

# **PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING**

## CHAPTER 5.1 - GENERAL PROVISIONS

### 5.1.1 APPLICATION AND GENERAL PROVISIONS

5.1.1.1 This Part sets forth provisions for dangerous goods consignments relative to preparation of consignments, marking, labelling, and placarding.

5.1.1.2 <Reserved>

**NOTE 1:** — ~~Part 5 of UN20 also includes requirements for transport documentation that, in this Code, are in Part 11.~~

**NOTE 2:** — ~~In accordance with the GHS, a GHS pictogram not required by this Code should only appear in transport as part of a complete GHS label and not independently (see GHS 1.4.10.4.4).~~<sup>[DK1]</sup>

### 5.1.2 USE OF OVERPACKS

**NOTE:** UN20 uses the word “overpack” to describe what was known as a ‘unit load’ in previous editions of this Code. In the UN Model Regulations, the definition of “overpack” restricts its use to a single consignor. This Code omits that restriction for transport within Australia by road or rail, thus permitting packaged dangerous goods to be unitised in accordance with this section by transporters, freight forwarders and load consolidators.

#### 5.1.2.1 Overpack marking

5.1.2.1.1 Unless marks and labels representative of all dangerous goods in the overpack are visible, the overpack must be:

- a. marked with the word “OVERPACK”. The lettering of the “OVERPACK” mark shall be at least 12 mm high; and
- b. labelled and marked with the proper shipping name, UN number and other marks, as required for packages by Chapter 5.2, for each item of dangerous goods contained in the overpack.

Labelling of overpacks containing radioactive material shall be in accordance with 5.2.2.1.12.

5.1.2.1.2 Despite 5.1.2.1.1, an overpack intended only for transport by road or rail within Australia need not be marked with the word “OVERPACK”.<sup>1</sup>

5.1.2.1.3 Despite 5.1.2.1.1, if marks and labels representative of all dangerous goods in the overpack are not visible, and all of the dangerous goods are limited quantity items, the overpack may be marked with the limited quantity mark specified in Chapter 3.4.

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<sup>1</sup> However, ‘OVERPACK’ marking will be required on overpacks transported by sea between Australian ports.

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### **5.1.2.2 Package provisions**

- 5.1.2.2.1 Each package of dangerous goods contained in the overpack must comply with all applicable provisions of this Code. The intended function of each package must not be impaired by the overpack.
- 5.1.2.2.2 Except for limited quantities where 3.4.5 applies, packages containing dangerous goods which are incompatible may not be transported together in an overpack.
- 5.1.2.2.3 Packages transported in an overpack must be wrapped, strapped or otherwise secured in a manner that minimises the likelihood of damage to the packages during transport.
- 5.1.2.2.4 Paints, Adhesives, Printing Inks and Resin Solutions to which special packing provision PP1 applies (see Packing Instruction P001 in Section 4.1.4) may be transported in inner packagings in an overpack subject to the conditions of PP1.

### **5.1.2.3 Package orientation**

Each package bearing package orientation marks as prescribed in 5.2.1.7 of this Code and which is overpacked or placed in a large packaging must be oriented in accordance with such marks.

### **5.1.2.4 Overpack provisions**

- 5.1.2.4.1 The overpack must be strong enough to withstand repeated handling.
- 5.1.2.4.2 If the overpack is intended to support overstackage it must be of a shape suitable for this purpose and strong enough to support stacking of other loads of similar density to the height to which they are intended to be stacked during transport.
- 5.1.2.4.3 The materials used to enclose or secure the packages in the overpack must be capable of withstanding exposure to moisture, extremes of temperature, sunlight and minor leakages of substance in the overpack.
- 5.1.2.4.4 The overpack must be suitable for lifting by fork lift truck or other lifting apparatus. If the lifting points are not apparent, they must be marked on the overpack.

**NOTE:** Provision is made for the transport of electric storage batteries in overpacks in Packing Instructions P003, P408, P801 and P903, as referenced from the entries for the particular types of batteries in the Dangerous Goods List.

### **5.1.3 EMPTY PACKAGINGS**

- 5.1.3.1 Other than for Class 7, a packaging which previously contained dangerous goods must be identified, marked and labelled as required for those dangerous goods unless freed from dangerous goods.
- 5.1.3.2 Freight containers, tanks, IBCs, as well as other packagings and overpacks, used for the transport of radioactive material must not be used for the storage or transport of other goods unless decontaminated

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below the level of 0.4 Bq/cm<sup>2</sup> for beta and gamma emitters and low toxicity alpha emitters and 0.04 Bq/cm<sup>2</sup> for all other alpha emitters.

