National Occupational Health and Safety Commission

NATIONAL CODE OF PRACTICE FOR THE LABELLING OF WORKPLACE SUBSTANCES [NOHSC:2012(1994)]

MARCH 1994

Australian Government Publishing Service
Canberra

The National Occupational Health and Safety Commission has declared a *National Code of Practice for the Labelling of Workplace Substances.*

National codes of practice declared by the National Commission under s.38(1) of *the National Occupational Health and Safety Commission Act 1985* (Cwlth) are documents prepared for the purpose of advising employers and workers of acceptable preventive action for averting occupational deaths, injuries and diseases in relation to workplace hazards.

The expectation of the Commonwealth Government and the National Commission is that national codes of practice will be suitable for adoption by Commonwealth, State and Territory governments. Such action will increase uniformity in the regulation of occupational health and safety throughout Australia and contribute to the enhanced efficiency of the Australian economy.

It should be noted that National Commission documents are instruments of an advisory character, except where a law, other than the National Occupational Health and Safety Commission Act, or an instrument made under such a law, makes them mandatory. The application of any National Commission document in any particular State or Territory is the prerogative of that State or Territory.

National Occupational Health and Safety Commission

NATIONAL CODE OF PRACTICE FOR THE LABELLING OF WORKPLACE SUBSTANCES [NOHSC:2012(1994)]

MARCH 1994

AusInfo
Department of Finance
and Administration
Canberra

ISBN 0 644 32182 2

Reprinted 1996
Reprinted 1998

Printed by CanPrint Communications Pty Limited, Canberra

FOREWORD

The National Occupational Health and Safety Commission is a tripartite body established by the Commonwealth Government to develop, facilitate and implement a national occupational health and safety strategy.

This strategy includes standards development, the development of hazard-specific and industry-based preventive strategies, research, training, information collection and dissemination and the development of common approaches to occupational health and safety legislation.

The National Commission comprises representatives of the peak employee and employer bodies - the Australian Council of Trade Unions and the Australian Chamber of Commerce and Industry - as well as the Commonwealth, State and Territory governments.

Consistent with the National Commission's philosophy of consultation, tripartite standing committees have been established to deal with issues relating to standards development, research and the mining industry. Expert groups and reference groups may be established to provide advice to the standing committees on those issues with which the National Commission is concerned.

PREFACE

Although many substances may present hazards at work, provided these hazards are known and understood and that appropriate precautions are taken, the substances can be used safely.

The National Commission recognises that the provision and dissemination of adequate information is the key to enabling hazardous substances to be used safely at work. The label is the initial source of information for an employee using or handling a hazardous substance.

There are a number of labelling systems in use in Australia. These include two national systems:

- *Australian Code for the Transport of Dangerous Goods by Road and Rail* (ADG Code)[1]; and
- *Standard for the Uniform Scheduling of Drugs and Poisons* (SUSDP)[2],

and other systems which tend to be specific to a narrow range of physical or chemical properties, for example:

- *Code of Practice for the Safe Transport of Radioactive Substances*[3];
- *Code of Practice for Labelling Agricultural Chemical Products*[4];
- *Code of Practice for Labelling Veterinary Chemical Products*[5]; and
- State and Territory legislation covering the labelling of explosives.

The National Commission's view is that these systems do not provide a comprehensive coverage of those substances used in workplaces and do not result in labels providing all the information an employee needs.

The National Commission therefore published a *Draft Guidance Note for the Labelling of Hazardous Substances Used at Work* in March 1989 proposing a labelling system that was in harmony with existing systems, but yet would result in labels which met workplace needs. Following review of public comment, a *Guidance Note for the Labelling of Workplace Substances* [NOHSC:3013(1991)] was subsequently published.

In November 1992 the National Commission agreed that the guidance note should be converted into a national code of practice to establish a labelling system suitable for supporting its *National Model Regulations for the Control of Workplace Hazardous Substances* [NOHSC:1005(1994)][6], under which suppliers and employers are responsible for ensuring that workplace hazardous substances are labelled appropriately.

In keeping with the philosophy behind its earlier guidance note on labelling, the *National Code of Practice for the Labelling of Workplace Substances* [NOHSC:2012(1994)] provides a flexible system of labelling whereby manufacturers and importers can meet requirements under the different legislation which applies to labelling and at the same time produce labels appropriate to workplace needs.

Consistent with this intent, if an overseas label provides at least equivalent information to that advised in this national code of practice, reformatting should not be necessary.

However, the National Commission recognises that continuing activities to further harmonise labelling systems both within Australia and overseas are necessary. To assist with this task, the National Commission has agreed to establish an expert group to advise on the implementation of its national code of practice and recommend refinements to maintain consistency with developments both within Australia and overseas. The National Commission expects that as a priority further guidance will be given on the question of the acceptability of overseas labelling systems.

This publication is one of six titles produced by the National Commission and released together as part of its workplace hazardous substances regulatory package. The six titles that comprise the set are:

- *National Model Regulations for the Control of Workplace Hazardous Substances* [NOHSC:1005(1994)] (which is produced under the same cover as the national code of practice);
- *National Code of Practice for the Control of Workplace Hazardous Substances* [NOHSC:2007(1994)];
- *National Code of Practice for the Preparation of Material Safety Data Sheets* [NOHSC:2011(1994)];
- *National Code of Practice for the Labelling of Workplace Substances* [NOHSC:2012(1994)];
- *Approved Criteria for Classifying Hazardous Subst*ances [NOHSC:1008(1994)]; and
- *List of Designated Hazardous Substances* [NOHSC:10005(1994)].

These publications are supplemented by the following titles:

- *Guidance Note for the Assessment of Health Risks Arising from the Use of Hazardous Substances in the Workplace* [NOHSC:3017(1994)]; and
- *Guidance Note for the Control of Workplace Hazardous Substances in the Retail Sector* [NOHSC:3018(1994)].

Each publication may be purchased separately through Commonwealth Government Bookshops.

1. TITLE

1.1 This national code of practice may be cited as the National Code of Practice for the Labelling of Workplace Substances [NOHSC:2012(1994)].

2. PURPOSE

2.1 The aim of this *National Code of Practice for the Labelling of Workplace Substances* [NOHSC:2012(1994)] is to provide practical guidance on meeting the requirements for the labelling of hazardous substances used at work under the *National Model Regulations for the Control of Workplace Hazardous Substances* [NOHSC:1005(1994)][6] and the Commonwealth, State and Territory regulations introduced in accordance with these national model regulations.

2.2 A label is defined as any information on a container which identifies the substance in the container and provides basic information about its safe use and handling.

2.3 Under the national model regulations it is the manufacturer or importer of a substance who is required to determine whether any substance they supply is hazardous. However, both suppliers and employers have responsibilities to ensure that workplace hazardous substances are appropriately labelled.

2.4 This national code of practice describes appropriate labelling for hazardous substances used at work and covers requirements for substances which are decanted in the workplace in accordance with the provisions of the *National Model Regulations for the Control of Workplace Hazardous Substances* [NOHSC:1005(1994)][6].

3. SCOPE

LABELLING SYSTEMS RECOGNISED AS APPROPRIATE LABELLING

3.1 The labelling system described in this national code of practice has been designed to be complementary to existing labelling systems.

3.2 The following substances, when packed and sold as end use products, should be regarded as being appropriately labelled:

(a) agricultural chemical products as defined under the *Agricultural and Veterinary Chemicals Act 1988* (Cwlth) and when labelled in accordance with the *Code of Practice for Labelling Agricultural Chemical Products*[4];

(b) veterinary chemical products as defined under the *Agricultural and Veterinary Chemicals Act 1988* (Cwlth) and when labelled in accordance with the *Code of Practice for Labelling Veterinary Chemical Products*[5];

(c) therapeutic goods as defined by the *Therapeutic Goods Act 1989* (Cwlth);

(d) food, including food additives when incorporated in food for consumption by humans or animals;

(e) cosmetic products; and

(f) munitions and explosives.

DOMESTIC PRODUCTS COVERED BY THE SUSDP

3.3 Domestic end use products which are covered by the SUSDP[2] under the State and Territory poisons legislation shall comply with the SUSDP[2] labelling requirements.

3.4 Where such domestic end use products are only incidentally used in the workplace, they need only comply with the SUSDP[2] labelling requirements. However, additional labelling information, in accordance with the National Commission's labelling system described in this national code of practice, should be incorporated for those products which may be reasonably expected to be used in the workplace, to ensure safe handling of the substances in their use at work.

INDUSTRIAL AND LABORATORY PRODUCTS COVERED BY THE SUSDP

3.5 Substances which are covered by the SUSDP[2], but which are packed and sold solely for dispensary, industrial, laboratory or manufacturing purposes, should only be labelled in accordance with the National Commission's labelling system described in this national code of practice.

ADG CODE REQUIREMENTS

3.6 In addition to being labelled in accordance with this national code of practice, where hazardous substances are also classified as dangerous goods by the ADG Code[1], the requirements of State and Territory dangerous goods legislation shall be met.

3.7 However, hazardous substances which are being transported, or are in transit, in accordance with any of the following codes and regulations need only comply with those systems:

(a) ADG Code[1];

(b) International Air Transport Association's *Dangerous Goods Regulations*[7];

(c) International Civil Aviation Organisation's *Technical Instructions for the Safe Transport of Dangerous Goods by Air*[8]; or

(d) Inter-Governmental Maritime Consultative Organisation's *International Maritime Dangerous Goods Code*[9].

HAZARDOUS SUBSTANCES IMPORTED FROM OVERSEAS

3.8 All hazardous substances imported into Australia, not otherwise required to be transported in accordance with any of the dangerous goods regulations or codes listed in section 3.7 above, do not require labelling in accordance with this national code of practice until such time as they have been taken possession of by the importer.

3.9 Workplace hazardous substances which are imported from overseas may be labelled in accordance with overseas requirements. Provided that these overseas labels contain equivalent information to that advised in this national code of practice, it should not be necessary to relabel an imported substance.

4. DEFINITIONS

'Acute toxicity' means a toxic effect which occurs immediately or shortly after a single exposure.

'ADG Code'[1] ***see*** *Australian Code for the Transport of Dangerous Goods by Road and Rail*.

'Article' means an item which is formed to a specific shape, surface or design during production, has an end function dependent in whole or in part on its shape or design, and which undergoes no change of chemical composition and physical state during the end use except as an intrinsic aspect of that end use. Fluids and particles are not considered articles, regardless of shape or design.

'Australian Code for the Transport of Dangerous Goods by Road and Rail' (ADG Code)[1] means the code prepared by the standing national Advisory Committee on the Transport of Dangerous Goods and endorsed by the Australian Transport Advisory Council. The ADG Code is based on recommendations prepared by the United Nations Committee of Experts on the Transport of Dangerous Goods. The ADG Code covers the classification, packaging, marking and transport of dangerous good.

'Boiling point' means the temperature at which the vapour pressure of a substance equals the atmospheric or other designated pressure.

'Cancer' means a malignant tumour which can spread to other organs of the body. As distinct from a benign tumour which cannot. (Although leukaemia and some other malignant diseases are not solid tumours, they meet other criteria for cancer and can be, and often are, included under this definition.)

'Carcinogen' means an agent which is responsible for the formation of a cancer.

'Carcinogenesis' means the causing of cancer.

'Carcinogenic' means capable of causing cancer.

'Chemical Abstracts Service Registry Number (CAS Number or CAS No.)' means a unique number assigned by the Chemical Abstracts Service, Columbus, Ohio, USA.

'Chronic toxicity' means a toxic effect which occurs after repeated or prolonged exposure. Chronic effects may occur some time after exposure has ceased.

'Class label' means the label illustrating the class allocated to a substance under the ADG Code[1].

'Combustion' means the process of burning.

'Combustible' means that a substance is capable of burning.

'Combustible liquid' means any liquid, other than a flammable liquid, that has a flashpoint, and that has a firepoint less than its boiling point, as defined by the ADG Code[1].

'Commercially confidential information' means information, such as chemical identity or exact composition, which, if made public, would significantly damage commercial interests.

'Concentration cut-off level' means the concentration level in the National Occupational Health and Safety Commission's *List of Designated Hazardous Substances* [NOHSC:10005(1994)][10], or assigned in accordance with the National Occupational Health and Safety Commission's *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(1994)][11].

