

Hazardous substance Test Certification advisory note

April 2009

Introduction

Under the staged implementation of the HSNO legislation all businesses using and storing hazardous substances should already have contacted a Test Certifier to arrange location; approved handlers and stationary container system test certification, where applicable, to the quantity and classification of hazardous substances being stored and used on their premises.

If you have already started the certification process with an ERMA approved Test Certifier then please ignore this advisory note. If you have not yet commenced the test certification process then please note that:

It is an offence against the HSNO Act to fail to comply with the requirement to obtain a test certificate as specified in any of the HSNO regulations (refer s109 (e) (iii)). Under this Act there are penalties of up to three months imprisonment or a fine not exceeding \$500,000 per offence and further ongoing penalties of \$50,000 per day the offence is continued. The enforcing agency is OSH.

What are Hazardous Substances?

A hazardous substance is a substance which appears on the ERMA database of substances which have had their intrinsic hazard properties assessed and for which a set of controls has been identified.

Under HSNO hazardous substances are identified by nine primary intrinsic hazard classifications:

Class 1	– explosives	eg fireworks
Class 2	– flammable gases	eg LPG
Class 3	– flammable liquids	eg petrol
Class 4	– flammable solids	eg sulphur
Class 5	– oxidising agents	eg chlorine, hydrogen peroxide, liquid oxygen
Class 6	– toxic substances	eg petrol
Class 8	– corrosive substances	eg acids and alkalis
Class 9	– ecotoxic substances	eg diesel

Within these classifications is a further series of sub-classifications depending on the severity of the intrinsic hazard of the substance to the environment or to people.

Most hazardous substances have more than one classification and the legislative controls for the substance will be dependent on these multiple classifications.

Some common substances which have been transferred are:

LPG	– 2.1.1A
Anhydrous Ammonia	– 2.1.1B
Aerosols	– 2.1.2A
Petrol	– 3.1A, 6.1E, 6.3B, 6.7B, 9.1B
Methylated Spirits	– 3.1B, 6.1E, 6.4A, 6.8B, 6.9A, 9.1D
Mineral Turpentine	– 3.1C, 6.1E, 6.3B, 9.1B
Kerosene	– 3.1C, 6.1E, 6.3B, 9.1B
Diesel Fuel	– 3.1D, 6.1E, 6.3B, 6.7B, 9.1B
Silver Nitrate	– 5.1.1B, 6.1D, 6.9A, 8.2B, 8.3A, 9.1A, 9.2A, 9.3A

A description of what these classifications mean can be found in the Hazardous Substances (Classification) Regulations.

Test Certifiers

Test Certifiers can issue Approved Handler; Location and Stationary Container System Test Certificates for different classes of hazardous substances depending on their competencies and approvals as assessed and issued by ERMA respectively. The web-link below identifies what each certifier is capable of certifying.

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A complete listing of test certifiers available countrywide can be found on the ERMA website at <http://www.ermanz.govt.nz/search/test-cert-reg.asp>. You will note the Christchurch City Council has its own Test Certifier – Lyn Osmer, (03) 941 8461, lyn.osmers@ccc.govt.nz.

Approved Handler Certification

Approved handler certificates are required to provide evidence of competence and experience with the handling of certain classifications and quantities of hazardous substances.

1. Quantities of Class 2, 3 and 4 hazardous substance that activate approved handler requirements

Hazard classification	Quantity
	100 kg (not permanent gases) LPG
2.1.1A	100 m ³ (permanent gases)
2.1.2A	3,000 L aggregate water capacity
3.1A	Any amount (except Petrol is 100 L)
3.1B	250 L (when containers greater than 5 L) 500 L (when containers up to and including 5 L)
3.2A	Any amount
3.2B	100 L
4.1.1A	100 kg
4.1.2A and B	Any amount
4.1.2C and D	25 kg
4.1.2E and F	50 kg
4.1.3A	Any amount
4.1.3B	100 kg
4.2A	Any amount
4.2B	100 kg
4.3A	Any amount
4.3B	100 kg

2. Quantities of Class 5.1 substance that activate approved handler requirements

Hazard classification	Quantity
5.1.1A	Any amount
5.1.1B	500 kg or L
5.1.1C	1 000 kg or 200 m ³
5.1.2A	250 kg or 200 m ³

3. Quantities of class 5.2 substances that activate approved handler requirements

Hazard classification	Quantity
5.2A or 5.2B	Any amount
5.2C, 5.2D, 5.2E or 5.2F	10 kg or 10 L
5.2G	Approved handler not required

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4. Quantities of certain class 6, 8 and 9 substances that must be under control of approved handler or secured

Hazardous classification

6.1A, 6.1B, 6.1C (except for propellant powders of classes 1.1C (UN0160) and 1.3C (UN 0161))

6.7A

8.2A

9.1A, 9.2A, 9.3A and 9.4A

Quantity

Any quantity

10 kg or more, if solid

10 L or more, if liquid

Any quantity

Any quantity

Notwithstanding the above in some *specific* cases it is not necessary to have these class 6-9 substances under the control of an approved handler if they are secured from unauthorised persons. The list of substances to which this applies can be found in the Dangerous Goods and Scheduled Toxic Substances Transfer Notice No. 35 document (available from Government bookshops) or seek advice from a Test Certifier/Hazardous Substances Enforcement Officer.

