

Compliance Document for New Zealand Building Code Clause F3 Hazardous Substances and Processes – Second Edition

Prepared by the Department of Building and Housing

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Compliance Documents are prepared by the Department of Building and Housing in accordance with section 22 of the Building Act 2004. A Compliance Document is for use in establishing compliance with the New Zealand Building Code.

A person who complies with a Compliance Document will be treated as having complied with the provisions of the Building Code to which the Compliance Document relates. However, a Compliance Document is only one method of complying with the Building Code. There may be alternative ways to comply.

Users should make themselves familiar with the preface to the New Zealand Building Code Handbook, which describes the status of Compliance Documents and explains alternative methods of achieving compliance.

Defined words (italicised in the text) and classified uses are explained in Clauses A1 of the Building Code and in the Definitions at the start of this Compliance Document.

F3: Document History			
	Date	Alterations	
First published	July 1992		
Amendment 1	1 July 2001	p. 2, Document History, Status p. 7, References p. 9, Definitions	p. 14, 1.3.2 p. 15, 3.6.1 b) p. 21, 4.7.6
Second edition	22 March 2007	Document revised – second edition issued.	
Note: Page numbers relate to the document at the time of Amendment and may not match page numbers in current document.			

Document Status

The most recent version of this document, as detailed in the Document History, is approved by the Chief Executive of the Department of Building and Housing. It is effective from 22 March 2007 and supersedes all previous versions of this document.

People using this Compliance Document should check for amendments on a regular basis. The Department of Building and Housing may amend any part of any Compliance Document at any time. Up-to-date versions of Compliance Documents are available from www.dbh.govt.nz

New Zealand Building Code

Clause F3 Hazardous Substances and Processes

This Clause is extracted from the New Zealand Building Code contained in the First Schedule of the Building Regulations 1992.

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FIRST SCHEDULE—continued		
Clause F3—HAZARDOUS SUBSTANCES AND PROCESSES		
Provisions	Limits on application	
OBJECTIVE		
F3.1 The objective of this provision is to safeguard people from injury or illness, and <i>other property</i> from damage, caused by <i>hazardous substances</i> or processes in <i>buildings</i> .		
FUNCTIONAL REQUIREMENT		
F3.2 <i>Buildings</i> where <i>hazardous substances</i> are stored and <i>hazardous processes</i> undertaken, shall be constructed to provide <i>adequate</i> protection to people and to <i>other property</i> .		
PERFORMANCE		
F3.3 Spaces in <i>buildings</i> where <i>hazardous substances</i> are stored, handled or used, or where <i>hazardous processes</i> are undertaken, shall be located and constructed to protect people, and <i>other property</i> , under both normal and reasonably foreseeable abnormal conditions, and shall be provided with:		
<ul style="list-style-type: none"> (a) Means of restricting unauthorised access, (b) Means of preventing <i>hazardous substances</i>, or other materials unacceptable to the <i>network utility operator</i>, from entering <i>sewers</i> or <i>public drains</i>, (c) Means of allowing the harmless release of pressure where there is a significant risk of explosion occurring, (d) Protected ignition sources where flammable or explosive goods are stored, (e) Means of rendering harmless by ventilation, containment, dilution, or chemical or biological action, any radioactive, toxic or flammable vapours, gases or materials which may escape from pipes, vessels or containers, 		

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FIRST SCHEDULE—continued

Provisions	Limits on application
(f) Impervious, easily cleaned surface finishes on <i>building elements</i> likely to be splashed or become contaminated in the course of the <i>intended use</i> of the <i>building</i> , and	
(g) Signs as required by Clause F8 “Signs”.	

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References

For the purposes of New Zealand Building Code compliance, the acceptable New Zealand and other Standards, and other documents referred to in this Compliance Document (primary reference documents) shall be the editions, along with their specific amendments, listed below. Where the primary reference documents refer to other Standards or other documents (secondary reference documents), which in turn may also refer to other Standards or other documents, and so on (lower order reference documents), then the applicable version of these secondary and lower order reference documents shall be the version in effect at the date this Compliance Document was published.

New Zealand Legislation

Hazardous Substances and New Organisms Act 1996	VM1 1.0.1
Hazardous Substances (Classification) Regulations 2001	VM1 2.0.1
Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001	VM1 2.0.2, 3.1.1, 3.4.1
Hazardous Substances (Dangerous Goods and Scheduled Toxic Substances) Transfer Notice 2004	VM1 2.0.2, 3.2.1
Hazardous Substances (Emergency Management) Regulations 2001	VM1 3.3.1

Definitions

This is an abbreviated list of definitions for words or terms particularly relevant to this Compliance Document. The definitions for any other italicised words may be found in the New Zealand Building Code Handbook.

Construct in relation to a *building*, includes to design, build, erect, prefabricate, and relocate the *building*.

Escape height The height between the floor level in the *firecell* being considered and the floor level of the required *final exit* which is the greatest vertical distance above or below that *firecell*.

COMMENT:

1. It is necessary only to use the greatest height to the exits required for the *firecell* being considered, even though the *building* may have other *final exits* at lower or higher levels.
2. Where the *firecell* contains *intermediate floors*, or upper floors within *household units* the *escape height* shall be measured from the floor having the greatest vertical separation from the *final exit*.

Escape route A continuous unobstructed route from any *occupied space* in a *building* to a *final exit* to enable occupants to reach a *safe place*, and shall comprise one or more of the following *open paths*, *protected paths* and *safe paths*.

COMMENT:

Doors are not obstructions in an *escape route* provided they comply with C/AS1 Part 3 and D1/AS1.