'Container' means anything in or by which hazardous substances are or have been wholly (or partly) cased, covered, enclosed, contained or packed, whether such a container is empty, or partially or completely full. Tanks and bulk storage containers, as defined by the ADG Code[1], are not included in the definition of 'container'.

'Correct shipping name' means a name for identifying substances classified as dangerous goods as specified by the ADG Code[1].

'Corrosive' means a substance which causes destruction of, or damage to, materials or living tissue on contact.

'Corrosive substance' means a substance which has been classified as a corrosive according to the National Occupational Health and Safety Commission's *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(1994)][11].

'Dangerous goods' means substances which are either specifically listed in the ADG Code[1] or meet the classification criteria of the ADG Code[1].

'Dangerous goods class' means the class allocated to a substance under the ADG Code[1].

'Employee' means an individual who works under a contract of employment, apprenticeship or traineeship.

'Employee representative' includes an employee member of a health and safety committee where established in the workplace, or a person elected to represent a group of employees on health and safety matters.

'Employer' means a corporation or an individual who employs persons under a contract of employment, apprenticeship or traineeship.

Note: The definition of employer includes the self-employed which means a person who works for gain, other than under a contract of employment, apprenticeship or traineeship, whether or not that person employs others.

'Dermal' means relating to the skin.

'Flammable' means that a substance is capable of being ignited and burning in air.

'Flammable liquid' means a liquid which is capable of being ignited and burning in air and which meets the criteria of the ADG Code[1].

'Flashpoint' means the lowest temperature in °C at which a liquid will produce enough vapour to ignite, if the vapour is flammable. For a specific definition for the purposes of classifying substances, reference should be made to the ADG Code[1]. Flashpoint is established by closed or open cup methods. The lower the flashpoint, the higher the risk of fire.

'Functional disturbance' means disturbance of the function of a part of the body, but not as a result of any structural change.

'Generic name' means a name applied to describe a category or group of chemicals, for example, azo dyes or halogenated aromatic amines.

'Hazard' means an intrinsic capacity associated with an agent or process capable of causing harm.

'Hazardous substance' means a substance which:

(a) is listed in the National Occupational Health and Safety Commission's *List of Designated Hazardous Substances* [NOHSC:10005(1994)][10]; or

(b) has been classified as a hazardous substance by the manufacturer or importer, in accordance with the National Occupational Health and Safety Commission's *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(1994)][11].

'Ignition' means setting fire to or being set fire to.

'Immiscible' means that two substances, if mixed together, will readily separate and not form a homogeneous mixture.

'Inflammation' means a condition of a part of the body which involves heat, swelling, redness and usually pain.

'Ingredient' means any component of a substance (including impurities), in a mixture or combination.

'Inhalation' means breathing in.

'Irritancy' means the ability of a substance to produce local irritation or inflammation on contact with tissues and membranes, such as skin or eyes, or , after inhalation, to produce local irritation or inflammation of nasal or lung tissue.

'Irritant' means a substance that will produce local irritation or inflammation on contact with tissues and membranes, such as skin or eyes, or that will, after inhalation, produce local irritation or inflammation of nasal or lung tissue.

'Label' means a set of information on a container which identifies the substance in the container, identifies whether the substance is hazardous and provides basic information about the safe use and handling of the substance.

'LC_{50}' means a concentration of a substance (usually in air) that is estimated to produce death in 50 per cent of a population of experimental animals on inhalation for a short period of time.

'LD_{50}' means a dose of a substance that produces death in 50 per cent of a population of experimental animals. It is usually expressed as milligrams per kilogram (mg/kg) of body weight.

'Lesion' means any discontinuity of tissue or loss of function of a part of the body as a result of disease or trauma.

'Material Safety Data Sheet (MSDS)'[12] means a document that describes the properties and uses of a substance, that is, identity, chemical and physical properties, health hazard information, precautions for use and safe handling information.

'May' means that a requirement is optional.

'Mixture' means a physical combination of chemicals resulting from the deliberate mixing of those chemicals or from a chemical reaction.

'Morphological change' means change to the form or structure of a part of the body.

'Mutagen' means an agent capable of producing a mutation.

Mutagenesis' means the process of producing a mutation.

'Mutagenic' means able to produce a mutation.

'Mutation' means a change in the genetic material of cells.

'Ocular' means of the eye or affecting the eye.

'Oral' means ingested or administered via the mouth.

'Oxidising material' means any substance which may start a fire in other materials or stimulate the combustion of other materials and, therefore, increase the violence of a fire.

'Oxidising property' means a property of substances which, although not necessarily combustible, may readily liberate oxygen or be the cause of an oxidation process and which, as a result, may start a fire in other materials or promote the combustion of other materials.

'Packaging group', as defined by the ADG Code[1], means the division of dangerous goods of Classes 3, 4, 5, 6.1, 8 and 9 into three groups according to the degree of the hazard present: 'I'ÿ(great danger), 'II' (medium danger) and 'III' (minor danger).

'Poisons Schedule' means a listing of substances requiring specific labelling and precautions in use. The *Standard for the Uniform Scheduling of Drugs and Poisons*[2] is the basis for State and Territory poisons legislation. ***See*** *Standard for the Uniform Scheduling of Drugs and Poisons*[2].

'Practicable' means 'practicable' in Victoria, Queensland, Western Australia and the Northern Territory, 'reasonably practicable' in New South Wales, South Australia, the Australian Capital Territory and Commonwealth jurisdiction and 'a reasonable precaution' in Tasmania.

'Product name' means the brand name, trade name or code name or code number specified by the supplier.

'Reactivity' means the ability to readily undergo chemical change.

'Respiratory system' means the system of the body used for breathing.

'Risk' means the likelihood that a substance will cause harm in the circumstances of its use.

'Scheduled' means a substance is classified under the Standard for the Uniform Scheduling of Drugs and Poisons[2].

'Sensitisation' means to become sensitive/allergic to the effects of minute quantities of a substance.

'Shall' means that a requirement is mandatory.

'Should' means a recommendation.

'Signal words' means word(s) prominently displayed on labels of hazardous substances to indicate the relative severity of hazard.

'Standard for the Uniform Scheduling of Drugs and Poisons' (SUSDP) [2] means the standard prepared by the National Health and Medical Research Council which is the basis for State and Territory poisons legislation.

'Subsidiary risk' means a risk in addition to the class to which dangerous goods are assigned; and which is determined by a requirement to have a subsidiary risk label under the ADG Code[1].

'Subsidiary risk label' means a label indicating the subsidiary risk of a dangerous good assigned by the ADG Code[1].

'Substance' means any natural or artificial entity, composite material, mixture or formulation other than an article.

'Supplier' means an importer, manufacturer, wholesaler or distributor of workplace substances, but excludes a retailer.

'SUSDP'[2] ***see*** *Standard for the Uniform Scheduling of Drugs and Poisons*.

'Teratogen' means an agent capable of causing deformities in a developing foetus, that is, causing birth defects.

'Teratogenesis' means the causing of abnormalities in a developing foetus, that is, causing birth defects.

'Teratogenic' means able to produce abnormalities in a developing foetus, that is, causing birth defects.

'Toxic effect' means the property of an agent producing damage to an organism. This usually refers to functional (systemic) damage but may be developmental in respect of tissue and skeleton in the case of the embryo. The damage may be permanent or transient.

'Trade name' means a company product name which may or may not be registered.

'United Nations Number (UN Number)' means a system of four digit numbers assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods. UN Numbers are assigned to one substance or to a group of substances with similar characteristics. They are not necessarily unique to one chemical, and may cover a group of chemicals with similar hazardous properties, for example, Organophosphorus pesticides, liquid, toxic - UN No. 3018.

'Vapour density' means the ratio of the density of the vapour compared to the density of air. The density of air is assumed to be 1.0. Vapours with a vapour density greater than 1.0 will tend to stay close to the floor, whereas vapours with a density of less than 1.0 will tend to rise.

'Vapour pressure' means the pressure created when a substance evaporates. This is the pressure of the vapour of the substance, at any given temperature, in equilibrium with its liquid or solid form. The higher the vapour pressure, the more the substance tends to evaporate.

'Volatile' means able to pass readily into the vapour state.

5. GENERAL GUIDELINES

5.1 All the information on labels should be:

(a) on an outside face of the container;

(b) in the English language;

(c) in durable print; and

(d) in lettering of a size and style which is easily legible.

5.2 The label should be firmly secured and printed in a colour or colours which provide a distinct contrast to the background colour.

5.3 A person shall not remove, deface, modify or alter a correct label of a substance used at work. It is an offence under the National Commission's *National Model Regulations for the Control of Workplace Hazardous Substances* [NOHSC:1005(1994)][6] to make any such alteration.

5.4 Containers shall remain correctly labelled until cleaned so that they no longer contain the hazardous substance that was placed in them.

6. LABELS FOR HAZARDOUS SUBSTANCES

6.1 The label on a hazardous substance should draw the attention of an employee who is handling or using the substance to the significant hazards involved. It should take into account all the hazards which are likely to occur during the use of the substance.

6.2 Samples of labels for workplace hazardous substances are provided at Appendix 4.

INFORMATION NEEDED ON LABELS FOR CONTAINERS WITH A CAPACITY OF MORE THAN 500 mL(g)

6.3 Labels on workplace hazardous substance containers of more than 500 mL(g) capacity should include the following:

(a) signal word(s) and/or dangerous goods class and subsidiary risk label(s) (where applicable);

(b) identification information:

- **(i)** product name,
- **(ii)** chemical name,
- **(iii)** United Nations (UN) Number (where required by the ADG Code[1]), and
- **(iv)** ingredients and formulation details (where relevant);

(c) risk phrase(s);

(d) directions for use (where appropriate);

(e) safety phrase(s);

(f) first aid procedures;

(g) emergency procedures;

(h) details of manufacturer or importer;

(i) expiry date (where relevant); and

(j) reference to the MSDS.

INFORMATION NEEDED ON LABELS FOR CONTAINERS WITH A CAPACITY OF 500 mL(g) OR LESS

6.4 It is recognised that small containers may have insufficient space to include all the information needed on the label in a style and size that is legible and clearly distinguishable from other markings on the container. The information needed on labels for small containers is therefore a subset of that for containers of more than 500 mL(g).

6.5 Labels on workplace hazardous substance containers of 500 mL(g) capacity or less should include the following:

(a) signal word(s) and/or dangerous goods class and subsidiary risk label(s) (where applicable);

(b) product name;

(c) chemical name;

(d) risk phrase(s) (at least the most significant phrase(s));

(e) safety phrase(s) (at least the most significant phrase(s));

(f) first aid procedures;

(g) details of manufacturer or importer; and

(h) reference to the MSDS.

6.6 Where a container of a hazardous substance is so small that this information cannot be provided on the actual container, the container should be labelled with at least:

(a) signal word(s) and/or the dangerous goods class and subsidiary risk label(s) (where applicable);

(b) product name; and

(c) details of manufacturer or importer.

6.7 In these circumstances, consideration should be given to other methods of providing additional information, such as on outer packaging or on leaflets. Alternative packaging can be used to give maximum clarity to the information and allow the full set of information to be supplied.

7. DESCRIPTION OF LABEL ITEMS FOR HAZARDOUS SUBSTANCES

SIGNAL WORD(S) AND/OR DANGEROUS GOODS CLASS AND SUBSIDIARY RISK LABEL(S)

7.1 Signal words are words prominently displayed on labels to indicate the relative degree of severity of a hazard. Class labels illustrate the class allocated to dangerous goods under the ADG Code[1] and indicate the major hazard posed by a substance.

7.2 Dangerous goods legislation requires that the dangerous goods class and subsidiary risk labels always be assigned according to the ADG Code[1].

7.3 Similarly, poisons legislation in all States and Territories require that if a substance is scheduled by the SUSDP[2], then the signal words:

'WARNING', 'POISON' and **'DANGEROUS POISON'**

should always be assigned in accordance to the SUSDP[2].

7.4 Where a hazardous substance is not defined as a dangerous good and it is not scheduled by the SUSDP[2], then the word **'HAZARDOUS'** should be used.

7.5 The signal word **'HAZARDOUS'** should be clearly shown on a contrasting background (preferably in red on a white background) and in a prominent position on the label. The height of the signal word should be at least twice the height of the general text and not less than a quarter of the height of the largest letter.