Location Test Certificate

A location test certificate is required when you exceed the quantities stated in the following lists:

1. Quantities of Class 2, 3 and 4 substances that activate hazardous substance location or transit depot requirements

Hazard classification	Quantity beyond which controls apply for closed containers	Quantity beyond which controls apply when use occurring in open containers
2.1.1A and B	100 kg (or 100 m ³ where a permanent gas)	100 kg (or 100 m ³ where a permanent gas)
2.1.2A	3000 L (aggregate water capacity)	3000 L (aggregate water capacity)
3.1A (see Note)	20 L	20 L
3.1B	100 L in containers greater than 5 L containers up to and including 5 L	250 L 50 L
3.1C	500 L in containers greater than 5 L containers up to and including 5 L	1500 L 250 L
3.2A, B, and C	1 L	1 L
4.1.1A	1 kg	1 kg
4.1.1B	100 kg	100 kg
4.1.2A and B	1 kg	1 kg
4.1.2C and D	25 kg	25 kg
4.1.2E, F, and G	50 kg	50 kg
4.1.3A, B, and C	1 kg	1 kg
4.2A	1 kg	1 kg
4.2B and C	25 kg	25 kg
4.3A	1 kg	1 kg
4.3B	25 kg	25 kg
4.3C	50 kg	50 kg

Note: Petrol (3.1A) activates hazardous substance location at 50 litres (DGTN #35)

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2. Quantities of Class 5.1.1 and 5.1.2 substances that activate hazardous substance location or transit depot requirements and test certification

Hazard classification	Hazardous substance location or transit depot where package to be kept closed at all times	Hazardous substance location where substances manufactured or used
5.1.1A	50 kg or 50 L	5 kg or 5 L
5.1.1B	500 kg or 500 L	50 kg or 50 L
5.1.1C	1 000 kg or 1 000 L	100 kg or 100 L
5.1.2A	200 m ³ (permanent gas) or 100 kg (non permanent gas)	200m ³ (permanent gas) or 100kg (non-permanent gas)

Note: The quantity refers to the total quantity present at or within the hazardous substances location, even if some of the substance is held in closed containers.

3. Quantities of class 5.2 substances that activate hazardous substance location or transit depot requirements

Hazard classification	Quantity
5.2A	Any quantity
5.2B	More than 1 kg
5.2C or 5.2D	More than 10 kg
5.2E or 5.2F	More than 25 kg

Test certification is required at a hazardous substance location when the following Class 5.2 thresholds are exceeded:

- (a) 10 kg of class 5.2A or class 5.2B substance; or
- (b) 25 kg of class 5.2C or class 5.2D substance; or
- (c) 100 kg of class 5.2E or class 5.2F substance.

Hazardous Atmosphere Zone

A hazardous atmosphere zone has to be established when you exceed the following thresholds:

2.1.1A, 2.1.1B eg LPG, hydrogen	300m ³ (permanent gas) 100 kg (non permanent gas)
2.1.2A eg aerosols	3,000 L aggregate water capacity
3.1A, 3.1B, 3.1C eg petrol, acetone, methylated spirits	100 L (closed) 25 L (decanting) 5 L (open occasionally) 1 L (open for continuous use)

The hazardous atmosphere zone needs to be in compliance with:

- AS/NZS 2430.3; or
- AS/NZS 2439.1:1987; or
- a Code of Practice approved by the Authority.

Stationary Container System Test Certificates

A stationary container test certificate is required in the following cases:

- (a) A stationary container system that includes a stationary tank intended to contain a hazardous substance if the stationary tank —
 - (i) is a below ground stationary tank; or
 - (ii) has a water capacity greater than 500 litres and is used or intended to be used to contain a gas; or
 - (iii) has a capacity greater than 2,500 litres and is used or intended to be used to contain a class 3.1A or class 3.1B hazardous substance (ie flammable liquid); or
 - (iv) has a capacity greater than 5,000 litres and used or intended to be used to contain a hazardous liquid, other than a hazardous liquid that is a class 3.1A or class 3.1B hazardous substance (eg diesel class 3.1D).

