

CODE OF PRACTICE

FOR

RETAIL FIREWORKS

**CATEGORIES: 1.3G (UN 0335), 1.4G (UN 0336)
AND 1.4S (UN 0337)**

**DESIGN, PERFORMANCE, TESTING, STORAGE, TRANSPORT,
SALE AND USE**

Disclaimer

This code of practice does not take the place of the HSNO Act or Regulations or any other Acts and Regulations referred to. Where any differences or conflicts occur between these notes and any legislation, the legislation takes precedence.

PREFACE

This HSNO Code of Practice was prepared to specifically address the design, performance, testing, storage, transport, sale and use of Retail Fireworks Class 1.3G (UN 0335) 1.4G (UN 0336) and 1.4S (UN 0337).

The objective is to provide importers, manufacturers and distributors of fireworks with assessment criteria that will ensure that a Test Certificate can be issued and the public can be supplied with fireworks that are safe to use in the environment in which they are intended to be used.

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SECTION 1

1. SCOPE AND GENERAL

1.1. Scope

This Code of Practice sets out requirements for the design, performance, testing, storage, transport, sale and use of retail fireworks categories 1.3G (UN 0335), 1.4G (UN 0336) and 1.4S (UN 0337).

This document is intended to be performance based. It includes common criteria that are applicable to all fireworks and also aims to provide guidance on the testing of retail fireworks.

Note: For types and descriptions of Retail Fireworks, see Appendix A.

The Code of Practice does not apply to –

- (a) indoor theatrical and film sets fireworks;
- (b) distress signals;
- (c) model rocket motors;
- (d) display fireworks
- (e) novelty fireworks, as listed in regulation 4(2) of the Hazardous Substances (Fireworks) Regulations 2001.

1.2. Referenced Documents

The following documents are referred to in this Code of Practice:

- HSNO Act 1996 plus HSNO Amendment Act 2000
- HSNO Act (Personnel Qualifications) Regulations 2001
- Hazardous Substances (Classes 1 – 5 Controls) Regulations 2001
- Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001
- Hazardous Substances (Classification) Regulations 2001
- Hazardous Substances (Packaging) Regulations 2001
- Hazardous Substances (Identification) Regulations 2001

- Hazardous Substances (Fireworks) Regulations 2001 plus variations as outlined in Transfer Report 2002
- Hazardous Substances (Tracking) Regulations 2001
- Hazardous Substances (Emergency Management) Regulations 2001
- The 11th revised edition of the Recommendations on the Transport of Dangerous Goods Model Regulations, published in 1999 by the United Nations (New York and Geneva).

1.3. Definitions

For the purpose of this Code of Practice the following definitions apply;

THE HSNO ACT:

Act means the HSNO Act 1996 plus Amendments;

Authority means the Environmental Risk Management Authority established under section 14 of this Act;

Firework means an object containing small quantities of hazardous substances with explosive properties enclosed in a case of paper or similar material of such a strength, construction and character that the ignition or explosion of one such firework will not cause the explosion en masse of similar fireworks kept or carried with it and whose sole or principal effect is not percussive or vertical or horizontal flight;

Hazard Classification means a combination of the hazardous property of a substance and the level or type of hazard related to that property prescribed in accordance with section 74 of this Act:

Hazardous Substance means, unless expressly provided otherwise by regulations any substance –

- (a) With one or more of the following intrinsic properties:
 - (i) Explosiveness;
 - (ii) Flammability;
 - (iii) A capacity to oxidise;
 - (iv) Corrosiveness;
 - (v) Toxicity (including chronic toxicity);
 - (vi) Ecotoxicity, with or without bioaccumulation; or
- (b) Which on contact with air or water (other than air or water where the temperature or pressure has been artificially increased or decreased) generates a substance with any one or more of the properties specified in paragraph (a) of this definition:

Identification means the provision of any information about a substance or organism which –

- (a) Clearly identifies the chemical or biological nature of the substance or organism;
- (b) Specifies the nature and degree or type of hazard intrinsic to the substance or organism;
- (c) Describes precautions to be taken by persons managing hazardous substances to avoid injury to people or environmental damage:

- (d) Directly or indirectly aids in managing any hazardous effect of a hazardous substance:
- (e) Identifies and specifies the means of contacting any person knowledgeable in the management of the substance:

Importation in relation to hazardous substances has the same meaning as in section 47 of the Customs Act 1966; and 'to import', in relation to those substances, has a corresponding meaning:

Lifecycle in relation to a substance, means the time for which the substance is in existence from (and including) its manufacture or importation to its disposal:

Regulations mean regulations in force under this Act:

Substance means –

- (a) Any element, defined mixture of elements, compounds, or defined mixture of compounds, either naturally occurring or produced synthetically, or any mixtures thereof:
- (b) Any isotope, allotrope, isomer, congener, radical, or ion of an element or compound which has been declared by the Authority, by notice in the *Gazette*, to be a different substance from that element or compound:
- (c) Any mixtures or combinations of any of the above:
- (d) Any manufactured article containing, incorporating, or including any hazardous substance with explosive properties:

Test Certificate means any certificate issued by a test certifier in accordance with section 82 of this Act which certifies that a requirement specified in regulations has been met:

THE HAZARDOUS SUBSTANCES (FIREWORKS) REGULATIONS 2001

Firework has the same meaning as in section 2 of the Act

Pyrotechnic Substance has the same meaning as in Part 2 of Schedule 1 of the Hazardous Substances (Classification) Regulations 2001 (ie. means a substance that produces pyrotechnic effects; where pyrotechnic effect, in relation to a substance that is initiated, means the production in that substance of a self-sustaining exothermic chemical reaction resulting in heat, sound, light, gas, smoke, or motion, or a combination of these.)

Retailer means a person engaged in a business that includes the sale of fireworks for any reason other than for resale by the person to whom the fireworks are sold.

1.4. General Requirements

1.4.1. General Design

Sufficient information shall be provided to enable the safe ignition and observation of the fireworks. The fireworks shall function in a safe and predictable manner. To accomplish this, consideration shall be given to –

- (a) ignition method and fuse burning time;
- (b) pyrotechnic content and composition;
- (c) construction type and integrity;
- (d) performance of the firework;
- (e) debris characteristics;
- (f) size of the area affected during the functioning of the firework; and
- (g) the fire and health risks posed by the firework.

1.4.2. User Information

Information shall be provided for the safe use of the firework. The way in which the firework functions shall be described to enable users to select fireworks appropriate for their needs. Instructions for use shall be provided, along with any necessary warnings to enable the firework's safe use. Such information shall be easy to comprehend and shall be legible. Instructions shall be in English.

1.4.3. Ignition Method

The manner by which the firework is ignited shall be readily identifiable and shall be by an appropriate method as recommended by the manufacturer or supplier. The time elapsed from lighting to functioning shall be sufficient to allow the user to retire to a safe distance but not so long that it may appear to be a misfire [see section 2.1]. This shall also apply to the time elapsed between the functioning of successive elements of the firework.

Note: Methods of ignition requiring a flame should be suited to the use of ordinary matches. The use of cigarette lighters or similar, should not be necessary. Retail fireworks (other than novelty pyrotechnics) must not have their own means of ignition.

1.4.4. Pyrotechnic Content

The pyrotechnic content shall be such that use of the article is not likely to injure a person standing a minimum of 3 metres away. The composition of the pyrotechnic shall be such that the firework is stable and safe during manufacture, sale, use, transport, handling and storage.

1.4.5. Percussive Effect

The sole or principal effect of retail fireworks must not be percussive in nature. Any percussive effect of a firework must be:

- (a) no greater than is necessary to achieve the visual effect of the firework;
- (b) a subsidiary effect only

If a retail firework contains flash powder, the flash powder should be exclusively for visual effect, and not for percussive (aural) effect.

Note: The pyrotechnic substance contained in a retail firework should not contain greater than 5% by weight of flash powder.

SECTION 2

2. DESIGN CRITERIA

Reference: Hazardous Substances (Fireworks) Regulations 2001

2.1. Construction and Design

Reference: Regulation 11 Hazardous Substance (Fireworks) Regulations 2001

Retail Fireworks shall –

1.
 - (a) not contain more than 40g of pyrotechnic substances; and
 - (b) not include –
 - (i) any chlorate mixed with sulphur, phosphorus, or any sulphide (unless the fireworks are an amorce);
 - (ii) any toxic substances of classification 6.1A, 6.1B, or 6.1C other than traces of antimony, arsenic, cadmium, chromium, lead, mercury, nickel, selenium, zinc and their compounds; and

[Note: Firework substance certificates issued by the manufacturer which cover compliance with (1)(a) and (1)(b) are mandatory and will normally be accepted as a means of compliance with regulation 11 unless there is reason to suspect their accuracy in which case further samples will be drawn for testing by a recognised laboratory for compliance, at the importers expense]