IDENTIFICATION INFORMATION

7.6 The product name, the chemical name (as defined below), the UN Number and a list of ingredients determined to be hazardous, where there is more than one such ingredient in the product, should be included on the label. This information is necessary for the identification of the hazardous properties of a product.

Product Name

7.7 The product name by which the substance is to be known should be included on the label. This may be identical to the trade name.

Substance Name

7.8 For a single ingredient hazardous substance, the chemical name should be assigned in the following order of preference:

(a) where the substance is specifically listed in the ADG Code[1] and meets the classification criteria of Section 2 of that code, use the correct shipping name assigned in the ADG Code[1];

(b) where the substance is scheduled, use the name as it appears in the SUSDP[2]; and

(c) where neither of the above are applicable, use the recognised chemical name as used in readily available scientific and technical handbooks, journals and texts.

7.9 Where the chemical name is identical to the product name, the name need not be duplicated.

UN Number

7.10 Where the substance is defined as a dangerous good in the ADG Code[1], the UN Number should be provided.

Ingredients and Formulation Details

7.11 In most cases, there should be full disclosure of ingredients determined to be hazardous. However, under certain conditions, non-disclosure of genuine commercially confidential information may be permitted, subject to the provisions of the *National Model Regulations for the Control of Workplace Hazardous Substances*[6], as described below.

Ingredients for which Full Disclosure is Required

Type I Ingredients

7.12 Disclosure of the chemical name (as defined in section 7.8) will always be required for some ingredients. These are ingredients which:

(a) in accordance with the National Commission's *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(1994)][11] are carcinogenic, mutagenic, teratogenic, skin or respiratory sensitisers, very corrosive, corrosive, toxic or very toxic, or harmful substances which can cause irreversible effects after acute exposure, or harmful substance which can cause serious damage to health after repeated or prolonged exposure;

OR

(b) have an exposure standard listed in the National Commission's *Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment* [NOHSC:1003(1991)][13];

AND

(c) are present in a quantity which exceeds the lowest relevant concentration cut-off level specified for the hazard classification in the National Commission's *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(1994)][11].

7.13 A claim of commercial confidentiality cannot be made in relation to any ingredient which meets these criteria. Generic names are not permitted for any of the above Type I ingredients.

Ingredients for which Generic Names may be Used with Notification to Worksafe Australia

Type II Ingredients

7.14 The manufacturer or importer may use a generic name on the label, in place of the chemical name of an ingredient (as defined in section 7.8), if:

(a) the ingredient is a harmful substance (not covered in subsection 7.12(a)) in accordance with the National Commission's *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(1994)][11];

AND

(b) is present in a quantity which exceeds the lowest relevant concentration cut-off level specified for the hazard classification in the National Commission's *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(1994)][11].

7.15 The generic name used should describe the functionality of the ingredient, substance or polymer which contributes to the hazard.

7.16 Notification of any commercially confidential Type II ingredient shall be made to Worksafe Australia on the approved form (***see*** Appendix 5).

7.17 Generic names should be selected as described at Appendix 6.

Proportions of Ingredients

7.18 If the exact amount of an ingredient determined to be hazardous is commercially confidential, then the proportion range of the ingredient contained in the product should be indicated as:

> 60 % 30 - 60 % 10 - < 30 % < 10 %

7.19 Ingredients should be listed so that the ingredient in the highest proportion is listed first and so on in descending order.

7.20 A substance classified as a dangerous good in accordance with the ADG Code[1] shall be labelled with the correct shipping name as required by the ADG Code[1]. This may require the technical name of selected ingredients to be listed first. Any other ingredients should then be listed in descending order of proportion.

Examples of the Ingredients Subsection of a Label

7.21 The examples below are for the following mixture:

toluene	55 %
ethyl methyl ketone	40 %
methanol	3.5 %
2-butanol	1 %
xylene	0.5 %

Note: Xylene and 2-butanol are not listed in the following examples because they have been determined not to be hazardous at these concentrations. (***See*** *List of Designated Hazardous Substances* [NOHSC:10005(1994)][10].)

7.22 *Example 1*. Where there is full disclosure of ingredients and proportions of ingredients:

Flammable Liquid, N.O.S., contains:

toluene	55 %
ethyl methyl ketone	40 %

Also contains:

methanol	3.5 %

7.23 *Example 2*. Where the exact proportions of the ingredients are commercially confidential (see Sample 3 at Appendix 4):

Flammable Liquid, N.O.S., contains:

toluene	30 - 60 %
ethyl methyl ketone	30 - 60 %

Also contains:

methanol	< 10 %

Complex Mixtures

7.24 It may be very difficult to identify the ingredients of some complex mixtures. In addition, the chemical composition of some complex mixtures may vary according to their source. The subsection of a label listing ingredients and formulation details for a complex mixture should provide as much information as possible. Chemical classes should be distinguished, where possible, for example, aliphatic or aromatic hydrocarbon, aliphatic alcohol or phenol, silica or silicates. Where relevant, the proportion ranges given in section 7.18 should be used to cover the variability in the composition of the complex mixture. If this is done, a statement should be made that the exact composition of the complex mixture is not known.

RISK PHRASE(S)

7.25 Risk phrases convey a general description of the hazard to supplement the dangerous goods class and subsidiary risk label(s) and/or signal word(s). These phrases should give notice of the hazards present with the normal, or reasonably foreseeable, handling or use of the substance. For example, use:

- **'Flammable'**; or
- **'Irritating to skin'**; or
- **'Harmful if swallowed'**.

7.26 Risk information should also include effects of overexposure or any likely chronic effects following multiple low level exposure.

7.27 Where a substance has been determined to be a hazardous substance, the provision of risk phrase(s) should be in accordance with the hazard classification that has been determined. When a substance poses more than one such hazard, an appropriate risk phrase for each hazard should be included, with the most significant being placed first.

7.28 The most appropriate risk phrases should be selected from Appendix 1. In general, no more than four phrases should be necessary. Additional risk phrases may be used for risks not identified in Appendix 1.

7.29 When more than four phrases apply, it may be possible to eliminate phrases which refer to the lowest degree of hazard, provided that the overall effectiveness of the warning is not reduced. Use of suitable safety phrases may also make certain risk phrases superfluous.

7.30 There is no need to duplicate risk phrases from any other section of the label, for example, when the risk phrase appears in the dangerous goods class label it is not necessary to duplicate it in this section.

DIRECTIONS FOR USE

7.31 Specific directions detailing quantities and procedures for use of the hazardous substance may be provided, where appropriate, for example, mixing instructions.

7.32 As directions for use go hand in hand with safety phrases, where possible, these sections should be located together.

SAFETY PHRASE(S)

7.33 Safety phrases provide information on safe storage, handling and personal protection. For example, use:

- **'Keep container dry'**; or
- **'When using do not eat or drink'**; or
- **'Wear suitable protective clothing and gloves'**.

7.34 When choosing safety phrases, the risks indicated by the risk phrases on the label should be addressed, taking into account the intended use of the hazardous substance.

7.35 Generally, safety phrases which give obvious advice in relation to risk phrases should be omitted from the label unless used to give particular emphasis to a specific warning. For example, the risk phrase **'Heating may cause an explosion'** need not be supplemented with the safety phrase **'Keep away from heat'**.

7.36 When a safety phrase refers to personal protective equipment, the safety phrase should, where appropriate, specify the type of protective equipment needed. For example, **'Wear suitable gloves'** becomes **'Wear gloves - neoprene'**.

7.37 The most appropriate safety phrases should be selected from Appendix 2. In general, no more than four phrases should be necessary. Additional safety phrase(s) may be used for situations not identified in Appendix 2.

7.38 To improve readability, safety phrases on a label should preferably be grouped under an appropriate heading, for example, 'SAFETY', as shown in the sample labels at Appendix 4.

FIRST AID PROCEDURES

7.39 First aid instructions should be included where contact or exposure to the substance warrants immediate treatment. The most appropriate first aid phrases should be selected from Appendix 3. Additional first aid phrase(s) may be used for situations not identified in Appendix 3. First aid instructions should be limited to procedures based on methods and materials commonly available. For example, use:

- **'Wash exposed skin with plenty of warm water'**; or
- **'Transfer patient to fresh air'**; or
- **'Remove contaminated clothing'**.

7.40 Where indicated, the following safety or first aid phrase(s) should be used in conjunction with the preceding instructions:

- **'In case of contact with eyes, rinse immediately with plenty of water and contact a doctor or Poisons Information Centre'**;
- **'If you feel unwell, contact a doctor or Poisons Information Centre (show the label where possible)'**;
- **'In case of accident or if you feel unwell, contact a doctor or Poisons Information Centre immediately (show the label where possible)'**; or
- **'If swallowed, contact a doctor or Poisons Information Centre immediately and show this container or label'**.

7.41 To improve readability, first aid phrase(s) on a label should preferably be grouped under an appropriate heading, for example, 'FIRST AID', as shown in the sample labels at Appendix 4.

EMERGENCY PROCEDURES

7.42 Instructions on the control of leaks, spills or fires should be provided. Instructions should be as simple and brief as possible and should advise on the use of suitable materials, equipment, extinguishing agents and so on. Where safety phrases for fire are not sufficient, specific advice should be included on fire procedures.

DETAILS OF MANUFACTURER OR IMPORTER

7.43 The name and address in Australia of the supplier who is primarily responsible for the hazardous substance should be provided, as well as a phone number (including the area code) from where advice can be obtained.

EXPIRY DATE

7.44 Where relevant, an expiry date for use of the substance should be provided.

REFERENCE TO THE MSDS

7.45 The user should be directed to further information by referring them to the MSDS, for example, **'Additional information is listed in the Material Safety Data Sheet'**.

8. LABELS FOR DECANTED SUBSTANCES

8.1 The practice of decanting is widespread in many industries. Minimum requirements for the labelling of decanted hazardous substances are contained in the *National Model Regulations for the Control of Workplace Hazardous Substances* [NOHSC:1005(1994)][6].

8.2 All hazardous substances which are decanted and are not consumed immediately shall be labelled with the product name and the risk and safety phrases.

8.3 Where a decanted substance is consumed immediately, no labelling is required.

8.4 A container shall remain correctly labelled until cleaned so that it no longer contains any hazardous substance.

9. LABORATORY LABELS

9.1 All hazardous substances supplied to laboratories shall be labelled in accordance with this national code of practice.

9.2 Where a hazardous substance is decanted in a laboratory, the employer shall ensure that the requirements of the *National Model Regulations for the Control of Workplace Hazardous Substances* [NOHSC:1005(1994)][6] for labelling decanted substances are met. See Chapter 8 of this national code of practice.

9.3 Where the hazardous substance is decanted in the laboratory into experimental equipment, such as test tubes or columns, the label may be attached to supporting apparatus, for example, a test tube rack. Alternatively, a tag may be used to enable the required information to be provided.

10. REVISION OF LABELS

10.1 Where a substance changes, for example, a new ingredient is introduced, or when new information about the health hazards of a substance becomes known, for example, the substance becomes known as a sensitiser, then labels will need to be revised to take into account the new information. Under the *National Model Regulations for the Control of Workplace Hazardous Substances* [NOHSC:1005(1994)][6], manufacturers and importers are required to review and revise the MSDS as often as reasonably necessary to keep it up to date and, in any event, at intervals not exceeding five years. When the supplier has to revise the MSDS, the label may also need to be reviewed.

11. CONTAINERS FOUND WITHOUT CORRECT LABELLING

11.1 If a container is not properly labelled, for example, if the label has been lost, the container should have the product name attached to it. If the product name is not known, then this should be clearly marked on the container, for example, **'Caution do not use: unknown substance'**.

11.2 A container which is not properly labelled should be stored in isolation until its contents can be identified and, if the substance is hazardous, the container appropriately labelled.

11.3 If the contents cannot be identified, the contents should be disposed of in an acceptable manner, in consultation with the relevant waste management authority.

APPENDIX I

SELECTED RISK PHRASES FROM THE COMMISSION OF THE EUROPEAN COMMUNITIES AND THE RELEVANT CRITERIA FOR THEIR USE IN AUSTRALIA

RISK PHRASES

Al.1 Risk phrases (R-Phrases) convey a general description of the hazard to supplement the dangerous goods class and subsidiary risk(s) or signal word(s). These phrases should give notice of the hazards present with the normal, or reasonably foreseeable, handling or use of the substance.