5.1.3.3 Unused pre-labelled dangerous goods packagings should be clearly identified as such on any transport documentation, any outer packaging or the exterior of the cargo transport unit in order to avoid inappropriate emergency response.

### 5.1.4 MIXED PACKING

When two or more dangerous goods are packed within the same outer packaging, the package must be labelled and marked as required for each substance. Subsidiary hazard labels need not be applied if the hazard is already represented by a primary hazard label.

### 5.1.5 <RESERVED>

## CHAPTER 5.2 - MARKING AND LABELLING

**NOTE:** In addition to the marking and labelling required by this chapter, all placardable units (any receptacle, including an IBC, with a capacity of more than 500 kg(L)) must be placarded with emergency information panels in accordance with Chapter 5.3. Where the proper shipping name, UN number or any label required by this chapter is incorporated in the emergency information panel, the requirement of this chapter for that marking or label are met.

### 5.2.1 MARKING

5.2.1.1 Unless provided otherwise in this Code (as in Chapter 3.4 for dangerous goods packed in limited quantities), the proper shipping name for the dangerous goods as determined in accordance with 3.1.2 and the corresponding UN number preceded by the letters "UN", must be displayed on each package, IBC, cylinder, pressure drum, tube, MEGC or other unpackaged article. The UN number and the letters "UN" must be at least 12 mm high, except for packages of 30 litres capacity or less or of 30 kg maximum net mass and for cylinders of 60 litres water capacity or less when they must be at least 6 mm in height and except for packages of 5 litres capacity or less or 5 kg maximum net mass ~~or less~~ [DK2] when they must be of an appropriate size. In the case of unpackaged articles the mark must be displayed on the article, on its cradle or on its handling, storage or launching device. For goods of Division 1.4, Compatibility Group S, the division and compatibility group letter must also be marked unless the label for 1.4S is displayed. A typical package mark is:

"CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Caprylyl chloride)  
UN 3265" If a size requirement in this clause is inconsistent with a size requirement in Table 5.2, Table 5.2 prevails.

**NOTE 1:** Cylinders of 60L water capacity or less marked with a UN number in accordance with the provisions of this Code up to 1 July 2015 need not comply with this provision until the next periodic inspection, or 1 July 2018, whichever occurs first.

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AND PLACARDING

**NOTE 2:** Packages that do not comply with this clause may not comply with marking requirements outside Australia.

5.2.1.1.1 Unless provided otherwise in this Code (as in 5.2.1.1.2 for imported dangerous goods, Chapter 3.4 for dangerous goods packed in limited quantities), the name and address in Australia of the manufacturer or consignor of the dangerous goods, or their agent must be displayed on each package, IBC, cylinder, pressure drum, tube, MEGC or unpackaged article.

5.2.1.1.2 Clause 5.2.1.1.1 does not apply when the dangerous goods are being transported in a closed freight container that has been imported into, or is to be exported from Australia, if:

(a) no goods (dangerous or not) have been removed from or added to the freight container since:

(i) if imported – its arrival in Australia; or

(ii) if to be exported — the load was first consigned for transport to the place from which it is to be exported; and

(b) the freight container is placarded in accordance with section 5.3.8.

5.2.1.2 All marks required by 5.2.1.1:

(a) must be readily visible and legible; and

(b) must be able to withstand open weather exposure without a substantial reduction in effectiveness; and

(c) must be displayed on a background of contrasting colour on the external surface of the package; and

(d) must not be located with other package marks that could substantially reduce their effectiveness; and

(e) should be in letters and numbers of at least the size specified for the package in Table 5.2 (see 5.2.2.2.1.9).

5.2.1.3 Salvage packagings including large salvage packings and salvage pressure receptacles must additionally be marked with the word “SALVAGE”. The lettering of the “SALVAGE” mark must be at least 12 mm high.

**NOTE:** For marking of overpacks, see 5.1.2.1.

5.2.1.4 Large packagings must be marked on at least two opposing sides.

**5.2.1.5** <Reserved>

**5.2.1.6 Special marking provisions for environmentally hazardous substances.**

**NOTE:** The application of 5.2.1.6 is conditional on Australian Special Provision AU01 in Chapter 3.3.3

5.2.1.6.1 Unless otherwise specified in this Code, packages containing environmentally hazardous substances meeting the criteria of 2.9.3 (UN Nos. 3077 and 3082) must be durably marked with the environmentally hazardous substance mark.