- (c) be constructed in a manner that does not allow pyrotechnic substances to escape at any time; and
- (d) not have their own means of ignition; and
- (e) not, if the fireworks are shaped as hand-held fireworks, discharge fire and burst the casing following ignition; and
- (f) not be in the shape of a gun, grenade, or similar device that could suggest the fireworks may be pointed or thrown at a person; and
- (g) have instructions for use on the outer case, or packet, if there are no outer cases; and
- (h) not, when used in accordance with the instructions for the use of the fireworks, on discharge, result in hot or burning material falling to the ground in a manner that creates a hazard; and
- (i) have a fuse burning time of not less than 3 seconds and not more than 11 seconds; and
- (j) not have a tube diameter of more than 22mm.

[Note: Tube and multi-tube fireworks should not have a tube size exceeding 20mm plus 2mm allowance and a maximum delay between cessation of one tube and the firing of the next tube of 5 seconds.]

2.

The instructions required by sub clause (1) must comply with Regulations 34 (comprehensibility), 35 (clarity) and 36 (Durability) of the Hazardous Substances (Identification) Regulations 2001.

SECTION 3

3. PERFORMANCE

Reference: Regulation 11(1)(g) Hazardous Substances (Fireworks) Regulations 2001

3.1. General

Retail Fireworks 1.3G (UN 0335), 1.4G (UN 0336) and 1.4S (UN 0337) are firework articles suitable for use in a small area, such as a suburban backyard by persons with no training in the safe use of fireworks, for example children under adult supervision.

The performance of Retail Fireworks shall be such that persons following reasonable instructions for their use and observing the fireworks are not, as far as practicable exposed to the risk of injury, nor should property be exposed to damage from fire.

Retail Fireworks shall be stable when resting in position before lighting and when discharging.

Note: Stability is an issue of great concern and if any item during testing exhibits a fault in this area it will be deemed to be not approved. Retail fireworks are assessed on stability in the manner that they are sold. If a stand is attached the firework will be tested with that support but if a firing t/support has to be purchased then the retail firework will be tested without such a device.

When used in accordance with the instructions for use the fireworks will not create a hazard by discharging hot or burning material.

It is generally accepted that to comply with this performance requirement the area affected by the functioning of the firework shall be less than 3m radius at ground level and to a minimum height of 3m. Nor shall any debris other than paper, cardboard, fabric, plastic foam, clay or any other combination thereof be permitted to fall outside the 3m radius. Nor should any debris be projected laterally more than 3m from the point of initiation.

Note: These requirements impose limits on such aspects as how far projectiles and burning debris are thrown and the size of the area affected during the functioning of the firework and therefore, the distance from which it is safe to observe.

SECTION 4

4. TESTING PROTOCOL FOR RETAIL FIREWORKS

References:

Hazardous Substances (Fireworks) Regulations 2001 Reg.9, 10, 11

Hazardous Substances and New Organisms (Personnel Qualifications) Reg.11

Hazardous Substances (Tracking) Regulations 2001 Reg.4

4.1. Introduction

The importer of a consignment of fireworks into New Zealand must obtain a Test Certificate for all fireworks of each type within that consignment. This certificate will be required before the consignment can be released by letter of authority. This is consistent with the requirement in Regulation 4(2) of the Tracking Regulations. Similarly, the manufacturer of a batch of fireworks in New Zealand must obtain a Test Certificate for each batch before they can be released from the manufacturing site. In both cases, the Test Certificate must be obtained before the fireworks are supplied to any retailer who must be provided with copy of the Test Certificate on request.

4.2. Testing

The testing shall be undertaken by an ERMA approved Test Certifier (Explosives – Fireworks).

4.3. Testing Environment

All performance field testing of fireworks shall be conducted at an isolated area that has been approved for the use of explosives. The test area shall be on level cleared ground having a radius of at least 10m with a smooth hard surface.

A marked circle of 3m radius shall be provided around the firing point, with posts marked with 3m height indication at the perimeter of the circle.