A1.2 The most appropriate risk phrases from EEC Council Directive 67/548/EEC[14] and amended Directives to 91/325/EEC[15] should be selected in accordance with the criteria listed in this appendix. Additional risk phrases may be used for risks not identified in this appendix.

A1.3 R12 and R13 from the European Communities are not recommended for use in Australia as they are covered by appropriate dangerous goods requirements.

A1.4 The relevant risk phases which should be used are as follows:

R 1 Explosive when dry.

R 2 Risk of explosion by shock, friction, fire or other sources of ignition.

R 3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.

R 4 Forms very sensitive explosive metallic compounds.

R 5 Heating may cause an explosion.

R 6 Explosive with or without contact with air.

R 7 May cause fire.

R 8 Contact with combustible material may cause fire.

R 9 Explosive when mixed with combustible material.

R 10* Flammable.

R 11* Highly flammable.

R 14 Reacts violently with water.

R 15 Contact with water liberates highly flammable gases.

R 16 Explosive when mixed with oxidising substances.

R 17 Spontaneously flammable in air.

* **These risk phrases may already be included in the dangerous goods class label if the substance is classified as 'Flammable' under the ADG Code[1]. In these cases it is not necessary to include the risk phrase in addition to the dangerous goods class label.**

R 18 **In use, may form flammable/explosive vapour-air mixture.**

R 19 **May form explosive peroxides.**

R 20 **Harmful by inhalation.**

R 21 **Harmful in contact with skin.**

R 22 **Harmful if swallowed.**

R 23 **Toxic by inhalation.**

R 24 **Toxic in contact with skin.**

R 25 **Toxic if swallowed.**

R 26 **Very toxic by inhalation.**

R 27 **Very toxic in contact with skin.**

R 28 **Very toxic if swallowed.**

R 29 **Contact with water liberates toxic gas.**

R 30 **Can become highly flammable in use.**

R 31 **Contact with acids liberates toxic gas.**

R 32 **Contact with acids liberates very toxic gas.**

R 33 **Danger of cumulative effects.**

R 34 **Causes burns.**

R 35 **Causes severe burns.**

R 36 **Irritating to eyes.**

R 37 **Irritating to respiratory system.**

R 38 **Irritating to skin.**

R 39 **Danger of very serious irreversible effects.**

R 40 **Possible risk of irreversible effects.**

R 41 **Risk of serious damage to eyes.**

R 42 **May cause sensitisation by inhalation.**

R 43 **May cause sensitisation by skin contact.**

R 44 **Risk of explosion if heated under confinement.**

R 45 **May cause cancer.**

R 46 **May cause heritable genetic damage.**

R 47 **May cause birth defects.**

R 48 **Danger of serious damage to health by prolonged exposure.**

R 49 **May cause cancer by inhalation.**

COMBINATIONS OF RISK PHRASES

Al.5 Where a substance exhibits the same degree of toxicity for different routes of exposure, risk phrases for these routes of exposure may be combined in a single sentence as shown below.

R 14/15 **Reacts violently with water liberating highly flammable gases.**

R 15/29 **Contact with water liberates toxic, highly flammable gas.**

R 20/21 **Harmful by inhalation and in contact with skin.**

R 20/22 **Harmful by inhalation and if swallowed.**

R 20/21/22 **Harmful by inhalation, in contact with skin and if swallowed.**

R 21/22 **Harmful in contact with skin and if swallowed.**

R 23/24 **Toxic by inhalation and in contact with skin.**

R 23/25 **Toxic by inhalation and if swallowed.**

R 23/24/25 **Toxic by inhalation, in contact with skin and if swallowed.**

R 24/25 **Toxic in contact with skin and if swallowed.**

R 26/27 **Very toxic by inhalation and in contact with skin.**

R 26/28 **Very toxic by inhalation and if swallowed.**

R 26/27/28 **Very toxic by inhalation, in contact with skin and if swallowed.**

R 27/28 **Very toxic in contact with skin and if swallowed.**

R 36/37 **Irritating to eyes and respiratory system.**

R 36/38 **Irritating to eyes and skin.**

R 36/37/38 **Irritating to eyes, respiratory system and skin.**

R 37/38 **Irritating to respiratory system and skin.**

R 42/43 **May cause sensitisation by inhalation and skin contact.**

CRITERIA FOR SELECTION OF RISK PHRASES

Al.6 Risk phrases should be assigned as specified below consistent with the National Commission's Approved Criteria for Classifying Hazardous Substances [NOHSC:1008(1994)][11] or the ADG Code[1] as appropriate.

Very Toxic, Toxic and Harmful Substances

Very Toxic Substances

R 28 Very toxic if swallowed.

Substances with acute toxicity of LD_{50} oral, rat: < 25 mg/kg (body weight).

R 27 Very toxic in contact with skin.

Substances with acute toxicity of LD_{50} dermal, rat or rabbit: < 50 mg/kg (body weight).

R 26 Very toxic by inhalation.

Substances with acute toxicity of LC_{50} inhalation, rat: < 0.25 mg/L/4 hr (body weight).

R 39 Danger of very serious irreversible effects.

Strong evidence that irreversible damage, other than carcinogenesis, mutagenesis and teratogenesis, is likely to be caused by a single exposure by an appropriate route, generally in the above mentioned dose range.

R 26, R 27 or R 28 is also to be assigned to indicate route of administration/exposure.

Toxic Substances

R 25 Toxic if swallowed.

Substances with acute toxicity of LD_{50} oral, rat: 25 < LD50 < 200 mg/kg (body weight).

R 24 Toxic in contact with skin.

Substances with acute toxicity of LD_{50} dermal, rat or rabbit: 50 < LD50 < 400 mg/kg (body weight.)

R 23 Toxic by inhalation.

Substances with acute toxicity of LC_{50} inhalation, rat: 0.25 < LC50 < 1 mg/L/4hr.

R 39 Danger of very serious irreversible effects.

Strong evidence that irreversible damage, other than carcinogenesis, mutagenesis and teratogenesis, is likely to be caused by a single exposure, by an appropriate route, generally in the above mentioned dose range.

R 23, R 24 or R 25 is also to be assigned to indicate route of administration/exposure.

R 48 Danger of serious damage to health by prolonged exposure.

Serious damage (that is, clear functional disturbance or morphological change which have toxicological significance) is likely to be caused by repeated or prolonged exposure, by an appropriate route, at dosage levels significantly lower than those quoted under R 48 in the section on harmful substances below.

R 23, R 24 or R 25 is also to be assigned to indicate route of administration/exposure.

Harmful Substances

R 22 Harmful if swallowed.

Substances with acute toxicity of LD_{50} oral, rat: 200 < LD50 < 2,000 mg/kg (body weight).

R 21 Harmful in contact with skin.

Substances with acute toxicity of LD_{50} dermal, rat or rabbit: 400 < LD50 < 2,000 mg/kg (body weight).

R 20 Harmful by inhalation.

Substances with acute toxicity of LC_{50} inhalation, rat: 1 < LC50 < 5 mg/L/4hr.

R 40 Possible risk of irreversible effects.

Strong evidence that irreversible damage, other than carcinogenesis, mutagenesis and teratogenesis, is likely to be caused by a single exposure by an appropriate route, generally in the above-mentioned dose range.

R 20, R 21 or R 22 is also to be assigned to indicate route of administration/exposure.

R 48 Danger of serious damage to health by prolonged exposure.

Serious damage (clear functional disturbance or morphological change which have toxicological significance) is likely to be caused by repeated or prolonged exposure by the following routes:

- oral, rat < 50 mg/kg (body weight)/day;
- dermal, rat or rabbit < 100 mg/kg (body weight)/day; and
- inhalation, rat < 0.25 mg/L, 6 hr/day.

These guide values can apply directly when severe lesions have been observed in a sub-chronic (90 days) toxicity study, but also serve as a guide when interpreting the results of sub-acute (28 days) or chronic (two years) toxicity tests.

R 20, R 21 or R 22 is also to be assigned to indicate route of administration/exposure.

Corrosive Substances

R35 Causes severe burns.

R34 Causes burns.

Irritant and Sensitising Substances

R 38 Irritating to skin.

If, when applied to healthy intact animal skin for up to four hours, the substance causes significant inflammation which is present 24 hours or more after the end of the exposure period or where practical experience shows the substance to be capable of causing inflammation in a substantial number of persons.

R 43 May cause sensitisation by skin contact.

Practical experience shows the substance to be capable of inducing a sensitisation reaction in a substantial number of persons by skin contact, or on the basis of a positive response in experimental animals.

R 37 Irritating to respiratory system.

Practical experience shows the substance to be capable of causing irritation to the respiratory system in a substantial number of persons.

R 42 May cause sensitisation by inhalation.

Practical evidence shows the substance to be capable of inducing a sensitisation reaction in humans by inhalation, at a greater frequency than would be expected from the response of a normal population.

R 36 Irritating to eyes.

If, when applied to the eye of the animal, the substance causes significant ocular lesions which are present 24 hours or more after instillation of the test material, or where practical experience shows the substance to be capable of causing eye irritation in a substantial number of persons.

R 41 Risk of serious damage to eyes.

If, when applied to the eye of the animal, the substance causes severe ocular lesions which are present 24 hours or more after instillation of the test material.

The use of R 34 precludes the use of R 41.

Carcinogenic Substances

Categories I and 2

R 45 May cause cancer.

R 49 May cause cancer by inhalation.

Substances which present a carcinogenic risk only when inhaled. For example, as dust, vapour or fumes (other routes of exposure e.g. by swallowing or in contact with skin, do not present any carcinogenic risk).

Category 3

R 40 Possible risk of irreversible effects.

Mutagenic Substances

Categories I and 2

R 46 May cause heritable genetic damage.

Catagory 3

R 40 Possible risk of irreversible effects.

Teratogenic Substances

Categories I and 2

R 47 May cause birth defects.

Dangerous Substances

Substances which may Explode under Specific Circumstances

R 2 Risk of explosion by shock, friction, fire or other sources of ignition.

For substances, including certain organic peroxides, but excepting those assigned to risk phrase R 3.

R 3 Extreme risk of explosion by shock, friction, fire or other sources of ignition.

For substances which are particularly sensitive, such as picric acid salts and PETN, and certain undiluted organic peroxides, such as dibenzoyl peroxide.

R 1 Explosive when dry.

For explosive substances put on the market in solution or in a wetted form, for example, nitrocellulose with more than 12.6 per cent nitrogen.

R 4 Forms very sensitive explosive metallic compounds.

For substances which may form sensitive explosive metallic derivatives, for example, picric acid and styphnic acid.

R 5 Heating may cause an explosion.

For thermally unstable substances not classified as explosives, for example, perchloric acid > 50 per cent.

R 6 Explosive with or without contact with air.

For substances which are unstable at ambient temperatures, for example, acetylene.

R 16 Explosive when mixed with oxidising substances.

For substances which react explosively with an oxidising agent, for example, red phosphorus.

R 18 In use, may form flammable/explosive vapour-air mixture.

For substances, not in themselves classified as flammable, but which contain volatile components which are flammable in air.

R 19 May form explosive peroxides.

For substances which may form explosive peroxides during storage, for example, diethyl ether and 1,4-dioxan.

R 44 Risk of explosion if heated under confinement.

For substances, not in themselves classified as explosive in accordance with the criteria for R 2 and R 3 above, but which may, nevertheless, display explosive properties in practice if heated under sufficient confinement. For example, certain substances which would decompose explosively if heated in a steel drum do not show this effect if heated in less strong containers.

Flammable Substances

R 10 Flammable.

Liquid substances having a flashpoint equal to or greater than 23°C, and less than or equal to 61°C.

Where this risk exists, the risk phrase will also be required as part of the Class label or subsidiary risk label, so it will not be necessary to repeat the phrases elsewhere on the label. Reference should be made to the ADG Code[1] for advice on the application of the phrase Flammable.

R 17 Spontaneously flammable in air.

For substances which may become hot and finally catch fire in contact with air at ambient temperature without any input of energy.

Highly Flammable Substances

R 11 Highly flammable.

Applies to flammable liquids with a flashpoint below 23°C, closed cup test;

Where this risk exists, the risk phrase will also be required as part of the label required by the ADG Code[1].

R 15 Contact with water liberates highly flammable gases.

R 8 Contact with combustible material may cause fire.