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- 5.2.1.6.2 The environmentally hazardous substance mark must be located adjacent to the marks required by 5.2.1.1. The requirements of 5.2.1.2 and 5.2.1.4 must be met.
- 5.2.1.6.3 The environmentally hazardous substance mark must be as shown in Figure 5.2.2.

**Figure 5.2.2: Environmentally hazardous substance mark**



**Environmentally hazardous substance mark**

– Symbol (fish and tree): black on white or suitable contrasting background

The mark must be in the form of a square set at an angle of 45 degrees (diamond-shaped). The symbol (fish and tree) must be black on white or suitable contrasting background. The minimum dimensions must be 100 mm x 100 mm and the minimum width of line forming the diamond must be 2 mm. If the size of the package so requires, the dimensions/line thickness may be reduced, provided the marking remains clearly visible. Where dimensions are not specified, all features must be in approximate proportion to those shown.

**NOTE 1:** The labelling provisions of 5.2.2 apply in addition to any requirement for packages to bear the environmentally hazardous substance mark.

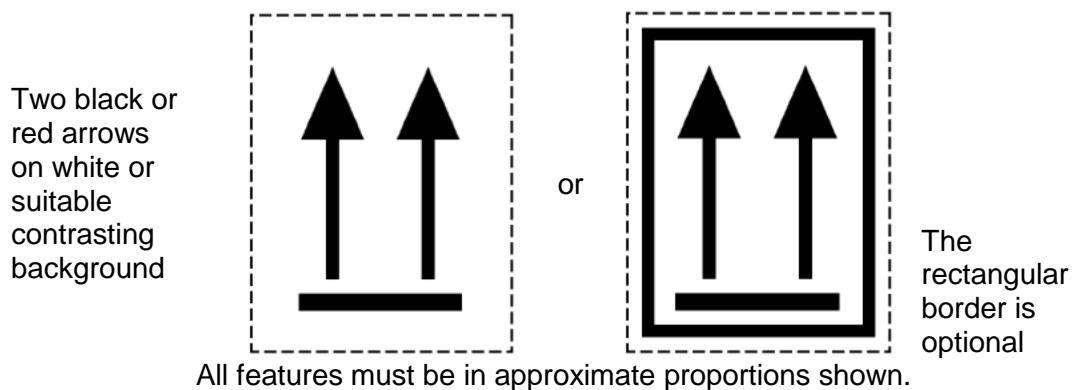
**5.2.1.7 Orientation arrows**

5.2.1.7.1 Except as provided in 5.2.1.7.2:

- ~~(a)~~ Combination packagings having inner packagings containing liquid dangerous goods; ~~and~~
- ~~(b)~~ Single packagings fitted with vents; ~~and~~
- ~~(c)~~ Cryogenic receptacles intended for the transport of refrigerated liquefied gases; ~~and~~
- Machinery or apparatus containing liquid dangerous goods when it is required to ensure the liquid dangerous goods remain in their intended orientation (see special provision 301 of chapter 3.3). PK3

must be legibly marked with package orientation arrows which are similar to the illustration shown below or with those meeting the specifications of ISO 780:1997. The orientation arrows must appear on two opposite vertical sides of the package with the arrows pointing in the correct upright direction. They must be rectangular and of a size that is clearly visible commensurate with the size of the package. Depicting a rectangular border around the arrows is optional.