4.4. Testing Procedure

Reference: Hazardous Substances (Firework) Regulations 2001 Regulation 11

1. The Test Certificate must certify that the objects of the consignment or batch are fireworks, within the context of these regulations and must identify the consignment or batch (e.g. by batch number). The Test Certificate must also certify that the fireworks contained in that particular consignment or batch:
 - (a) do not contain more than 40g of pyrotechnic substances
 - (b) do not include –
 - (i) contain any chlorate mixed with sulphur, phosphorus or any sulphide (unless the fireworks are an amorce.)
 - (ii) do not contain any toxic substances of hazard classifications 6.1A, 6.1B or 6.1C other than traces on antimony, arsenic, cadmium, chromium, lead, mercury, nickel, selenium, zinc and their compounds
 - (c) are constructed in a manner that does not allow pyrotechnic substances to escape at any time (except during use)
 - (d) do not have their own means of ignition

- (e) do not, if they are shaped as a hand-held firework, discharge fire on ignition and conclude with an explosion which bursts the casing
- (f) are not in the shape of a gun, grenade, or similar device that could suggest the fireworks may be pointed or thrown at a person
- (g) have instructions for use on its outer case, or packet if there is no outer case
- (h) when used in accordance with the instructions for the use of the fireworks, do not, on discharge, result in hot or burning material falling to the ground in a manner that creates a hazard
- (i) have a fuse burning time of between 3 seconds and 11 seconds
- (j) do not have a tube diameter of more than 22mm.

Appendix C All of the above information is recorded on a standard test sheet, copy attached as Appendix C.

2. The instructions required by sub clause (1)(g) must comply with Regulations 34 (comprehensibility) and 35 (clarity) of the Hazardous Substances (Identification) Regulations 2001.
3. A copy of the test certificate must be given to the Authority by the test certifier as soon as practicable after the certificate is issued.
4. Despite sub clause (1), if regulation 10(6) or regulation 10(7) applies, the test certificate must not certify that sub clause (1)(b) is complied with, but must certify that the obligation to test for compliance with that sub clause has been waived.

Note: *It should be borne in mind by the Test Certifier that some fireworks may perform in a dangerous manner and appropriate precautions should be taken. Protective visor, earmuffs, fireproof clothing and safety footwear should be worn.*

4.5. Pyrotechnic Content / Weight Checking and Chemical Testing

It is mandatory for manufacturers to supply a fireworks substance certificate particular to the item being imported which covers powder content and chemical composition. This certificate is accepted as meeting the requirements of Regulation 11(1)(a), (b) and (c)

If the Test Certifier has reason to suspect the integrity of the substance certificate he/she must get them checked at an accredited laboratory at the importer's or manufacturer's cost.

4.5.1. Checking Weight

The Retail Firework being checked for pyrotechnic content / weight should be dismantled with care by a competent person using tools that are non-sparking. The pyrotechnic composition should be removed ensuring that it is separated from other material such as clay and weighed on a balance that has a scale interval of 0.1.g.

4.5.2. Chemical Testing

Any chemical testing should be carried out by an accredited testing laboratory body.

Notes:

- *Precautions should be taken to minimize static electricity; for example, by careful choice of clothes, floor coverings, benchtops and the use of earthing plates. Apparatus prone to static build-up should be avoided.*
- *To prevent ignition during dismantling and weighing, the use of a manual balance scale is preferred to the use of a scale having electronic indication.*

4.5.3. Acceptance Criteria

Reference: Hazardous Substance (Fireworks) Regulations 2001 Reg.10

Retail Fireworks shall comply with all of the design criteria as outlined in Regulations 9 and 11 and the batch of fireworks shall be accepted or rejected using the following sampling procedure.

Regulation 10: Requirements for issue of Test Certificates (Sampling)

1. A Test Certificate may be issued by a Test Certifier for all fireworks of any one type within an imported consignment or for a batch of fireworks manufactured in New Zealand, if those fireworks comply with regulation 11.
2. For the purposes of sub clause (1), a batch of (NZ manufactured) fireworks complies with regulation 11 if –
 - (a) not less than 10 fireworks are selected at random from the batch and each of the selected fireworks, when tested, complies with that regulation; or
 - (b) in a case where 1 of the fireworks selected under paragraph (a) does not comply with 1 or more of the requirements of regulation 11(1)(c),(f),(g) or (h) not less than 10 additional fireworks are selected at random from the same batch and each of the selected fireworks, when tested, complies with regulation 11.
3. For the purposes of sub clause (1), all fireworks of any one type within an imported consignment comply with regulation 11 if –
 - (a) not less than 10 fireworks are selected at random from those fireworks of that type within the consignment and each of the selected fireworks, when tested, complies with that regulation; or
 - (b) in a case where 1 of the fireworks selected under paragraph (a) does not comply with 1 or more of the requirements of regulation 11(1)(c), (f) (g) or (h), not less than 10 additional fireworks of the same type are selected at random from the same consignment and each of the selected fireworks, when tested, complies with regulation 11.
4. If a batch of fireworks does not satisfy the requirements of sub clause (2), it must not be given a test certificate.
5. If all fireworks of any one type within an imported consignment do not satisfy the requirements of sub clause (3), a test certificate must not be given for those fireworks.