Other oxidising substances which may cause fire or enhance the risk of fire when in contact with combustible material.

R 9 Explosive when mixed with combustible material.

For other substances which become explosive when mixed with combustible materials, for example, certain chlorates and organic peroxides.

Substances with Other Properties

R 7 May cause fire.

For reactive substances, for example, fluorine and sodium hydrosulphite.

R 14 Reacts violently with water.

For substances which react violently with water, for example, acetyl chloride, alkali metals and titanium tetrachloride.

R 29 Contact with water liberates toxic gas.

For substances which, in contact with water or damp air, evolve very toxic/toxic gases in potentially dangerous amounts, for example, aluminium phosphide and phosphorus pentasulphide.

R 30 Can become highly flammable in use.

For substances, not in themselves classified as flammable, but which may become flammable due to the loss of non-flammable volatile components.

R 31 Contact with acids liberates toxic gas.

For substances which react with acids to evolve toxic gases in dangerous amounts, for example, sodium hypochlorite and barium polysulphides.

R 32 Contact with acids liberates very toxic gas.

For substances which react with acids to evolve very toxic gases in dangerous amounts, for example, salts of hydrogen cyanide and sodium azide.

R 33 Danger of cumulative effects.

For substances when accumulation in the human body is likely and may cause some concern. Use when information does not justify the use of R 48.

APPENDIX 2

SELECTED SAFETY PHRASES FROM THE COMMISSION OF THE EUROPEAN COMMUNITIES AND THE RELEVANT CRITERIA FOR THEIR USE IN AUSTRALIA

SAFETY PHRASES

A2.1 Safety phrases (S-Phrases) provide information on safe storage, handling and personal protection.

A2.2 The most appropriate safety phrases from EEC Council Directive 67/548/EEC[14] and amended Directives to 91/325/EEC[15] should be selected in accordance with the criteria listed in this appendix. Relevant safety directions from the SUSDP[2] may also be used where no appropriate European Communities safety phrase can be identified. Other safety phrases may only be used for risk situations not covered by this appendix or the SUSDP[2].

A2.3 S10, S11, S19, S31 and S32 from the European Communities are not recommended for use in Australia.

A2.4 The relevant safety phrases which should be used are as follows:

S l **Keep locked up.**

S 2 **Keep out of reach of children.**

S 3 **Keep in a cool place.**

S 4 **Keep away from living quarters.**

S 5 **Keep contents under ...** [appropriate material to be specified by the manufacturer].

S 6 **Keep under ...** [inert gas to be specified by the manufacturer].

S 7 **Keep container tightly closed.**

S 8 **Keep container dry.**

S 9 **Keep container in a well ventilated place.**

S 12 **Do not keep the container sealed.**

S 13 **Keep away from food, drink and animal feeding stuffs.**

S 14 **Keep away from ...** [incompatible materials to be specified by the manufacturer].

S 15 **Keep away from heat.**

S 16 **Keep away from sources of ignition - No smoking.**

S 17 **Keep away from combustible material.**

S 18 **Handle and open container with care.**

S 20 **When using, do not eat or drink.**

S 21 **When using, do not smoke.**

S 22 **Do not breathe dust.**

S 23 **Do not breathe gas/fumes/vapour/spray** [appropriate wording to be specified by the manufacturer].

S 24 **Avoid contact with skin.**

S 25 **Avoid contact with eyes.**

S 29 **Do not empty into drains.**

S 30 **Never add water to this product.**

S 33 **Take precautionary measures against static discharges.**

S 34 **Avoid shock and friction.**

S 35 **This material and its container must be disposed of in a safe way.**

S 36 **Wear suitable protective clothing.**

S 37 **Wear suitable gloves.**

S 38 **In case of insufficient ventilation, wear suitable respiratory equipment.**

S 39 **Wear eye/face protection.**

S 40 **To clean the floor and all objects contaminated by this material, use ...** [material to be specified by the manufacturer].

S 41 **In case of fire and/or explosion, do not breathe fumes.**

S 42 **During fumigation/spraying, wear suitable respiratory equipment** [appropriate wording to be specified by the manufacturer].

S 43 **In case of fire use ...** [manufacturer to specify the precise type of firefighting equipment. If water increases the risk, add **-** ***Never use water***].

S 47 **Keep at temperature not exceeding ... °C** [to be specified by the manufacturer].

S 48 **Keep wetted with ...** [appropriate material to be specified by the manufacturer].

S 49 **Keep only in the original container.**

S 50 **Do not mix with ...** [incompatible materials to be specified by the manufacturer].

S 51 **Use only in well ventilated areas.**

S 52 **Not recommended for interior use on large surface areas.**

S 53 **Avoid exposure ê obtain special instructions before use.**

COMBINATIONS OF SAFETY PHRASES

A2.5 Safety phrases may be combined in a single sentence as shown below.

S 1/2	**Keep locked up and out of reach of children.**
S 3/7/9	**Keep container tightly closed in a cool, well ventilated place.**
S 3/9	**Keep in a cool, well ventilated place.**
S 3/9/14	**Keep in a cool, well ventilated place away from ...** [incompatible materials to be specified by the manufacturer].
S 3/9/14/49	**Keep only in the original container in a cool, well ventilated place away from ...** [incompatible materials to be specified by the manufacturer].
S 3/9/49	**Keep only in the original container in a cool, well ventilated place.**
S 3/14	**Keep in a cool place away from ...** [incompatible materials to be specified by the manufacturer].
S 7/8	**Keep container tightly closed and dry.**
S 7/9	**Keep container tightly closed and in a well ventilated place.**
S 20/21	**When using, do not eat, drink or smoke.**
S 24/25	**Avoid contact with skin and eyes.**
S 36/37	**Wear suitable protective clothing and gloves.**
S 36/37/39	**Wear suitable protective clothing, gloves and eye/face protection.**
S 36/39	**Wear suitable protective clothing and eye/face protection.**
S 37/39	**Wear suitable gloves and eye/face protection.**
S 47/49	**Keep only in the original container at temperature not exceeding ... °C** [to be specified by the manufacturer].

CATEGORISATION OF SAFETY PHRASES

A2.6 Safety phrases may be grouped in accordance with specific handling situations as shown below.

Safe Handling

S18	**Handle and open container with care.**
S25	**Avoid contact with eyes.**
S33	**Take precautionary measures against static discharges.**
S34	**Avoid shock and friction.**
S37	**Wear suitable gloves.**

S38 **In case of insufficient ventilation wear suitable respiratory equipment.**

S39 **Wear eye/face protection.**

S42 **During fumigation/spraying wear suitable respiratory equipment** [appropriate type to be specified by the manufacturer].

S50 **Do not mix with ...** [materials to be specified by the manufacturer].

S51 **Use only in well ventilated areas.**

S52 **Not recommended for interior use on large surface areas.**

S53 **Avoid exposure - obtain special instructions before use.**

Safe Storage

S1 **Keep locked up.**

S17 **Keep away from combustible material.**

S47 **Keep at temperature not exceeding ... °C** [to be specified by the manufacturer].

S48 **Keep wetted with ...** [appropriate material to be specified by the manufacturer].

S49 **Keep only in the original container.**

Spills

S29 **Do not empty into drains.**

S30 **Never add water to this product.**

S36 **Wear suitable protective clothing.**

S40 **To clean the floor and all objects contaminated by this material, use ...** [material to be specified by the manufacturer].

Disposal

S35 **This material and its container must be disposed of in a safe way.**

Fire

S41 **In case of fire and/or explosion, do not breathe fumes.**

S43 **In case of fire use ...** [manufacturer to specify the precise type of firefighting equipment. If water increases the risk, add ***- Never use water***].

CRITERIA FOR SELECTION OF SAFETY PHRASES

A2.7 Safety phrases should be assigned in accordance with the criteria listed below.

Note: Since many substances may be used both in the workplace and by the members of the general public, the criteria below address both situations. The most appropriate phrases should be selected after considering the potential users of the substance.

Substances in General

S 1 Keep locked up.

Applicability

Very toxic, toxic and corrosive substances.

Criteria for use

Obligatory for those substances mentioned above likely to be used by members of the general public.

S 2 Keep out of reach of children.

Applicability

All hazardous substances.

Criteria for use

Obligatory for all hazardous substances likely to be used by members of the general public or likely to be used in places to which members of the general public have access unless there is no reason to fear any danger, particularly to children.

S 4 Keep away from living quarters.

Applicability

Very toxic and toxic substances.

Criteria for use

Normally limited to very toxic and toxic substances when desirable to supplement S 13, for example, when there is an inhalation risk and the substance should be stored away from living quarters. The advice is not intended to preclude proper use of the substance in living quarters.

S 6 Keep under ... [inert gas to be specified by the manufacturer].

Applicability

Hazardous substances which must be kept under an inert atmosphere.

Criteria for use

Normally limited to special cases, for example, certain organo metallic compounds.

S 12 Do not keep the container sealed.

Applicability

Substances which will, by giving off gases or vapours, be liable to burst the container.

Criteria for use

Normally limited to the special cases mentioned above.

S 13 Keep away from food, drink and animal feeding stuffs.

Applicability

Very toxic, toxic and harmful substances.

Criteria for use

Recommended when such substances are likely to be used by members of the general public.

S 15 Keep away from heat.

Applicability

Substances which may decompose or react spontaneously under the effect of heat.

Criteria for use

Normally limited to special cases, for example, monomers, but not assigned if risk phrases R 2, R 3 and/or R 5 have already been applied.

S 20 When using, do not eat or drink.

Applicability

Very toxic, toxic and corrosive substances.

Criteria for use

Normally limited to special cases, for example, arsenic and arsenic compounds and fluoracetates, in particular, when any of these are likely to be used by members of the general public.

S 21 When using, do not smoke.

Applicability

Substances which produce toxic products on combustion.

Criteria for use

Normally limited to special cases, for example, halogenated compounds.

S 22 **Do not breathe dust.**

Applicability

All solid hazardous substances.

Criteria for use

Recommended for those substances mentioned above which are liable to form inhalable dusts and when it is necessary to draw the attention of the user to inhalation risks not mentioned in the risk phrases which have been ascribed. However, may be used in exceptional cases to emphasise such risk phrases, in particular to emphasise R 42.

S 23 **Do not breathe gas/fumes/vapour/spray** [appropriate wording to be specified by the manufacturer].

Applicability

All liquid or gaseous hazardous substances.

Criteria for use

Recommended when it is necessary to draw the attention of the user to inhalation risks not mentioned in the risk phrases which have to be ascribed. However, it may be used in exceptional cases to emphasise such risk phrases, in particular, to emphasise R 42.

Recommended for substances in the form of aerosols which are likely to be used by members of the general public.

S 24 **Avoid contact with skin.**

Applicability

All hazardous substances.

Criteria for use

Recommended when it is necessary to draw the attention of the user to skin contact risks not mentioned in the risk phrases which have to be ascribed. This will apply to cryogenic substances and compressed gases. However, may be used in exceptional cases to emphasise such risk phrases, in particular, to emphasise R 43.

S 35 **This material and its container must be disposed of in a safe way.**

Applicability

Explosive substances.

Very toxic and toxic substances.

Substances dangerous to the environment.

Criteria for use

Obligatory for explosive substances other than organic peroxides.

Recommended for very toxic and toxic substances, particularly when such substances are likely to be used by members of the general public.

S 36 Wear suitable protective clothing.

Applicability

Very toxic, toxic, harmful or corrosive substances.

Organic peroxides.

Criteria for use

Recommended for substances used in industry which are:

- very toxic, toxic or corrosive; and/or
- harmful and easily absorbed by the skin; and/or
- liable to damage health by prolonged exposure.

S 37 Wear suitable gloves.

Applicability

Very toxic, toxic, harmful or corrosive substances.

Organic peroxides.

Substances irritating to the skin.

Criteria for use

Recommended when S 36 is not used for very toxic, toxic and corrosive substances, for example, by members of the general public.

Recommended for organic peroxides as the combination S 37/39.

Recommended for substances irritating to the skin, particularly when R 38 is not shown on the label.

S 38 In case of insufficient ventilation wear suitable respiratory equipment.

Applicability

Very toxic or toxic substances.

Criteria for use

Normally limited to special cases involving the use of very toxic or toxic substances in industry or in agriculture.