**Figures 5.2.3 and 5.2.4: Orientation arrows**

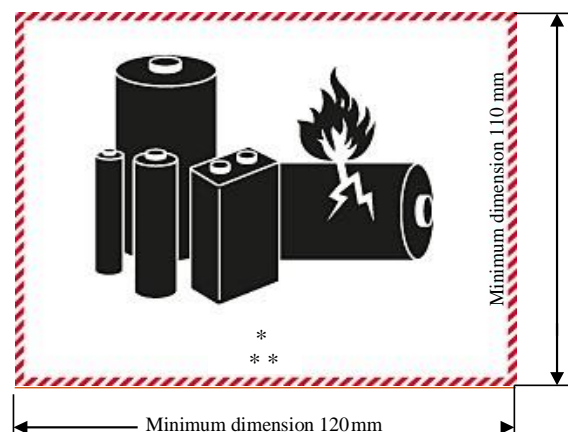


- 5.2.1.7.2 Orientation arrows are not required on:
- (a) Outer packagings containing pressure receptacles except cryogenic receptacles;
  - (b) Outer packagings containing dangerous goods in inner packagings each containing not more than 120 ml, with sufficient absorbent material between the inner and outer packagings to completely absorb the liquid contents;
  - (c) Outer packagings containing Division 6.2 infectious substances in primary receptacles each containing not more than 50 ml;
  - (d) Type IP-2, type IP-3, type A, type B(U), type B(M) or type C packages containing Class 7 radioactive material;
  - (e) Outer packagings containing articles which are leak-tight in all orientations (e.g. alcohol or mercury in thermometers, aerosols, etc.); or
  - (f) Outer packagings containing dangerous goods in hermetically sealed inner packagings each containing not more than 500 ml.
- 5.2.1.7.3 Arrows for purposes other than indicating proper package orientation must not be displayed on a package marked in accordance with this sub-section.
- 5.2.1.8 <Reserved>**
- 5.2.1.9 *Lithium battery mark***
- 5.2.1.9.1 Packages containing lithium cells or batteries prepared in accordance with special provision 188 shall be marked as shown in Figure 5.2.5.
- 5.2.1.9.2 The mark must indicate the UN number preceded by the letters "UN", i.e. 'UN 3090' for lithium metal cells or batteries or 'UN 3480' for lithium ion cells or batteries. Where the lithium cells or batteries are contained in, or packed with, equipment, the UN number, preceded by the letters "UN", i.e. 'UN 3091' or 'UN 3481' as appropriate shall be indicated. Where a package contains lithium cells or batteries assigned to different UN numbers, all applicable UN numbers shall be indicated on one or more marks.



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Figure 5.2.5, Lithium battery mark



\* Place for UN number(s)

\*\* Place for telephone number for additional information

The mark shall be in the form of a rectangle or a square with hatched edging. The dimensions shall be a minimum of 1200 mm wide x 1400 mm high and the minimum width of the hatching shall be 5 mm. The symbol (group of batteries, one damaged and emitting flame, above the UN number for lithium ion or lithium metal batteries or cells) shall be black on white or suitable contrasting background. The hatching shall be red. If the size of the package so requires, the dimensions/line thickness may be reduced to not less than 1005 mm wide x 740 mm high. Where dimensions are not specified, all features shall be in approximate [DK4]proportion to those shown.

### 5.2.2 LABELLING

#### 5.2.2.1 Labelling provisions

**NOTE:** These provisions relate essentially to danger labels. However, additional marks or symbols indicating precautions to be taken in handling or storing a package (e.g. a symbol representing an umbrella indicating that a package must be kept dry) may be displayed on a package if appropriate.

5.2.2.1.1 All dangerous goods packages, cylinders, pressure drums, tubes, MEGCs, IBCs, overpacks and unpackaged articles that are subject to this Code must have a label that identifies the primary and subsidiary hazards of the dangerous goods and that conforms to models Nos. 1 to 9 illustrated in 5.2.2.2.2, except:

- (a) those IBCs, pressure drums, tubes, MEGCs and articles which are placardable units that are placarded with emergency information panels in accordance with Chapter 5.3; or
- (b) where there is an exemption from labelling in an applicable Special Provision in Chapter 3.3; or
- (c) for dangerous goods in limited quantities that are packed and marked in accordance with Chapter 3.4; or

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For the purposes of this provision, the “EXPLOSIVE” subsidiary hazard label is model No. 1.

**NOTE 1:** Unlike earlier editions, in this Code a label identifying a subsidiary hazard is now identical to the Class or Division label used for the same hazard, as illustrated in 5.2.2.2.2. The appropriate Class or Division number indicating the subsidiary hazard must be displayed in the bottom corner of the label.

5.2.2.1.2 Where articles or substances are specifically listed in the Dangerous Goods List, a danger class label must be affixed for the hazard shown in Column 3. A subsidiary hazard label must also be affixed for any hazard indicated by a class or division number in Column 4 of the Dangerous Goods List. However, special provisions indicated in Column 6 may also require a subsidiary hazard label where no subsidiary hazard is indicated in Column 4 or may exempt from the requirement for a subsidiary hazard label where such a hazard is indicated in the Dangerous Goods List.

5.2.2.1.3 Except as provided in 5.2.2.1.3.1, if a substance which meets the definition of more than one class is not specifically listed by name in the Dangerous Goods List in Chapter 3.2, the provisions in Chapter 2.0 must be used to determine the primary hazard class of the goods. In addition to the label required for that primary hazard class, subsidiary hazard labels must also be applied as specified in the Dangerous Goods List.

5.2.2.1.3.1 Packages containing substances of Class 8 need not bear subsidiary hazard label model No. 6.1 if the toxicity arises solely from the destructive effect on tissue. Packages containing substances of Division 4.2 need not bear subsidiary hazard label model No. 4.1.

