door to the magazine, or on the outside of the container if a container serves as a magazine; and

(*e*) the magazine is cool and dry to protect the rocket motors or igniters from deterioration and all reasonable precautions are taken to prevent fire in the magazine.

## PART 5

## SALE, PURCHASE AND POSSESSION

*Licence Requirements*

To sell

**19**. (1) A person must hold a Storage Licence for Sale or Use to sell, give or exchange

(*a*) more than 1 000 kg of model rocket motors and igniters; or

(*b*) any quantity of high-power rocket motors and their igniters.

To use

~~(2) A person must be an operator of a factory that is the subject of a Factory Licence or a magazine that is the subject of a Storage Licence for Sale and Use to store for use~~

~~(*a*) 1 000 kg or more of low hazard ppp;~~

~~(*b*) 100 kg or more of high hazard ppp.~~

~~To repackage~~

~~(3) A person must be an operator of a factory that is the subject of a Factory Licence or a magazine that is the subject of a Storage Licence for Sale and Use to repackage ppp.~~ **[Client: Confirm required)**

**20**. (1) It is prohibited to attempt to purchase, purchase, sell or attempt to sell model rocket motors or model rocket igniters except as follows: **[Jacinthe: Please note there is a whole separate Part on "use" where age restrictions should go even if we have to repeat!]**

(*a*) in the case of single use model rocket motors with a total installed impulse of up to 40 N-s and any igniters for model rocket motors, the vendor and purchaser must be at least 12 years old;

(*b*) in the case of single use model rocket motors with a total installed impulse of more than 40 but not more than 80 N-s, the vendor and purchaser must be at least 16 years old;

(*c*) in the case of single use model rocket motors with a total installed impulse of more than 80 but not more than 160 N-s, the vendor and purchaser must be at least 18 years old;

(*d*) in the case of reloadable model rocket motors, the vendor and purchaser must be at least 18 years old; and

(*e*) in all cases, the vendor must ensure that the purchaser is informed of **[Put this info in a schedule. To discuss format with client]**.

(i) the relevant storage requirements,

(ii) the content of section 602.45 of the *Canadian Aviation Regulations*,

(iii) the age restrictions on firing model rockets, and

(iv) the need for adult supervision when firing model rockets.

(2) It is prohibited to attempt to purchase, purchase, sell or attempt to sell high-power rocket motors or high-power rocket igniters except as follows:

(*a*) the vendor must

(i) be at least 18 years old,

(ii) hold a Storae Licence for Sale or Use,

(iii) ensure that the purchaser is informed of the relevant storage requirements, the content of sections 602.43 to 602.45 of the *Canadian Aviation Regulations* and the age restriction on firing high-power rockets **[Put this info in a schedule. To discuss format with client]**, and

(iv) keep a record of the sale for a period of at least 3 years beginning on the date of sale; and

(*c*) the purchaser must

(i) be at least 18 years old, and

(ii) hold a certificate issued by ~~a recognized rocketry association or~~ the Chief Inspector of Explosives for the rocket motor power range being purchased. **[Client: This certificate**

**and the basis on which it is issued must be more clearly set out. We have serious concerns that a certificate issued by a recognized rocketry association would constitute an illegal subdelegation.]**

*Prohibited Places to Display for Sale*

Prohibitions

**21**. It is prohibited to display rocket motors or igniters for sale in the following places:

(*a*) in a dwelling;

(*b*) in a tent, trailor or other shelter;

(*c*) in a place that is less than 5 m from a bulk flammable substance storage tank or dispensing unit, such as a gas station; or

(*d*) in a place that is between 5 and 30 m from a bulk flammable substance storage tank or dispensing unit, such as a gas station, unless the articles are separated from the tank or unit by a structural external wall. **[Client: Doesn't cover theft or excessive heat/open flame. To discuss]**

*How to Display for Sale*

Requirements

**22**. (1) A person who displays rocket motors or igniters must make certain that all of the following requirements are met:

(*a*) the articles must be in lots of not more than 25 kg each that are separated from each other to prevent a fire in one lot from spreading immediately to another lot;

(*b*) rocket motors must be displayed separately from igniters, and neither can be displayed with any other type of explosives, except, in the case of rocket motors, other types of rocket motors and, in the case of igniters, other types of igniters;

(*c*) the articles must be separated from flammable goods, such as fuels, paints and solvents, to prevent a fire from spreading immediately from the flammable goods to the rocket motors or igniters;

(*d*) the article must not be exposed to any heat or any substance that could cause ignition, such as could be generated by a furnace or barbeque;

(*e*) the articles must not be exposed to heat or dampness that could cause them to deteriorate; and

(*f*) the articles must be inaccessible to the public by being either

(i) locked up, such as in a display case, or

(ii) placed in an area that the public does not have access to, such as behind a sales counter.