S 39 **Wear eye/face protection.**

Applicability

Organic peroxides.

Corrosive substances including irritants which give rise to risk of serious damage to the eyes.

Very toxic and toxic substances.

Criteria for use

Recommended for organic peroxides as the combination S 37/39.

Recommended for corrosive substances and eye irritants, in particular when there is a risk of splashing.

Normally limited to exceptional cases for very toxic substances where there is a risk of splashing and they are likely to be easily absorbed by the skin.

S 40 **To clean the floor and all objects contaminated by this material, use ...** [material to be specified by the manufacturer].

Applicability

All hazardous substances.

Criteria for use

Normally limited to those hazardous substances for which water is not considered to be a suitable cleansing agent, for example, where absorption by powdered material or dissolution by solvent is necessary, and where it is important for health and or safety reasons to provide a warning on the label.

S 41 **In case of fire and/or explosion, do not breathe fumes.**

Applicability

Hazardous substances which, on combustion, give off very toxic or toxic gases.

Criteria for use

Normally limited to special cases.

S 42 **During fumigation/spraying wear suitable respiratory equipment** [appropriate wording to be specified by the manufacturer].

Applicability

Substances intended for such use, but which may endanger the health and safety of the user unless proper precautions are taken.

Criteria for use

Normally limited to special cases.

S 47 **Keep at temperature not exceeding ... °C** [to be specified by the manufacturer].

Applicability

Substances which become unstable at a certain temperature.

Criteria for use

Normally limited to special cases, for example, certain organic peroxides.

S 49 **Keep only in the original container.**

Applicability

Substances sensitive to catalytic decomposition.

Criteria or use

Normally limited to substances sensitive to catalytic decomposition, for example, certain organic peroxides.

S 50 **Do not mix with ...** [materials to be specified by the manufacturer].

Applicability

Substances which may react with the specified product to evolve very toxic or toxic gases. Organic peroxides.

Criteria for use

Recommended for substances mentioned above which are likely to be used by members of the general public, when it is a better alternative to R 31 or R 32.

Obligatory with certain peroxides which may give violent reaction with accelerators or promoters.

S 51 **Use only in well ventilated area.**

Applicability

Substances likely to, or intended to, produce vapours, dusts, sprays, fumes, mists which give rise to inhalation risks or to a fire or explosion risk.

Criteria for use

Recommended when use of S 38 would be inappropriate. Therefore, it is important when such substances are likely to be used by members of the general public.

S 52 **Not recommended for interior use on large surface areas.**

Applicability

Volatile, very toxic, toxic and harmful substances.

Criteria for use

Recommended when damage to health is likely to be caused by prolonged exposure to these substances by reason of its volatilisation from large treated surfaces in the home or other enclosed places where persons congregate.

Carcinogenic, Mutagenic and Teratogenic Substances

S 53 Avoid exposure - obtain special instructions before use.

Applicability

Carcinogenic, mutagenic and/or teratogenic substances.

Criteria for use

Obligatory for substances mentioned above to which R 45, R 46, R 47 and/or R 49 have been ascribed.

Corrosive and Irritant Substances

S 25 Avoid contact with eyes.

Applicability

Corrosive or irritant substances.

Criteria for use

Normally limited to special cases, that is, when it is considered essential to emphasise the risk to eyes denoted by use of R 34, R 35, R 36 or R 41. Therefore, it is important if these substances are likely to be used by members of the general public and eye or face protection may not be available.

Other Dangerous Substances

S 3 Keep in a cool place.

Applicability

Organic peroxides.

Other hazardous substances having a boiling point < 40°C.

Criteria for use

Obligatory for organic peroxides unless S 47 is used.

Recommended for other hazardous substances having a boiling point < 40°C.

S 5 Keep contents under ... [appropriate material to be specified by the manufacturer].

Applicability

Spontaneously flammable solid substances.

Criteria for use

Normally limited to special cases, for example, sodium, potassium or white phosphorous.

S 7 **Keep container tightly closed.**

Applicability

Organic peroxides.

Substances which can give off very toxic, toxic, harmful or highly flammable vapours. Substances which on contact with moisture give off highly flammable gases.

Highly flammable solids.

Criteria for use

Obligatory for organic peroxides in the combination of S 3/7/9.

Recommended for the other fields of application mentioned above.

S 8 **Keep container dry.**

Applicability

Substances which may react violently with water.

Substances which on contact with water liberate highly flammable gases. Substances which on contact with water liberate very toxic or toxic gases.

Criteria for use

Normally limited to the fields of application mentioned above when necessary to reinforce warnings given by R 14, R 15 in particular, and R 29.

S 9 **Keep container in a well ventilated place.**

Applicability

Organic peroxides.

Volatile substances which may give off very toxic, toxic or harmful vapours. Highly flammable liquids and gases.

Criteria for use

Obligatory for organic peroxides in the combination S 3/7/9.

Recommended for volatile substances which may give off very toxic, toxic or harmful vapours.

Recommended for highly flammable liquids or gases.

S 14 **Keep away from ...** [incompatible materials to be specified by the manufacturer].

Applicability

Organic peroxides.

Criteria for use

Obligatory for, and normally limited to, organic peroxides. However, may be useful in exceptional cases when incompatibility is likely to produce a particular risk.

S 16 Keep away from sources of ignition - No smoking.

Applicability

Highly flammable liquids and gases.

Criteria for use

Recommended for the substances mentioned above but not assigned if risk phrases R 2, R 3 and/or R 5 have already been applied.

S 17 Keep away from combustible material.

Applicability

Substances which may form explosive or spontaneously flammable mixtures with combustible material.

Criteria for use

Available for use in special cases, for example, to emphasise R 8 and R 9.

S 18 Handle and open container with care.

Applicability

Substances liable to produce an overpressure in the container.

Substances which may form explosive peroxides.

Criteria for use

Normally limited to the above-mentioned cases when there is risk of damage to the eyes and/or when the substances are likely to be used by members of the general public.

S 29 Do not empty into drains.

Applicability

Highly flammable liquids.

Criteria for use

Recommended for those highly flammable liquids which are immiscible with water. The intention is to avoid accidents, for example, fire and explosion, and not to emphasise general pollution problems.

S 30 Never add water to this product.

Applicability

Substances which react violently with water.

Criteria for use

Normally limited to special cases, for example, sulphuric acid, and may be used, as appropriate, to give the clearest possible information, either to emphasise R 14 or as an alternative to R 14.

S 33 **Take precautionary measures against static discharges.**

Applicability

Highly flammable substances.

Criteria for use

Recommended for substances which are used in industry and which do not absorb moisture. Virtually never used for substances that are placed on the market for use by members of the general public.

S 34 **Avoid shock and friction.**

Applicability

Explosive substances.

Criteria for use

Obligatory for, and normally limited, to explosive organic peroxides.

S 43 **In case of fire, use ...** [manufacturer to specify the precise type of firefighting equipment. If water increases the risk, add ***- Never use water***].

Applicability

Highly flammable and flammable substances.

Criteria for use

Obligatory for substances which in contact with water or damp air evolve highly flammable gases.

Recommended for highly flammable and flammable substances, particularly when they are immiscible with water.

S 48 **Keep wetted with ...** [appropriate material to be specified by the manufacturer].

Applicability

Substances which may become very sensitive to sparks, friction or impact if allowed to dry out.

Criteria for use

Normally limited to special cases, for example, nitrocelluloses.

APPENDIX 3

SELECTED FIRST AID PHRASES FROM THE COMMISSION OF THE EUROPEAN COMMUNITIES AND THE RELEVANT CRITERIA FOR THEIR USE IN AUSTRALIA

FIRST AID PHRASES

A3.1 First aid phrases provide instructions where contact or exposure to a substance requires immediate treatment. The most appropriate phrases from EEC Council Directive 67/548/EEC[14] and amended Directives to 91/325/EEC[15] should be selected in accordance with the criteria listed in this appendix. Relevant first aid instructions from the SUSDP[2] may be used where no appropriate European Communities first aid phrases can be identified. Other first aid phrases may only be used for situations not covered by this appendix or the SUSDP[2].

A3.2 The relevant first aid phrases which should be used are as follows:

S 26 **In case of contact with eyes, rinse immediately with plenty of water and contact a doctor or Poisons Information Centre.**

S 27 **Take off immediately all contaminated clothing.**

S 28 **After contact with skin, wash immediately with plenty of ...** [material to be specified by the manufacturer].

S 44 **If you feel unwell, contact a doctor or Poisons Information Centre (show the label where possible).**

S 45 **In case of accident or if you feel unwell, contact a doctor or Poisons Information Centre immediately (show the label where possible).**

S 46 **If swallowed, contact a doctor or Poisons Information Centre immediately and show this container or label.**

CRITERIA FOR SELECTION OF FIRST AID PHRASES

A3.3 First aid phrases should be assigned in accordance with the criteria listed below.

General

S 44 **If you feel unwell, contact a doctor or Poisons Information Centre (show the label where possible).**

Applicability

Toxic substances.

Criteria for use

Obligatory for the substances mentioned above when used in industry and not likely to be used by members of the general public.

S 45 **In case of accident or if you feel unwell, contact a doctor or Poisons Information Centre immediately (show the label where possible).**

Applicability

Very toxic substances.

Toxic and corrosive substances.

Criteria for use

Obligatory for the very toxic substances mentioned above.

Obligatory for toxic and corrosive substances mentioned above when likely to be used by members of the general public.

Skin

S 27 **Take off immediately all contaminated clothing.**

Applicability

Organic peroxides.

Very toxic, toxic or corrosive substances.

Criteria for use

Obligatory for organic peroxides.

Recommended for very toxic and toxic substances which are easily absorbed by the skin and for corrosive substances unless safety phrase S 36 can be considered sufficient by itself.

S 28 **After contact with skin, wash immediately with plenty of ...** [material to be specified by the manufacturer].

Applicability

Very toxic, toxic or corrosive substances.

Criteria for use

Recommended for the substances mentioned above, in particular when water is not the most appropriate rinsing fluid.

Ingestion

S 46 If swallowed, contact a doctor or Poisons Information Centre immediately and show this container or label.

Applicability

All hazardous substances other than those which are toxic or very toxic.

Criteria for use

Obligatory for all hazardous substances mentioned above which are likely to be used by members of the general public, unless there is no reason to fear any danger from swallowing, particularly by children.

Eye

S 26 In case of contact with eyes, rinse immediately with plenty of water and contact a doctor or Poisons Information Centre.

Applicability

Corrosive or irritant substances.

Criteria for use

Obligatory for corrosive substances and those to which R 41 has already been ascribed. Recommended for irritant substances to which the risk phrase R 36 has already been ascribed.

APPENDIX 4

SAMPLES OF LABELS FOR WORKPLACE HAZARDOUS SUBSTANCES

A4.1 The following sample labels have been produced in accordance with the labelling system described in this national code of practice.