5.2.2.1.4 *Labels for Class 2 gases with subsidiary hazard(s)*

| <b>Table 5.2.2.1.4: Labels for Class 2 gases with subsidiary hazard(s)</b> |  |                             |                                   |
|--|--|-----------------------------|-----------------------------------|
| <b>Division</b>  | <b>Subsidiary hazard(s) shown in Chapter 2.2</b> | <b>Primary hazard label</b> | <b>Subsidiary hazard label(s)</b> |
| 2.1  | None   | 2.1                         | None                              |
| 2.2  | None   | 2.2                         | None                              |
|  | 5.1  | 2.2 <sup>a</sup>            | 5.1 <sup>a</sup>                  |
| 2.3  | None   | 2.3                         | None                              |
|  | 2.1  | 2.3                         | 2.1                               |
|  | 5.1  | 2.3                         | 5.1                               |
|  | 5.1, 8   | 2.3                         | 5.1, 8                            |
|  | 8  | 2.3                         | 8                                 |
|  | 2.1, 8   | 2.3                         | 2.1, 8                            |
| Table note:<br>a See 5.2.2.1.5   |  |                             |                                   |

5.2.2.1.5 Three separate labels have been provided for Class 2, one for flammable gases of Division 2.1 (red), one for non-flammable, non-toxic gases of Division 2.2 (green) and one for toxic gases of Division 2.3

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(white). Where the Dangerous Goods List indicates that a Class 2 gas possesses single or multiple subsidiary hazards, labels must be used in accordance with the table in 5.2.2.1.4.

- 5.2.2.1.5.1 For the labelling of cylinders containing UN 1070 Nitrous Oxide or UN 1072 Oxygen, and any other gases of Division 2.2 that have a Subsidiary Hazard of 5.1, a yellow "OXIDISING GAS" label (model No. 2.5) may be used In lieu of Division 2.2 plus Subsidiary hazard 5.1 labels.

**NOTE:** The use of the oxidising gas label is valid for road or rail transport in Australia. It may not be accepted internationally, or for sea or air transport within Australia.

- 5.2.2.1.6 Except as provided in 5.2.2.2.1.2, each label must:

- (a) be located on the same surface of the package near the proper shipping name, if the package dimensions are adequate; and
- (b) be so placed on the packaging that they are not covered or obscured by any part or attachment to the packaging or any other label or mark; and
- (c) when primary and subsidiary hazard labels are required, be displayed next to each other.

Where a package is of such an irregular shape or small size that a label cannot be satisfactorily affixed, the label may be attached to the package by a securely affixed tag or other suitable means.

- 5.2.2.1.7 <Reserved>

- 5.2.2.1.8 Labels must be affixed on a surface of contrasting colour, or must have either a dotted or solid outer boundary line.

- 5.2.2.1.9 *Special provisions for the labelling of self-reactive substances*

An "EXPLOSIVE" subsidiary hazard label (model No. 1) must be applied for type B self-reactive substances, unless the competent authority has exempted a specific packaging from this label because test data have proved that the self-reactive substance in such a packaging does not exhibit explosive behaviour.

- 5.2.2.1.10 *Special provisions for the labelling of organic peroxides*

The Division 5.2 label (model 5.2B) must be affixed to packages containing organic peroxides classified as types B, C, D, E or F. This label also implies that the product may be flammable and hence no "FLAMMABLE LIQUID", subsidiary hazard label (model No. 3) is required. In addition, the following subsidiary hazard labels must be applied:

- (a) an "EXPLOSIVE" subsidiary hazard label (model No. 1) for organic peroxides type B, unless the competent authority has exempted a specific packaging from this label because test data have proved that the organic peroxide in such a packaging does not exhibit explosive behaviour;
- (b) a "CORROSIVE" subsidiary hazard label (model No. 8) is required when packing group I or II criteria of Class 8 are met.

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### 5.2.2.1.11 *Special provisions for the labelling of infectious substances packages*

In addition to the primary hazard label (model No. 6.2), infectious substances packages must bear any other label required by the nature of the contents.

### 5.2.2.1.12 *<Reserved>*

*Note the requirement to label inner packages has been removed in lieu of GHS requirements.*

### 5.2.2.1.13 *Labels for articles containing dangerous goods transported as UN Nos. 3537, 3538, 3539, 3540, 3541, 3542, 3543, 3544, 3545, 3546, 3547 and 3548*

5.2.2.1.13.1 Packages containing ~~dangerous goods in~~ articles ~~and or dangerous goods in~~ articles transported unpackaged [DK5] shall bear labels according to 5.2.2.1.2 reflecting the hazards established according to 2.0.5. If the article contains one or more lithium batteries with, for lithium metal batteries, an aggregate lithium content of 2 g or less, and for lithium ion batteries, a Watt-hour rating of 100 Wh or less, the lithium battery mark (Figure 5.2.5) shall be affixed to the package or unpackaged article. If the article contains one or more lithium batteries with, for lithium metal batteries, an aggregate lithium content of more than 2 g and for lithium ion batteries, a Watt-hour rating of more than 100 Wh, the lithium battery label (5.2.2.1.2 No. 9A) shall be affixed to the package or unpackaged article.