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(b) A stationary container system that includes a process container (eg a reaction vessel or a distillation column or a dip tank) that is part of a stationary container system intended to contain a hazardous substance if the process container —

- (i) is situated under ground, including ground that has been raised to provide cover for the process container; or
- (ii) is covered by material other than ground; or
- (iii) has a water capacity greater than 250 litres and used, or intended to be used, to contain a hazardous gas; or
- (iv) has a capacity greater than 1,000 litres and used or intended to be used to contain a hazardous liquid.

(c) A stationary container system that includes a vaporiser to which Schedule 8 of the Dangerous Goods Transfer Notice No. 35 applies.

(d) A stationary container system attached to an oil burning installation (excluding installations at domestic premises as specified in clause 64 of the Dangerous Goods Transfer Notice No. 35).

The above legislative requirements do not apply to a stationary container system that —

(a) does not have a service tank; and

(b) has a capacity less than —

- (i) 500 litres for class 3.1D substances (eg diesel) supplying an internal combustion engine; or
- (ii) 50 litres for class 3.1A (eg petrol), 3.1B and 3.1C (eg kerosene) substances supplying an internal combustion engine; or
- (iii) 60 litres for class 3.1 substances supplying a burner (includes 3.1A, 3.1B, 3.1C and 3.1D).

Tracked Substances

Certain classes of hazardous substances require to be tracked under HSNO throughout the lifecycle of the substance. Details of:

- (a) identity of the Approved Handler;
- (b) substance information;
- (c) location of the tracked substance;
- (d) transfer to another place; and
- (e) disposal of tracked substance

must be recorded at each stage of its lifecycle.

Hazard Classifications of Substances Requiring Tracking

Intrinsic property of substance	Hazard classifications as specified in Hazardous Substances (Classification) Regulations 2001
Explosiveness	All class 1 substances. (There are some exceptions – refer to Schedule 1, Hazardous Substances (Tracking) Regulations 2001.)
Flammability	3.1A and 3.2A 4.1.2A and 4.1.2B 4.1.3A 4.2A 4.3A
Capacity to oxidise	5.1.1A 5.2A and 5.2B
Toxicity	6.1A, 6.1B, and 6.1C
Ecotoxicity	9.1A 9.2A 9.3A 9.4A

Labelling

New identification and packaging regulations took effect from 31 March 2006. A Code of Practice is in preparation by NZCIC.

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Signage for Premises

The requirements for signage took effect as of 31 March 2006. A Code of Practice has been issued by NZCIC "Signage for Premises Storing Hazardous Substances and Dangerous Goods".

Group Standards

A group standard is an approval for a group of hazardous substances of a similar nature, type or use under Part 6A of the Hazardous Substances and New Organisms Act 1996.

Group Standards Categories

Additives, Process Chemicals and Raw Materials	Fire Fighting Chemicals
Aerosols	Food Additives and Fragrance Materials
Animal Nutritional and Animal Care Products	Fuel Additives
Class 4 Substances	Laboratory Chemicals and Reagent Kits
Class 5.1.1 Oxidising Substances	Leather and Textile Products
Class 5.2 Organic Peroxides	Lubricants
Cleaning Products	Metal Industry Products
Compressed Gas Mixtures	N.O.S. (Not Otherwise Specified) Substances
Construction Products	Photographic Chemicals
Corrosion Inhibitors	Polymers
Cosmetic Products	Refining Catalysts
Denatured Ethanol	Solvents
Dental Products Embalming Products	Surface Coatings and Colorants (includes Adhesives, Dyes and Pigments, Inks and Paints)
Fertilisers	Water Treatment Chemicals

Transitional Provisions

Type 'E' Depots

Where existing stores in use on the premises prior to 1 April 2004 were deemed to be, and previously approved as "Type E" depots by the Dangerous Goods Inspector then you do not need to upgrade them immediately. A test certifier should have been engaged to undertake an assessment of the extent of compliance of the store with the HSNO legislation before **31 March 2006** and prepare a compliance plan which must be agreed with ERMA by **31 March 2007**.

Tanks

If the tank is new or the hazardous substance has changed then the stationary container system must be certified immediately. If an underground stationary container system has ceased being used then it must be removed within three months of the final day of use or application made to ERMA to allow the tank to remain in the ground.

There is a Code of Practice for existing tanks up to 60,000 litres capacity which was approved in November 2006 by ERMA, reference HSNO COP 1301, which can be used for further information.

Further Information and Advice

Further information or substance specific advice can be sought from the Christchurch City Council Hazardous Substances Section by telephoning:

Liam Tarpey (03) 941 8663 liam.tarpey@ccc.govt.nz

The Christchurch City Council's Test Certifier is Lyn Osmers, telephone (03) 941 8461, email: lyn.osmers@ccc.govt.nz.