6. Despite subclasses (1), (2) and (4), the Authority may waive the requirement that a batch of fireworks be tested for compliance with regulation 11(1)(b), if a batch of fireworks containing the same type or types of fireworks has earlier been tested and found to comply with that regulation.
7. Despite subclasses (1), (3) and (5), the Authority may waive the requirement that all fireworks of any one type within an imported consignment be tested for compliance with regulation 11(1)(b), if an imported consignment of fireworks containing the same type of fireworks has earlier been tested and found to comply with that regulation.

4.5.4. Records of testing

Results and methods of testing shall be documented and kept, one electronic copy and one hard copy for not less than five years from date of test. Records of testing shall be provided to ERMA for validation and confirmation prior to the distribution of the fireworks to retailers for sale.

***Note:** Manufacturers or importers making a statement of compliance with this Code of Practice on a product, packaging, or promotional material related to that product are advised to ensure that such compliance is capable of being verified.*

Importers of Retail Fireworks are reminded that regulation 4 of the Hazardous Substances (Tracking) Regulations 2001 requires that before uplifting an import consignment of fireworks a certificate of approval signed by or on behalf of the Authority that the fireworks have been approved under section 29 of the Act must be obtained for presentation to Customs .

SECTION 5

5. IDENTIFICATION AND PACKAGING

IDENTIFICATION

Reference: Hazardous Substances (Identification) Regulations 2001

5.1. Labelling

Fireworks that are too small to carry a label may be labelled only on an outer pack, provided they are sold in the outer pack only and not as unlabelled single items.

Fireworks sold individually shall be labelled individually. The labels shall contain the following information:

- (a) Instructions for use (see Appendix B, B3).
- (b) Appropriate warnings (see Appendix B, B1).
- (c) A description of the principal effect of the firework after ignition (see Appendix B, B2).
- (d) Labels and instructions shall be comprehensible and clear. Ref. Regulation 34 (Comprehensibility) and 35 (Clarity) of the Hazardous Substances (Identification) Regulations 2001. With the required information in plain English on a contrasting background A guide to print size is a minimum of 3mm on fireworks and outer packs.

PACKAGING

*Reference: Hazardous Substances (Packaging) Regulations 2001
Hazardous Substances (Fireworks) Regulations 2001*

5.2. General

The Hazardous Substances(Packaging) Regulations 2001 Regulations 5,6,7(1) 8, apply to Retail Fireworks. These Packaging integrity requirements of individual fireworks are also covered by Regulation 11(1)(c) of the Hazardous Substances (Fireworks) Regulations 2001 i.e. are constructed in a manner that does not allow pyrotechnic substances to escape at any time.

The container or case that contains the individual fireworks should have been subjected to the appropriate UN testing criteria e.g. passed the drop, stack and cob test etc. and the case marked accordingly with the appropriate UN Logo, country of origin, test date, laboratory information etc.

5.3. Packaging of Individual Firework Items that are intended for Display and Sale in Areas Accessible to the Public

All packaging must be securely closed and the outer package proper shall have passed the following test – retained its integrity after being subjected to a cigarette lighter flame impinging on the packaging for 25 seconds, This test should be carried out by a Test Certifier, although this is not a regulatory requirement.

SECTION 6

6. STORAGE, SECURITY AND TRANSPORT

STORAGE/SECURITY

Reference: Hazardous Substances (Classes 1 – 5 Controls) Regulations 2001

Definition: *Approved Handler* means a person who has a test certificate that certifies that the person meets the competency requirements for approved handlers specified in the Hazardous Substances and New Organisms (Personnel Qualifications) Regulations 2001.

Note: Net Explosive Quantity (NEQ) and Gross Weight

- Unless otherwise specified, where the regulations refer to a quantity of fireworks, that quantity is the net explosive quantity (NEQ) where NEQ is the gross weight less the weight of any construction or packaging materials of the substance or article.
- Generally, however, the controls in the regulations refer to quantities of fireworks as the gross weight, to reflect the existing practice of using gross weight in references to previous controls.