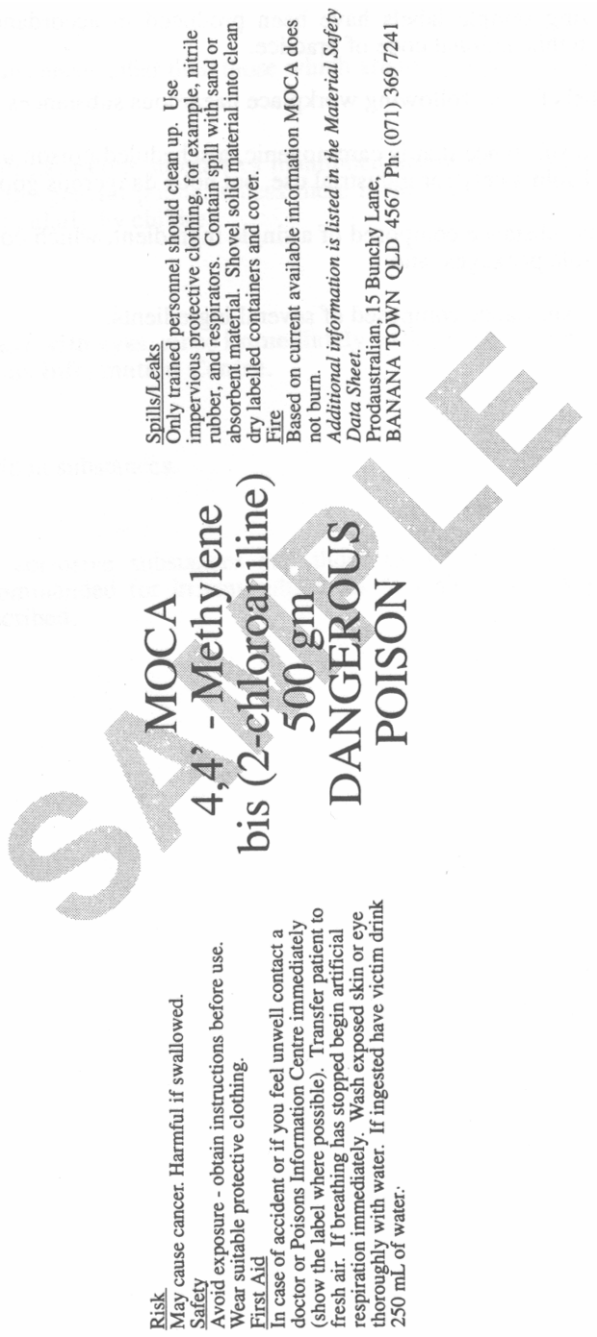
A4.2 Sample labels for the following workplace hazardous substances are provided:

(a) a hazardous substance that is carcinogenic, a scheduled poison under the SUSDP[2] but packed and sold solely for industrial use, but not a dangerous good;

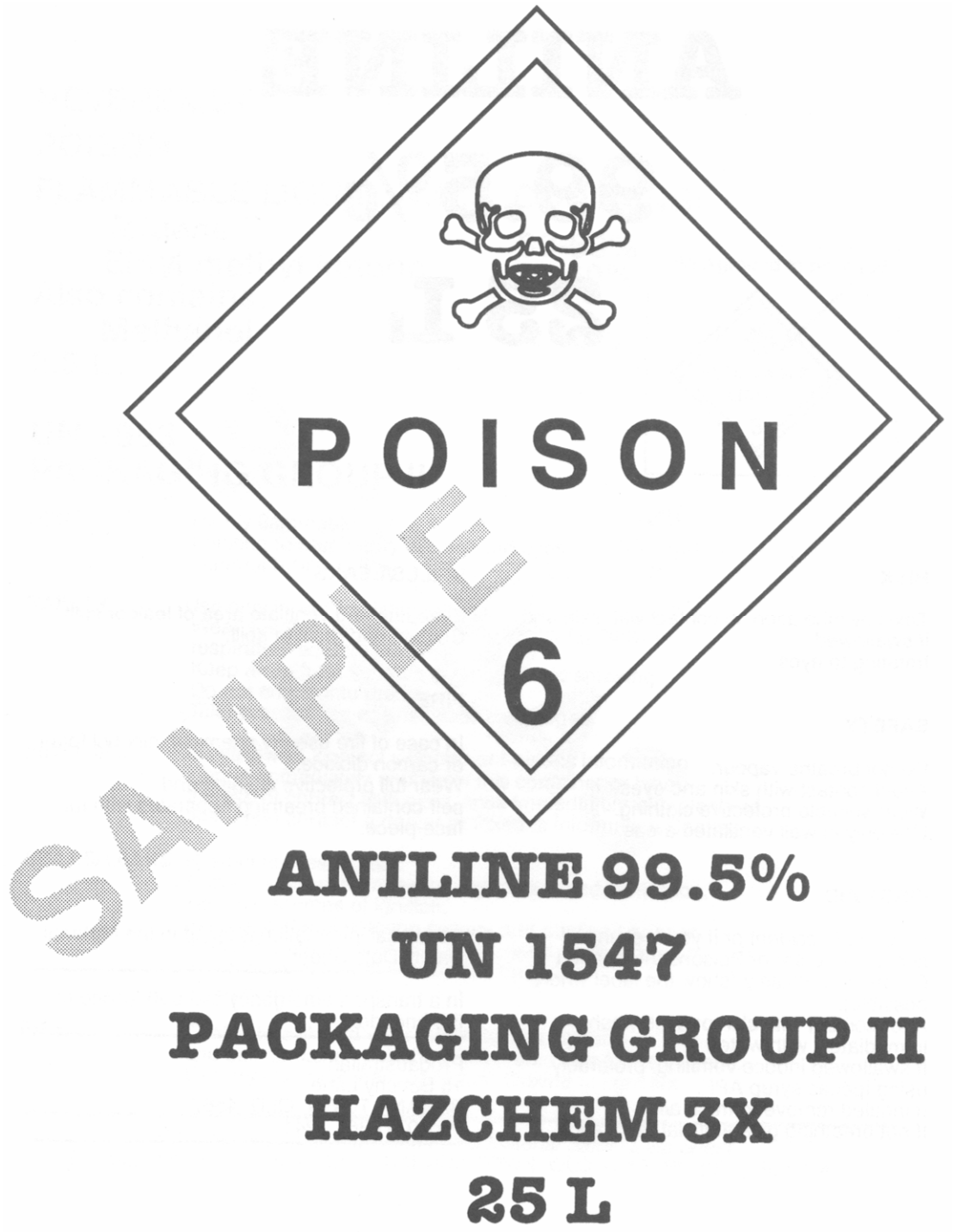
(b) a hazardous substance composed of a single ingredient, which complies with the ADG Code[1] for sole packages; and

(c) a hazardous substance composed of several ingredients.

Sample 1: Label for a hazardous substance that is carcinogenic, but not a dangerous good



Sample 2: Label for a hazardous substance comprised of a single ingredient which complies with the ADG Code for sole packages



Sample 2: Label for a hazardous substance comprised of a single ingredient which complies with the ADG Code for sole packages

ANILINE

99.5%

25 L

RISK

Toxic by inhalation, in contact with skin and if swallowed.
Irritating to eyes.

SAFETY

Do not breathe vapour.
Avoid contact with skin and eyes.
Wear suitable protective clothing.
Use only in well ventilated areas.

FIRST AID

In case of accident or if you feel unwell contact a doctor or Poisons Information Centre immediately (show the label where possible).
After contact with skin or eyes wash immediately with water.
If swallowed induce vomiting, preferably using Ipecac syrup APF.
If inhaled remove to fresh air.
If not breathing give artificial respiration.

SPILLS/LEAKS

Evacuate and ventilate area of leak or spill.
Contain and recover spill.

FIRE

In case of fire use dry chemical, alcohol foam or carbon dioxide.
Wear full protective clothing and self-contained breathing apparatus with full face-piece.

Additional information is listed in the Material Safety Data Sheet.

In a transport emergency dial 000, police or fire brigade.

Prodaustralian
15 Bunchy Lane
BANANA TOWN QLD 4567
Ph: (071) 369 7241

Sample 3: Label for a hazardous substance composed of several ingredients

NEVEREXIST

POISON

FLAMMABLE LIQUID, N.O.S.,CONTAINS:

Toluene	30-60%
Ethyl methyl ketone	30-60%

Also contains:

Methanol	< 10%

2.5 L

Background to be in red.

UN 1993
PACKAGING GROUP II

RISK Highly flammable.
Irritating to respiratory system and eyes.
Harmful by inhalation.

SAFETY Use only in well ventilated areas.
Wear suitable protective clothing including suitable respiratory equipment.
Keep away from sources of ignition - No smoking.
Do not empty into drains.
Take precautions against static discharges.

FIRST AID If swallowed, contact a doctor or Poisons Information Centre immediately and show this container or label.
In case of contact with eyes, rinse immediately with plenty of water and contact a doctor or Poisons Information Centre.

SPILLS/LEAKS Restrict access to area.
Provide adequate protective equipment and ventilation.
Remove sources of ignition.
Prevent material entering sewers and confined spaces.
If possible cover liquid with earth, sand or absorbent material which does not react with spilled material.
Flush area with water.

FIRE Firefighters should wear full protective clothing and self-contained breathing apparatus with full face-piece.
Use dry chemical foam or carbon dioxide to fight fire.

Additional information is listed in the Material Safety Data Sheet.
Prodaustralian, 15 Bunchy Lane, BANANA TOWN QLD 4567, Ph: (071) 369 7241

APPENDIX 5

CRITERIA AND FORM FOR NOTIFICATION OF USE OF A GENERIC NAME

CRITERIA

A5.1 Information to be provided by the manufacturer or importer of a hazardous substance where a Type II ingredient is commercially confidential and a generic name is used to protect the confidentiality of the ingredient.

Notes:

A5.2 The manufacturer or importer responsible for placing the hazardous substance on the market shall provide evidence that the divulging of the chemical identity of the preparation on the label or MSDS will place at risk the confidential nature of his/her property.

A5.3 Specific factors which need to be considered in determining if a claim for commercial confidentiality should be made include:

(a) whether there would be significant detriment to the owner's business if the identity of the substance was disclosed:

- **(i)** if so, an explanation should be provided;

(b) whether the substance is identified by other than trade or generic names in journals or other public sources, for example, registers, public files of government agencies, patent applications, etc;

(c) whether the substance has been granted confidential status in another country:

- **(i)** if so, information on which countries should be provided;

(d) whether the substance has been identified publicly in another country:

- **(i)** if so, information should be provided on why granting confidential status in Australia will protect commercial interest;

(e) whether the substance has been patented:

- **(i)** if so, information should be provided on why granting confidential status will protect commercial interest;

(f) whether a public or private disclosure about the substance has been made outside the owner's organisation regarding the importation or manufacture of the substance;

(g) whether the owner has taken precautions to prevent disclosure that the substance has been manufactured or imported:

- **(i)** if so, information should be provided on what measures have been taken;

(h) what would be the ramifications arising from loss of commercial confidentiality;

(i) whether it would be practicable for competitors to analyse and duplicate the substance;

(j) whether failure to disclose the information would compromise the protection of occupational health, public health or the environment; and

(k) the benefits of having public access to this information.

A5.4 The generic name used on the label and MSDS must be the same.

A5.5 The generic name used should contain enough information about the hazardous substance to ensure risk free handling.

A5.6 In order to avoid multiple notifications, only one declaration of confidentiality is necessary if a set of hazardous substances:

(a) contain the same hazardous ingredients in the same concentration range;

(b) have the same classification and labelling; and/or

(c) have the same intended uses.

A5.7 The declaration of confidentiality must include all the elements provided for in this form, not forgetting the product name of each substance. A single consistent generic name must be used to protect the chemical identity of the same ingredient under consideration in the case of all the substances referred to.

DECLARATION OF CONFIDENTIALITY

1. Name and full address (including telephone number) of the person who is responsible for placing the substance on the market (manufacturer or importer).

2. Precise identification of:

(a) the Type II ingredient(s) for which confidentiality is proposed and the generic name; and

(b) composition of the hazardous substance (as provided in the National Occupational Health and Safety Commission's *National Code of Practice for the Preparation of Material Safety Data Sheets* [NOHSC:2011(1994)]).

CAS NO (or AICS* NO)	Chemical Name according to international nomenclature and classification†	Generic Name	Composition %

NB: Where ingredients are classified provisionally, accompanying information (bibliographic references) should be provided as evidence that the provisional classification takes account of all existing pertinent information available on the properties of the ingredient.

* Australian Inventory of Chemical Substances.

† See the National Occupational Health and Safety Commission's *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(1994)].

3. Justification for the confidentiality.

4. Product name of the hazardous substance.

5. Is the product name the same for use overseas and in all of Australia?

Yes ☐

No ☐

If no, specify the product name used overseas and in the different jurisdictions.

Overseas (specify country):

New South Wales:

Victoria:

Queensland:

South Australia:

Western Australia:

Tasmania:

Northern Territory:

Australian Capital Territory:

Commonwealth:

6. Classification of the hazardous substance(s) according to the National Occupational Health and Safety Commission's *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(1994)].

7. Labelling of the substance(s) according to the National Occupational Health and Safety Commission's *National Code of Practice for the Labelling of Workplace Substances* [NOHSC:2012(1994)].

8. Intended uses for the hazardous substance(s).

9. Material Safety Data Sheet(s) conforming to the National Occupational Health and Safety Commission's *National Code of Practice for the Preparation of Material Safety Data Sheets* [NOHSC:2011(1994)].

Signature Date

APPENDIX 6

GUIDE FOR SELECTING GENERIC NAMES

A6.1 INTRODUCTORY NOTE

(a) This guide is based on the procedure for naming hazardous substances (division of substances into families) which is described at section A6.3 and EEC Council Directive 67/548/EEC[14].