Exception

(2) Despite paragraph (1)(*f*), rocket motors or igniters that are in sealed packaging do not have to be inaccessible to the public if they are monitored.

*Display Area Requirements*

Requirements

**23**. (1) Subject to subsection (2), an area where rocket motors or igniters are displayed for sale must meet all of the following requirements:

(*a*) if the display area is attached to a dwelling, storage unit or place that contains a storage unit, it must be separated from the dwelling or storage unit by a wall that

(i) meets the standards in applicable building codes, and

(ii) resists fire enough to allow all occupants to safely evacuate in the event of a fire;

(*b*) it must have at least two unobstructed exits that permit quick exit in an emergency; and

(*c*) it must be kept secure from unauthorized access when it is not open for business.

(2) Subsection (1) does not apply to display areas for model rocket motors that are classified as "UN Class 1.4S".

## PART 6

## USE

*Model Rocket Launch Site Requirements*

**24**. The site for launching a model rocket must meet the following criteria:

(*a*) in the case of a model rocket described in columns 1 to 4 of an item in Schedule 2, the launch site may be located at the distance from the centre of an airport set out in column 5 of that item;

(*b*) it must not **constitute (isn't it the launched rocket that is hazardous?)** a hazard to persons or property in the vicinity, including low-flying aircraft; **(See comment above; this repeats *Can Aviation Regs*)**

(*c*) the site must meet the minimum site dimensions set out in column 5 of an item of Schedule 1 for a model rocket described in columns 1 to 4 of that item;

(*d*) it must not be located near hazardous areas or structures such as high-rise buildings, overhead power lines, major highways, where a risk of property damage or to public safety could arise; and

(*e*) the use of the site for launching a model rocket must be approved by the property owner or lessee.

*Model Rocket Launch Pad Requirements*

**25**. No person shall launch a model rocket unless the following requirements are met:

(*a*) the area within 5 m of the launch pad is kept free of combustible materials or loose objects that could be propelled by rocket motor exhaust;

(*b*) the launch pad must be stable and capable of guiding the initial portion of the rocket's lift-off phase to promote stable flight performance;

(*c*) the end point of the launch pad or rail rod must be raised above eye level to prevent eye injury or, if this is not possible, a guard must be placed on the end point between launches;

(*d*) the launch pad must be equipped with an exhaust deflector to keep the rocket motor exhaust from directly striking the ground and, if the launch pad is angled, the exhaust deflector must be oriented to deflect exhaust away from all observers and launch crews; and

(*e*) the angle of the launch pad must not be greater than 60 degrees from the horizontal.

*Model Rocket Firing System Requirements*

**26**. The firing system for a model rocket must meet the following requirements:

(*a*) it must be remote and electrically actuated;

(*b*) it must be equipped with a controller firing switch that returns to the "off" position when released;

(*c*) it must be equipped with a second means of protection, such as a safety key interlock, that prevents accidental or premature firing;

(*d*) the controller **[Client: is this the same thing as the "controller firing switch" in (b)?)** must be located

(i) at least 5 m from the launch pad, in the case of rockets that are equipped with rocket motors of up to 30 N-s total installed impulse, and

(ii) at least 15 m from the launch pad, in the case of model rockets that are equipped with rocket motors of more than 30 N-s total installed impulse;

(*e*) the power supply must be tested before the launch and found to be of sufficient strength to reliably ignite the rocket motor within one second of actuation; and

(*f*) the controller and its power supply must not be connected until the moment of launching.

*Model Rocket Launch Requirements*

**27**. No person shall launch a model rocket unless the following requirements are met:

(*a*) the model rocket igniter

(i) must not be installed until immediately before the launch, and

(ii) must be connected to the firing system only after having been installed in the rocket motor and the rocket has been positioned on the test bench;

(*b*) no hand or other body part may be placed over a lift-off ready rocket on its launch pad;

(*c*) the wind velocity must be less than 30 km/hour;

(*d*) the launch must be during daylight hours when visibility is at least the maximum predicted altitude of the flight or 1000 m, whichever is greater;

(*e*) model rockets must not be launched into cloud;

(*f*) at the time of the launch, no person shall be located closer than

(i) 5 m from the launch pad, in the case of model rockets equipped with a motor or total installed impulse of up to 30 N-s, and