6.1. The Amount of Fireworks Present being above 500kg and below 1000 kg (gross weight)

Must be under the personal control of an Approved Handler or handled by a person under the direct supervision of an Approved Handler. It is sufficient if the fireworks are merely secured so that a person cannot gain access to them without tools, keys, or any other device for operating locks.

6.2. Combined Total of 1,000 kg to 10,000 kg (gross weight) of Fireworks Stored in Relocatable Containers

Must be secured by locks and monitored by a security system when not under the control of an approved handler. Must be separated from occupied buildings by a distance of at least 2 metres and must be clear from the exits of the buildings.

6.3. Containers or Buildings containing greater than 10,000 kg (gross weight). (Location Test Certificate required)

Must be secured by locks and monitored by a security system when not under the control of an approved handler. Must be separated from public access ways and from other buildings by distances of not less than 5 metres. Containers and buildings must be separated from other hazardous substances by a distance of not less than 15 metres.

Notwithstanding the above, no more than 10,000 kg (gross weight) of retail fireworks may be stored, at any one time, at a location to which the public have access.

6.4. Storage of Purchased Fireworks

Persons storing purchased fireworks should endeavour to keep them:

- Segregated and separated from incompatible substances, such as flammable liquids and other chemical products
- Separated from ignition sources, including sources of heat
- Kept in a locked receptacle
- Kept away from children
- Kept away from foodstuffs

TRANSPORT

6.5. Transportation

There are no specific provisions in the HSNO regulations relating to the transportation of retail fireworks. However, the transportation of retail fireworks will still be governed by the relevant requirements in the Land Transport Rule - Dangerous Goods, including the requirement for drivers of commercial road vehicles to have a dangerous goods endorsement on their driving licence. Equally, the corresponding requirements under the air and sea transport legislation must be complied with.

6.6. Passenger Service Vehicles

Retail fireworks are prohibited from carriage on any passenger service vehicles (buses, passenger trains) except for retail packs of fireworks after the point of retail sale subject to the driver's approval.

6.7. Private Transportation

When transporting fireworks in private transportation, persons should be mindful of the characteristics of the fireworks ensuring that:

- They are located safely in the vehicle away from any source of ignition
- They are adequately secured
- They are segregated and separated from incompatible substances.

SECTION 7

7. SALE AND DISPLAY

*Reference: Hazardous Substances (Fireworks) Regulations 2001 Reg.6-8
Hazardous Substances (Packaging) Regulations 2001 Reg.10*

- 7.1. Fireworks may be displayed for retail sale, or sold by a retailer, only during the period beginning 27th October and ending at the close of 5th November in each year and only to persons over 14 years of age.

At any other time, fireworks can only be sold if the retailer obtains a written approval from the Authority. The Authority may issue such an approval if the fireworks are to be sold for use at gatherings held for cultural or religious purposes and the use of the fireworks is a traditional feature at the gathering.

The approval must set out details of:

- (a) the event or gathering that the fireworks are being bought for
- (b) the period of time that the retailer may sell the fireworks
- (c) the people who will be buying the fireworks
- (d) any other conditions imposed on the approval

Note: A retailer must not sell fireworks unless a test certificate for those fireworks has been issued.

- 7.2. No fireworks shall be displayed or stored in any place to which members of the public have access, unless the fireworks are placed in closed containers which meet the requirements of the Hazardous Substances (Packaging) Regulations 2001 (Regulation 10) or otherwise covered in such a manner that they are protected from any source of ignition.

Note: Exemptions

The following Retail Fireworks are exempted from the sales period restrictions and display for sale requirements i.e. they can be sold all year round and displayed for sale in public areas provided they comply with the requirements for a test certificate to be issued:

- Those bonbon crackers, snaps, or similar pyrotechnic novelties or noise makers containing less than 1.7 mg of pyrotechnic substance; and
- Those amorces, crackshots, or similar pyrotechnic novelties or noise makers containing less than 5 mg of pyrotechnic substance; and
- Those party poppers, streamer bombs, handblasters, or similar pyrotechnic novelties or noise makers containing less than 20 mg of pyrotechnic substance.

(Ref. Regulation 4(2) Hazardous Substances (Fireworks) Regulations 2001):

SECTION 8

8. TRACKING AND USE

TRACKING

Reference: Hazardous Substances (Tracking) Regulations 2001

- 8.1.** All Retail Fireworks are excluded from the controls of the Hazardous Substances (Tracking) Regulations at any time after sale by a retailer to another person (ie. after sale to the public).