5.2.2.1.13.2 When it is required to ensure articles containing liquid dangerous goods remain in their intended orientation, orientation marks meeting 5.2.1.7.1 shall be affixed and visible on at least two opposite vertical sides of the package or of the unpackaged article where possible, with the arrows pointing in the correct upright direction.

### 5.2.2.1.14 *Labelling of segregation devices*

Type I and II segregation devices and Non - Type I underslung segregation devices in which dangerous goods are transported in accordance with Section 4.4.5 must be labelled on each vertical side that may be exposed during loading or transport with labels in accordance with sub-section 5.2.2.1, except that each label must be at least 250 mm square.

## 5.2.2.2 **Provisions for labels**

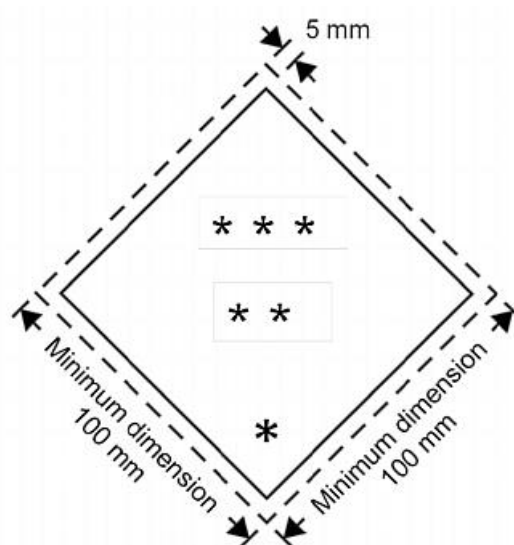
5.2.2.2.1 Labels must satisfy the provisions of this section and conform, in terms of colour, symbols and general format, to the specimen labels shown in 5.2.2.2.2, except as provided in 5.2.2.2.1.5.

**NOTE:** Where appropriate, labels in 5.2.2.2.2 are shown with a dotted outer boundary as provided for in 5.2.2.2.1.1. This is not required when the label is applied on a background of contrasting colour.

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5.2.2.2.1.1 Labels must be configured as shown in Figure 5.2.6.

**Figure 5.2.6: Class/ Division Label**



**Class/ Division Label**

Notes to Figure 5.2.6:

- \* The class or, for divisions 5.1 and 5.2, the Division number **must** be shown in the bottom corner.
- \*\* Additional text/numbers/symbol/letters **must** (if mandatory) or may (if optional) be shown in this bottom half.
- \*\*\* The class or division symbol or, for divisions 1.4, 1.5 and 1.6, the division number and for Model No 7E the word "FISSILE" must be shown in the top half.

5.2.2.2.1.1.1 Labels must be displayed on a background of contrasting colour, or must have either a dotted or solid outer boundary line.

5.2.2.2.1.1.2 The label must be in the form of a square set at an angle of 45 degrees (diamond-shaped). The minimum dimensions must be 100 mm x 100 mm. There must be a line inside the edge forming the diamond which must be parallel and approximately 5 mm from the outside of that line to the edge of the label. ~~and the minimum width of the line inside the edge forming the diamond must be 2 mm. The line inside the edge must be parallel and 5 mm from the outside of that line to the edge of the label.~~ [DK6]

5.2.2.2.1.1.3 If the size of the package so requires the dimensions may be reduced proportionally, provided the symbols and other elements of the label remain clearly visible. Dimensions for cylinders **must** comply with 5.2.2.2.1.2.

5.2.2.2.1.2 Cylinders for Class 2 may, on account of their shape, orientation and securing mechanisms for transport, bear labels representative of those specified in this section, which have been reduced in size, according to ISO 7225:2005<sup>2</sup> "Gas cylinders – Precautionary labels", for display on the non-cylindrical part (shoulder) of such cylinders. Labels may overlap

<sup>2</sup> The minimum sizes for labels specified by ISO 7225 are included in Table 5.2.