Firecell Any space including a group of contiguous spaces on the same or different levels within a *building*, which is enclosed by any combination of *fire separations*, *external walls*, roofs, and floors.

COMMENT:

Floors, in this context includes ground floors, and those in which the underside is exposed to the external environment (e.g. when cantilevered). Note also that internal floors between *firecells* are *fire separations*.

Hazardous substance has the meaning given in the Hazardous Substances and New Organisms Act 1996.

Purpose group The classification of spaces within a *building* according to the activity for which the spaces are used.

Verification Method F3/VM1

1.0 Other legislation

1.0.1 The storage and use of *hazardous substances* is subject to the Hazardous Substances and New Organisms Act 1996 and Regulations, 'Gazette' notices and Group Standards issued under that Act. *Buildings* used for the storage or use of *hazardous substances* therefore must comply with that legislation as well as the Building Code.

1.0.2 The Hazardous Substances and New Organisms Act 1996 (HSNO Act) states in section 142(6):

Any controls prescribed under any other Act for any hazardous substance shall not contravene the provisions of regulations made under sections 75 and 76 [for the control of hazardous substances] of this Act unless—

- (a) There is provision in that other Act that expressly provides that controls made under that other Act for specified purposes may contravene the provisions of regulations made under this Act; and
- (b) The controls are made for the purposes provided for in that Act.

1.0.3 There are no provisions in the Building Act for the Building Code to contravene any controls made under the HSNO Act.

2.0 Scope

2.0.1 This document covers substances defined as Class 2 (flammable gases), Class 3.1 (flammable liquids), Class 4 (flammable solids) and Class 5 (Oxidising substances and organic peroxides) under the Hazardous Substances (Classification) Regulations 2001. Low flashpoint diesel (low flash domestic heating oil and alpine diesel) shall be deemed to have a flammable classification of 3.1D.

2.0.2 This document is a Verification Method for the construction of *buildings* where Classes 2, 3.1, 4 and 5 *hazardous substances* are stored in excess of the quantities given in:

Table 4 of Schedule 3 for classes 2, 3 and 4

Table 1 of Schedule 4 for class 5

Table 2 of Schedule 4 for class 5

Table 1 of Schedule 5 for class 5

of the Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001 or in accordance with the provisions of Schedule 10 of the Hazardous Substances (Dangerous Goods and Toxic Substances) Transfer Notice 2004.

(Refer to www.legislation.co.nz and the 'Gazette', March 2004 No. 35, www.gazette.govt.nz for this legislation.)

3.0 Referenced legislation

3.0.1 Construction in compliance with the following documents shall be deemed as providing compliance with Clause F3.3 (a) to (e) of the Building Code.

3.1 Control of ignition and control of adverse effects of ignition for Classes 1 to 5

3.1.1 Parts 1 and 2 and 4 to 6 and Schedules 3, 4 and 5 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations 2001. (Refer to www.legislation.co.nz)

3.2 Methods of construction and isolation distances for Classes 2 and 3.1 only

3.2.1 Parts 1 to 4 of Schedule 10 of the Hazardous Substances (Dangerous Goods and Scheduled Toxic Substances) Transfer Notice 2004. (Refer to the 'Gazette', March 2004 No. 35, www.gazette.govt.nz)

3.2.2 Note that paragraph 32 of Schedule 10 states:

A separation distance from an area of high intensity land use calculated under Part 2 or Part 3 must not be calculated beyond the boundary of the property at which the relevant hazardous substance is present unless the person in charge of any property beyond that boundary agrees that the separation distance may be calculated to include the property of which the person is in charge.

3.3 Secondary containment systems (bundling)

3.3.1 Regulations 35 to 41 and Schedule 4 of the Hazardous Substances (Emergency Management) Regulations 2001. (Refer to www.legislation.co.nz)

3.4 Security

3.4.1 Regulation 56 for Classes 2, 3 and 4 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations in the specified quantities. Regulations 89, 107 and 123 for Classes 5.1.1 and 5.1.2 of the Hazardous Substances (Classes 1 to 5 Controls) Regulations. (Refer to www.legislation.co.nz)

COMMENT

1. Means of egress may be in accordance with C/AS1: Part 3 provided that:
 - the *firecells* are considered as *WF purpose group*
 - *firecells* having a floor area greater than 50 m² have at least two *escape routes*
 - *firecells* having an *escape height* of more than 3 m have at least two *escape routes*.
2. Note the requirement for the establishment of a *hazardous substance* location under the Hazardous Substances (Classes 1 to 5 Controls) Regulations.
3. A container for a *hazardous substance*, including stationary containers or tanks, is a defined term in the Hazardous Substances and New Organisms Act. Containers for *hazardous substances* are not *buildings* for the purposes of the Building Act.

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All references to Verification Methods are preceded by **VM**.

Class 1	VM1 3.1
Class 2	VM1 2.0.1, 2.0.2, 3.1, 3.2, 3.4.1
Class 3.1	VM1 2.0.1, 2.0.2, 3.1, 3.2, 3.4.1
Class 4	VM1 2.0.1, 2.0.2, 3.1, 3.4.1
Class 5	VM1 2.0.1, 2.0.2, 3.1, 3.4.1
Control of adverse effects of ignition	VM1 3.1
Control of ignition	VM1 3.1
Isolation distances	VM1 3.2
Methods of construction	VM1 3.2
Other legislation	VM1 1.0
Scope	VM1 2.0
Secondary Containment systems	VM1 3.3
Security	VM1 3.4