USE

Reference: Hazardous Substances (Emergency Management) Regulations 2001

8.2. Introduction

Whilst it is difficult to control the use of firework items after purchase nevertheless individuals do have a responsibility to exercise all due care to comply with the spirit of emergency preparedness.

The following is a list of precautions to take prior to having a retail fireworks display:

- advise your neighbours before using the fireworks
- never throw fireworks
- never put fireworks in your pocket
- keep pets indoors while using fireworks
- fireworks should be used in a clear open space away from dry grass or material that burns easily
- keep fireworks in a closed box in a dry place away from ignition sources and out of the reach of children
- never use fireworks during days of 'total fire ban'
- care should be taken when using fireworks during the 'fire danger period'; contact the local fire authority for further information
- ensure safe viewing distances are established
- weather conditions such as wind should be taken into consideration before using fireworks
- a supply of water should be readily available
- take the fireworks out one at a time and close the box each time
- follow the instructions on each firework carefully; read them by torchlight, never with a naked flame
- fireworks should only be used under adult supervision
- light the end of the fuse at arm's length, preferably with a safety firework lighter or match rather than a gas cigarette lighter, then stand well back
- if a firework fails to light leave it for at least 10 min. then place it in a bucket of water to make it safe
- ensure that a telephone is available in case of an emergency
- ensure appropriate safety equipment including safety glasses, closed shoes, body coverings, hat are provided
- leave the site clean after using the fireworks

This list is not exhaustive and can be added to with any good proven safety advice.

SECTION 9

9. EMERGENCY MANAGEMENT

*Reference: Hazardous Substances (Emergency Management) Regulations 2001
Hazardous Substances (Identification) Regulations 2001*

9.1. Introduction

Quantities of Retail Fireworks greater than 10,000 kg gross weight are required to have a level 3 emergency management response plan with significant signage requirements. Given the speed of a fireworks fire fast evacuation coupled with extremely tight security on any introduced source of ignition is essential.

Equally for firework quantities less than 10,000 kg extra signage requirements detailing that fireworks are present in the area and people should exercise caution is merited the provision of fire extinguishers with regards to any activity involving fireworks is only a general one in that the fire extinguisher would be used to extinguish a fire threatening stored fireworks or firework operations.

- 9.2. The 10,000 kg gross weight threshold means that level 3 emergency management applies to large scale firework operations such as packaging distribution centres. The expectation is that a facility such as a firework repackaging and distribution centre would have excellent security in place, a very visible emergency evacuation plans, audible alarms with ideally water sprinkler systems to control any spread of fire. Also good isolation distances and inter-isolation distances would enhance further isolating the hazard.

In conclusion, although the potential hazard cannot be entirely eliminated it can be significantly reduced and isolated using combinations of the above.

Note: All of these facilities require a location test certificate and responsible staff approved handler test certificates.

APPENDIX A

RETAIL FIREWORK TYPES AND DESCRIPTIONS

This list does not cover all the types of Retail Fireworks currently available

Type	Description	Principal Effect(s)
Combination (also known as Cakes or multi-shots)	Assembly including several elements in combination such as fountain, roman candles etc, with a single point of ignition	As for each individual element
Fountain	Tube containing Pyrotechnic composition	Emission of sparks and flames with or without aural effect other than reports
Roman candle	Single tube containing alternate propellant and pyrotechnic units	Ejection of pyrotechnic unit or several units in succession, producing visual or aural effects, or both, remote from the firework case
Sparkler	Wire or stick coated along one end with pyrotechnic composition and designed to be held in the hand	Emission of sparks
Wheel	Device that is designed to rotate about a fixed point	Rotation, emission of sparks and flame with or without aural effects
Flash Powder	A pyrotechnic substance that is intended to produce a flash of light (whether or not with a report, smoke or sparks)	Products flash of light
Snake / glow worm	A small pressed pellet of pyrotechnic substance and less than 25 mm in diameter	When placed on ground and ignited it produces an expanding snakelike ash

APPENDIX B

RECOMMENDED WARNING, INSTRUCTION AND DESCRIPTION PHRASES

B1 WARNINGS

Following are some examples of warnings that should be used on labels for Retail (Shop) Fireworks:

- (a) Light fuse and retreat at least 5 m.
- (b) Do not hold in hand when ignited.
- (c) Use only under adult supervision.
- (d) Do not fire near eyes or ears.
- (e) Keep away from eyes.
- (f) Keep away from eyes and skin.
- (g) Do not put in mouth.
- (h) Do not inhale smoke.
- (i) Keep away from clothing, etc.
- (j) Do not dismantle.
- (k) Spent sparklers remain very hot.
- (l) Never position any part of the body over the firework.
- (m) Do not put ignited item into confined area.
- (n) Do not direct or point towards people, animals or buildings.