(ii) 15 m from the launch pad, in the case of model rockets equipped with a motor or total installed impulse of greater than 30 N-s total installed impulse,

(*g*) all spectators and persons who are not involved in the launch must be located at least 50 m away from the launch pad;

(*h*) a loud warning followed by a countdown of at least 5 seconds duration must precede each launch;

(*i*) unproven rocket designs shall be test flown in isolation with minimal participation; **[Client: meaning still vague? amplify please.)**

(*j*) if there is a misfire,

(i) the model rocket must not be approached until the power supply has been disconnected from the firing circuit and a 2 minute waiting period has passed, and

(ii) the igniter must be removed, by some means that keeps the hands away from the exhaust nozzle, from any misfired motor while the rocket is on its launch pad; and

(*k*) in the case of a competitive meet with more than 50 launches, all airports within 20 km of the launch site must be informed of the location and the start and finish times of the event.

**28**. Static testing of **model rocket motors** must only be conducted under the following conditions:

(*a*) the rocket motor must be fixed to an immovable test bench in a manner that it will not come free during the test;

(*b*) the rocket motor must be remotely ignited by electrical means at a safe distance in keeping with the launch requirements set out in 36(*a*), (*b*), (*f*), (*g*), (*h*) and (*j*);

(*c*) the temperature of the rocket motor must not be greater than 80 degrees C at the time of testing; and

(*d*) if the test is conducted indoors, an efficient means of evacuating exhaust gases must be provided for and precautions taken to clear the exhaust path of combustibles.

*Use of Reloadable Rocket Motors*

**29**. It is prohibited for a person to reload a model rocket motor or a high-power rocket motor unless the person is at least 18 years old.

*Launch of High-Power Rocket Motors*

No person shall launch a high-power rocket **unless they are a certified user** and do so in accordance with the *Aeronautics Act* and the *Canadian Aviation Regulations*. **( We are not regulating here. Note: the concept of "certified user" is from the Transport Canada publication "Requirements for Launching High Power Rockets in Canada". It states that a certified user is a "person who has met the requirements of Natural Resources Canada - Explosives Division**

**and is capable of all the requirements set out in this document." Where is this idea in these Regulations? Is it embedded in the concept of the recognized rocketry association or individual? What are your criteria for certifying such a person?**

**The Transport Canada publication covers rocket motors made from liquid propellants too (see definition "rocket engine" where they set out a rationale for the distinction between engine and motor). We do <u>not</u> want to cover liquid propellant motors in our Regulations. To discuss.)**

*coming into force*

registration
date

30. These Regulations come into force on the day on which they are registered.

# SCHEDULE 1

*(Subsection 31(1))*

| Item | Column 1<br>MotorType | Column 2<br>Total Impulse (N-s) | Column 3<br>Recommended Model Weight (gm) | Column 4<br>Recommended (seconds) | Column 5<br>Site Dimension (m.) |
|---|---|---|---|---|---|
| 1. | ¼A - ½A | 0.00-1.25 | 85 | 2 | 15 |
| 2. | A | 1.26-2.50 | 115 | 3 | 30 |
| 3. | B | 2.51-5.00 | 170 | 2 | 60 |
| 4. | C | 5.01-10.00 | 170 | 3 | 1 220 |
| 5. | D | 10.01-20.00 | 370 | 3 | 150 |
| 6. | E | 20.01-40.00 | 1 000 | 4 | 300 |
| 7. | F | 40.01-80.00 | 1 500 | 4 | 300 |
| 8. | G | 80.01-160.00 | 1 500 | 5 | 300 |
| 9. | 2G | 160.01-320.00 | 1 500 | 6 | 500 |

## SCHEDULE 2

*(Section 31(2))*

| Item | Column 1<br>MotorType | Column 2<br>Total Impulse (N-s) | Column 3<br>Minimum Weight (gm) | Column 4<br>Minimum-Body Diameter (mm) | Column 5<br>Minimum-Distance from Airport (km) |
|---|---|---|---|---|---|
| 1. | ¼A | 0.00-0.625 | 15 | 13 | 3 |
| 2. | ½A | 0.626-1.25 | 20 | 13 | 3 |
| 3. | A | 1.251-2.50 | 30 | 13 | 5 |
| 4. | B | 2.51-5.00 | 50 | 18 | 5 |
| 5. | C | 5.01-10.00 | 75 | 24 | 5 |
| 6. | D | 10.01-20.00 | 100 | 35 | 5 |