(b) The families are defined in the following manner:

(i) inorganic or organic substances whose properties are identified by having a common chemical element as their chief characteristic. The family name is derived from the name of the chemical element. These families are identified as in section A6.3 by the atomic number of the chemical element (001 to 013); and

(ii) organic substances whose properties are identified by having a common functional group as their chief characteristic.

- the family name is derived from the functional group name, and
- these families are identified by the number convention found in section A6.2 (601 to 650).

(c) Sub-families bringing together substances with a common specific character have been added in certain cases.

A6.2 ESTABLISHING THE GENERIC NAME

(a) General principles:

In selecting a generic name, the following approach is adopted:

(i) identity of the functional groups and chemical elements present in the molecule; and

(ii) determine the most important functional groups and chemical elements which contribute to its properties.

The identified functional groups and elements taken into account are the names of the families and sub-families set out in section A6.3 in the form of a (non-restrictive) list.

(b) Practical application:

After having conducted a search to see if the substance belongs to one or more families or sub-families on the list, the generic name can be established in the following way:

(i) If the name of a family or sub-family is sufficient to characterise the chemical elements or important functional groups, this name will be chosen as the generic name.

Examples:

- 1,4-dihydroxybenzene
  family 604 : phenols and derivatives
  - generic name: phenol derivative.
- butanols
  family 603 : alcohols and derivatives
  sub family : aliphatic alcohols
  - generic name : aliphatic alcohol
- 2-Isopropoxyethanol
  family 603 : alcohols and derivatives
  sub-family: glycolethers
  - generic name : glycolether
- methacrylate
  family 607 : organic acids and derivatives
  sub-family : acrylates
  - generic name : acrylate

(ii) If the name of a family or sub-family is not sufficient to characterise the chemical elements of important functional groups, the generic name should be a combination of the corresponding different family or sub-family names:

Examples:

- lead hexafluorosilicate
  family 009 : fluorine compounds
  sub-family : inorganic fluorides
  family 082 : lead compounds
  - generic name : inorganic lead fluoride
- chlorobenzene
  family 602 : halogenated hydrocarbons
  sub-family : halogenated aromatic hydrocarbons
  family 017 : chlorine compounds
  - generic name : chlorinated aromatic hydrocarbon

– 2,3,6-tricholorophenylacetic acid
  family 607 : organic acids
  sub-family : halogenated aromatic acids
  family 017 : chlorine compounds
  - generic name : chlorinated aromatic acid

– 1-chloro-1-nitropropane
  family 610 : chloronitrated derivatives
  family 601 : hydrocarbons
  sub-family : aliphatic hydrocarbons
  - generic name : chlorinated aliphatic hydrocarbon

– tetrapropyl dithiopyrophosphate
  family 015 : phosphorus compounds
  sub-family : phosphoric esters
  family 016 : sulphur compounds
  - generic name : thiophosphoric ester

NB: In the case of certain elements, notably metals, the name of the family or sub-family may be indicated by the words 'organic' or 'inorganic'.

Examples:

– dimercury chloride
  family 080 : mercury compounds
  - generic name : inorganic mercury compound

– barium acetate
  family 056 : barium compounds
  - generic name : organic barium compound

– ethyl nitrite
  family 007 : nitrogen compounds
  sub-family : nitrites
  - generic name : organic nitrite

– sodium hydrosulphite
  family 016 : sulphur compounds
  - generic name : inorganic sulphur compound

A6.3 DIVISION OF SUBSTANCES INTO FAMILIES AND SUB-FAMILIES

Family No	Families Sub-Families
001	Hydrogen compounds Hydrides
002	Helium compounds
003	Lithium compounds
004	Beryllium compounds
005	Boron compounds Boranes Borates
006	Carbon compounds Carbamates Inorganic carbon compounds Salts of hydrogen cyanide Urea and derivatives
007	Nitrogen compounds Quaternary ammonium compounds Acid nitrogen compounds Nitrates Nitrites
008	Oxygen compounds
009	Fluorine compounds Inorganic fluorides
010	Neon compounds
011	Sodium compounds
012	Magnesium compounds Organometallic magnesium derivatives
013	Aluminium compounds Organometallic aluminium derivatives
014	Silicon compounds Silicanes Silicates
015	Phosphorus compounds Acid phosphorus compounds Phosphonium compounds Phosphoric esters Phosphates Phosphites Phosphoramides and derivates
016	Sulphur compounds Acid sulphur compounds Mercaptans Sulphates Sulphites

Family No	Families Sub-Families
017	Chlorine compounds Chlorates Perchlorates
018	Argon compounds
019	Potassium compounds
020	Calcium compounds
021	Scandium compounds
022	Titanium compounds
023	Vanadium compounds
024	Chromium compounds Chromium VI compounds
025	Manganese compounds
026	Iron compounds
027	Cobalt compounds
028	Nickel compounds
029	Copper compounds
030	Zinc compounds Organometallic zinc derivatives
031	Gallium compounds
032	Germanium compounds
033	Arsenic compounds
034	Selenium compounds
035	Bromine compounds
036	Krypton compounds
037	Rubidium compounds
038	Strontium compounds
039	Yttrium compounds
040	Zirconium compounds
041	Niobium compounds
042	Molybdenum compounds
043	Technetium compounds
044	Ruthenium compounds
045	Rhodium compounds
046	Palladium compounds

Family No	Families Sub-Families
047	Silver compounds
048	Cadmium compounds
049	Indium compounds
050	Tin compounds Organometallic tin derivates
051	Antimony compounds
052	Tellurium compounds
053	Iodine compounds
054	Xenon compounds
055	Caesium compounds
056	Barium compounds
057	Lanthanum
058	Cerium compounds
059	Praseodymium compounds
060	Neodymium compounds
061	Promethium compounds
062	Samarium compounds
063	Europium compounds
064	Gandolinium compounds
065	Terbium compounds
066	Dysprosium compounds
067	Holmium compounds
068	Erbium compounds
069	Thulium compounds
070	Ytterbium compounds
071	Lutetium compounds
072	Hafnium compounds
073	Tantanium compounds
074	Tungsten compounds
075	Rhenium compounds
076	Osmium compounds
077	Iridium compounds

Family No	Families Sub-Families
078	Platinum compounds
079	Gold compounds
080	Mercury compounds Organometallic mercury derivatives
081	Thallium compounds
082	Lead compounds Organometallic lead derivatives
083	Bismuth compounds
084	Polonium compounds
085	Astate compounds
086	Radon compounds
087	Francium compounds
088	Radium compounds
089	Actinium compounds
090	Thorium compounds
091	Protactinium compounds
092	Uranium compounds
093	Neptunium compounds
094	Plutonium compounds
095	Americum compounds
096	Curium compounds
097	Berkelium compounds
098	Californium compounds
099	Einsteinium compounds
100	Fermium compounds
101	Mendelevium compounds
102	Nobelium compounds
103	Lawrencium compounds
601	Hydrocarbons Aliphatic hydrocarbons Aromatic hydrocarbons Alicyclic hydrocarbons Polycyclic aromatic hydrocarbons (PAH)

Family No	Families Sub-Families
602	Halogenated hydrocarbons* Halogenated aliphatic hydrocarbons* Halogenated aromatic hydrocarbons* Halogenated alicyclic hydrocarbons* * Specify according to the family corresponding to halogen.
603	Alcohols and derivates Aliphatic alcohols Aromatic alcohols Alicyclic alcohols Alcanolamines Epoxy derivatives Ethers Glycolethers Glycols and polyols
604	Phenols and derivatives Halogenated phenol derivatives* * Specify according to the family corresponding to halogen.
605	Aldehydes and derivates Aliphatic aldehydes Aromatic aldehydes Alicyclic aldehydes Aliphatic acetals Aromatic acetals Alicyclic acetals
606	Ketones and derivatives Aliphatic Ketones Aromatic Ketones* Alicyclic Ketones * Quinones included
607	Organic acids and derivatives Aliphatic acids Halogenated aliphatic acids* Aromatic acids Halogenated aromatic acids* Alicyclic acids Halogenated alicyclic acids* Aliphatic acid anhydrides Halogenated aliphatic acid anhydrides* Aromatic acid anhydrides Halogenated aromatic acid anhydrides* Alicyclic acid anhydrides Halogenated alicyclic acid anhydrides* Salts of aliphatic acid Salts of halogenated aliphatic acid* Salts of aromatic acid Salts of halogenated aromatic acid* Salts of alicyclic acid Salts of halogenated alicyclic acid* Esters of aliphatic acid

Family No	Families Sub-Families
607 cont'd	Esters of halogenated alicyclic acid* Esters of aromatic acid Esters of halogenated aromatic acid* Esters of alicyclic acid Esters of halogenated alicyclic acid* Esters of glycol ether Acrylates Methacrylates Lactones Acyl halogenides * Specify according to the family corresponding to halogen.
608	Nitriles and derivatives
609	Nitrated derivatives
610	Chloronitrated derivatives
611	Azoxy and azoic derivatives
612	Aminated derivatives Aliphatic amines and derivatives Alicyclic amines and derivatives Aromatic amines and derivatives Aniline and derivatives Benzidine and derivatives
613	Heterocyclic basis and derivatives Benzimidazote and derivatives Imidazol and derivatives Pyrethrinoids Quinoline and derivatives Triazine and derivatives Triazole and derivatives
614	Glucosides and alcaloids Alcaloid and derivatives Glucosids and derivatives
615	Cyantes and isocyanates Cyanates Isocyanates
616	Amides and derivatives Acetamide and derivatives Anilides
617	Organic Peroxides
650	Various substances Do not use this family. Instead, use the families or sub-families mentioned above.

REFERENCED DOCUMENTS

1. Federal Office of Road Safety, *Australian Code for the Transport of Dangerous Goods by Road and Rail*, 5th Edition, Australian Government Publishing Service, Canberra, September 1992.

2. National Health and Medical Research Council, *Standard for the Uniform Scheduling of Drugs and Poisons*, Australian Government Publishing Service, Canberra, 1992.

3. Department of the Arts, Sport, the Environment, Tourism and Territories, *Code of Practice for the Safe Transport of Radioactive Substances*, Australian Government Publishing Service, Canberra.

4. Australian Agricultural and Veterinary Chemicals Council, *Code of Practice for Labelling Agricultural Chemical Products*, Australian Government Publishing Service, Canberra, 1989.

5. Australian Agricultural and Veterinary Chemicals Council, *Code of Practice for Labelling Veterinary Chemical Products*, Australian Government Publishing Service, Canberra, 1989.

6. National Occupational Health and Safety Commission, 'National Model Regulations for the Control of Workplace Hazardous Substances' [NOHSC:1005(1994)], in *Control of Workplace Hazardous Substances: National Model Regulations and National Code of Practice*, Australian Government Publishing Service, Canberra, 1994.

7. International Air Transport Association, *Dangerous Goods Regulations*, International Air Transport Association, Quebec, latest edition.

8. International Civil Aviation Organisation, *Technical Instructions for the Safe Transport of Dangerous Goods by Air*, International Civil Aviation Organisation, Montreal, latest edition.

9. The Inter-Governmental Maritime Consultative Organisation, *International Maritime Dangerous Goods Code*, Australian Supplement, Australian Government Publishing Service, Canberra, latest edition.

10. National Occupational Health and Safety Commission, *List of Designated Hazardous Substances* [NOHSC:10005(1994)], Australian Government Publishing Service, Canberra, 1994.

11. National Occupational Health and Safety Commission, *Approved Criteria for Classifying Hazardous Substances* [NOHSC:1008(1994)], Australian Government Publishing Service, Canberra, 1994.

12. National Occupational Health and Safety Commission, *National Code of Practice for the Preparation of Material Safety Data Sheets* [NOHSC:2011(1994)], Australian Government Publishing Service, Canberra, 1994.

13. National Occupational Health and Safety Commission, 'Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1991)]', in *Exposure Standards for Atmospheric Contaminants in the Occupational Environment*, Australian Government Publishing Service, Canberra, 1991.

14. EEC Council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances, *Official Journal of the European Communities*, No. L 196 (16 August 1967).

15. EEC Council Directive 91/325/EEC adapting to technical progress for the 13th time EEC Council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances, *Official Journal of the European Communities*, No. L 180 (8 July 1991).