B2 DESCRIPTION

Following are some descriptions that should be used on labels for Retail (Shop)

Fireworks:

- (a) Ejects/emits star(s).
- (b) Ejects/emits showers of sparks.
- (c) Shoots flaming balls.
- (d) Produces whistles and showers of sparks.
- (e) Ejects whistles.
- (f) Produces novelty effect.
- (g) Spins on string.

B3 INSTRUCTIONS

Following are some examples of instructions that should be used on labels for Retail

(Shop) Fireworks:

- (a) Light at arm's length.
- (b) Light at arm's length and retire.
- (c) Light fuse and get away.
- (d) Straighten fuse, light tip of free end at arm's length and retreat immediately at least 5 m.
- (e) Do not hold in hand.
- (f) Place flat on ground.
- (g) Place upright on level ground.
- (h) Place on hard open surface.
- (i) Insert upright in soft ground.
- (j) Stick end in ground and point away from people or flammable material.
- (k) Attach securely to an upright post.
- (l) Attach securely to an upright post with nail provided.
- (m) Ensure firework will not fall over.
- (n) Ensure firework is free to rotate.
- (o) Fuse is located under tissue cover.
- (p) Remove cover to expose fuse.

APPENDIX C

RETAIL FIREWORKS FIELD TESTING CHECK LIST

Firework Tested

Name of firework

Item name

Item number

Manufacturer / Brand

Item description

Importer / Local Manufacturer

Retailer Date of supply

Consignment identification lot / batch number

Name of Tester and Reg. number Date of test

Weather conditions

Results of tests:

YES NO ('Yes' means that the fireworks passes the test. 'No' means that it fails).

- label contains statement of hazard, accurate description and firing instructions
Detail what the label states
- pyrotechnic composition not escaping from article
- easily lit with match (not applicable for sparklers)
- fuse secure, fuse burning time between 3 and 11 seconds
- delay to firing of next tube (of multi-tube firework) less than 5 seconds
- article functions without exploding
- article or pyrotechnic unit function without erratic or unsafe projection
- article not likely to cause injury or damage in normal use
- article remains stable at rest and while firing
- no burning matter falling or projected more than 3 m away and less than 3 m in height

- debris other than paper etc, projected laterally less than 3 m from ignition point
- debris other than paper etc, falls more than 3 m from ignition point
- no paper etc, debris weighing more than 20 g and falls less than 3 m from ignition point
- pyrotechnic substance weight does not exceed 40 g
- chemical / substance acceptable
- item performs in accordance with its description
- physical test blowout / misfire

Compliance, conclusions and recommendations:

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Signature of Tester: Date

N.B. On successful completion of testing a copy of the Test Certificate on this item must be sent to ERMA NZ without delay.

APPENDIX D

IMPORTER / RETAILER COMPLIANCE CHECK LIST

Importer	<p>Have you obtained an ERMA Certificate of Importation</p> <p>Ref. Section 4</p>
	<p>Have you notified a suitably qualified approved Test Certifier for the testing of your fireworks</p> <p>Ref. Section 4</p> <p>Retail fireworks must not be distributed until receipt of Test Certificate</p>
	<p>If more than 10,000 kg of fireworks are to be stored, apply to a Test Certifier for a Location Test Certificate</p> <p>Ref. Section 6</p>
Retailer	<p>Check to ensure all fireworks purchased for sale have a Test Certificate which covers all items. Ref. Section 4</p>
	<p>If over 500 kg gross weight of fireworks are stored an Approved Handler Test Certificate is required. Ref. Section 6</p>
	<p>If over a 1000 kg gross weight of fireworks are stored a hazardous substance location and controlled zone must be established.</p>
	<p>Check fireworks displayed for sale are in fireproof bags or under cover. Ref. Section 7</p>
	<p>Ensure no sales to the public before the 27th October and after the 5th November and no sales during the selling period are made to persons under the age of 14 years. Ref. Section 7</p>
	<p>Ensure all fireworks are secured when no Approved Handler is present on the premises. Ref. Section 6</p>