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to the extent provided for by ISO 7225:2005, however, in all cases, the labels representing the primary hazard and the numbers appearing on any label must remain fully visible and the symbols recognisable.

**NOTE:** When the diameter of the cylinder is too small to permit the display of the reduced size labels on the non-cylindrical upper part of the cylinder, the reduced sized labels may be displayed on the cylindrical part.

5.2.2.2.1.3 With the exception of Divisions 1.4, 1.5 and 1.6, the upper half of the label must contain the pictorial symbol and the lower half must contain the class or division number (and for goods of Class 1, the compatibility group letter) as appropriate. However, for label model No. 9A, the upper half of the label shall only contain the seven vertical stripes of the symbol and the lower half shall contain the group of batteries of the symbol and the class number. Except for label model No. 9A, the label may include such text as the UN number, or words describing the hazard class (e.g. “flammable”) in accordance with 5.2.2.2.1.5 provided that the text does not obscure or detract from the other required label elements. 5.2.2.2.1.4 Except for Divisions 1.4, 1.5 and 1.6, labels for Class 1 show in the lower half the division number and compatibility group letter for the substance or article. Labels for Divisions 1.4, 1.5 and 1.6 show in the upper half the division number and in the lower half the compatibility group letter. For Division 1.4, Compatibility Group S, no label is generally required. However, in cases where a label is considered necessary for such goods, it should be based on model No. 1.4.

5.2.2.2.1.5 On labels other than those for material of Class 7, the insertion of any text (other than the class or division number) in the space below the symbol must be confined to particulars indicating the nature of the hazard and precautions to be taken in handling. In this Code, text indicating the nature of the risk (e.g. “FLAMMABLE GAS”, or “CORROSIVE”), is depicted on all specimen labels in 5.2.2.2.2. This text must be included on labels for material of Class 7 and on label model No. 2.5, and should be included on the other labels where practicable. For label 9A, no text other than the class mark must be included in the bottom part of the label.

**NOTE 1:** In UN ~~49~~<sup>20</sup>, the IMDG Code, ICAO Rules, IATA Regulations, ADR and RID, text indicating the nature of the risk, while permitted, is not included in the illustrated labels other than those for material of Class 7. Often therefore labels on imported packages and IBCs, or used as placards on imported freight containers or portable tanks, will not incorporate text indicating the nature of the risk, or may incorporate this text in another language. Such labels are acceptable for continued transport within Australia. Text is more frequently omitted where the UN number is incorporated in a label used as a placard as shown in Figure 5.3.3.

**NOTE 2:** Notwithstanding Note 1, the continuing display on labels of text indicating the nature of the risk is strongly encouraged for use within Australia, particularly when used as placards on vehicles and freight containers, to assist with hazard recognition in an emergency.

5.2.2.2.1.6 The symbols, text and numbers must be shown in black on all labels except for:

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- (a) the Class 8 label, where the text (if any) and class number must appear in white; and
  - (b) labels with entirely green, red or blue backgrounds where they may be shown in white; and
  - (c) the new Division 5.2 label, where the symbol may be shown in white; and
  - (d) the Division 2.1 label displayed on cylinders and gas cartridges for liquefied petroleum gases, where they may be shown in the background colour of the receptacle if adequate contrast is provided.
- 5.2.2.2.1.7 All labels must be able to withstand open weather exposure without a substantial reduction in effectiveness.
- 5.2.2.2.1.8 Where the colour orange, red, green, blue or yellow is specified for use in labels in 5.2.2.2 or in placards in Chapter 5.3, the colour of the label or placard must be the relevant colour as displayed and identified in Figure 5.3.7 (at the end of Chapter 5.3).
- 5.2.2.2.1.9 Where the size of a package is such that it is impracticable to apply a label of 100 mm x 100 mm as required by 5.2.2.2.1.1, the label must be of at least the dimensions specified for the package in Table 5.2. In each instance, the minimum dimensions apply to each side of the outer border set at 45°.





PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING  
AND PLACARDING

| Table 5.2: Minimum Dimensions of Labels   |   |                                   |  |
|---|---|-----------------------------------|--|
| Class or Article  | Package, Packaging or Article                                   | Minimum dimensions of labels (mm) | Recommended minimum size of lettering <sup>a</sup> [see 5.2.1.2(d)] (mm) |
| <b>Class 2 (other than Aerosols)</b>  | Cylinder of outside diameter:<br>< 75 mm                        | 10 x 10                           | 2.5  |
|   | ≥ 75 mm < 180 mm  | 15 x 15                           | 3  |
|   | ≥ 180 mm  | 25 x 25                           | 5  |
|   | Pressure drum or tube ≤ 500 L <sup>b</sup>                      | 100 x 100                         | 7  |
| <b>BATTERIES, WET, FILLED WITH ACID, electric storage (UN 2794)</b>   | Battery with a gross mass of 65kg or less, but top surface only | 20 x 20                           | 3  |
| <b>All others</b>   | Package containing:<br>≤ 0.5 kg(L)                              | 15 x 15                           | 2.5  |
|   | > 0.5 kg(L) ≤ 5 kg(L)   | 20 x 20                           | 3  |
|   | > 5 kg(L) ≤ 25 kg(L)  | 50 x 50                           | 5  |
|   | > 25 kg(L)  | 100 x 100                         | 7  |
|   | IBC ≤ 500 kg(L) <sup>b</sup>                                    | 100 x 100                         | 7  |
|   | Large packaging, overpack, segregation device                   | 100 x 100                         | 12   |
| <b>Table notes:</b><br>a Where the space available on the package for labelling is limited and the Proper Shipping Name of the dangerous goods must be supplemented by a Technical Name (where special provision 274 is assigned to the particular entry in the Dangerous Goods List – see 3.1.2.8), the minimum height of the letters of the Technical Name or names may be reduced to not less than half the size stated in this table or 1.5 mm, whichever is the greater.<br>b IBCs, pressure drums and tubes of capacity > 500 kg(L) are placardable units that must be placarded with emergency information panels in accordance with 5.3.3 |   |                                   |  |









## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING







### 5.2.2.2.2 Specimen labels

| <u>Label model No.</u>                           | <u>Division or Category</u>    | <u>Symbol and symbol colour</u>   | <u>Background</u> | <u>Figure in bottom corner (and figure colour)</u> | <u>Specimen labels</u>  | <u>Note</u>  |
|--|--------------------------------|---|-------------------|--|---|--|
| <b>Class 1: Explosive substances or articles</b> |                                |   |                   |  |   |  |
| <u>1</u>   | <u>Divisions 1.1, 1.2, 1.3</u> | <u>Exploding bomb: black</u>  | <u>Orange</u>     | <u>1</u><br>(black)                                |    | <u>** Place for division – to be left blank if EXPLOSIVE is the subsidiary risk</u><br><u>* Place for compatibility group – to be left blank if EXPLOSIVE is the subsidiary risk</u> |
| <u>1.4</u>                                       | <u>Division 1.4</u>            | <u>1.4: black</u><br><u>Numerals shall be about 30 mm in height and be about 5 mm thick (for a label measuring 100 mm x 100 mm)</u> | <u>Orange</u>     | <u>1</u><br>(black)                                |    | <u>* Place for compatibility group</u>   |
| <u>1.5</u>                                       | <u>Division 1.5</u>            | <u>1.5: black</u><br><u>Numerals shall be about 30 mm in height and be about 5 mm thick (for a label measuring 100 mm x 100 mm)</u> | <u>Orange</u>     | <u>1</u><br>(black)                                |   | <u>* Place for compatibility group</u>   |
| <u>1.6</u>                                       | <u>Division 1.6</u>            | <u>1.6: black</u><br><u>Numerals shall be about 30 mm in height and be about 5 mm thick (for a label measuring 100 mm x 100 mm)</u> | <u>Orange</u>     | <u>1</u><br>(black)                                |  | <u>* Place for compatibility group</u>   |





# PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING

| <u>Label model No.</u> | <u>Division or Category</u>                                     | <u>Symbol and symbol colour</u>  | <u>Background</u> | <u>Figure in bottom corner (and figure colour)</u>  | <u>Specimen labels</u>  | <u>Note</u>  |
|------------------------|---|--|-------------------|---|---|--|
| <b>Class 2: Gases</b>  |   |  |                   |   |   |  |
| <u>2.1</u>             | <u>Division 2.1:</u><br><u>Flammable gases</u> [DK7]            | <u>Flame: black or white</u><br><u>(except as provided for in 5.2.2.2.1.6 (d))</u> [DK8] | <u>Red</u>        | <u>2</u><br><u>(black or white)</u><br><u>(except as provided for in 5.2.2.2.1.6 (d))</u> |   | =  |
| <u>2.2</u>             | <u>Division 2.2:</u><br><u>Non-flammable, non-toxic gases</u>   | <u>Gas cylinder: black or white</u>  | <u>Green</u>      | <u>2</u><br><u>(black or white)</u>   |   | =  |
| <u>2.3</u>             | <u>Division 2.3:</u><br><u>Toxic gases</u>                      | <u>Skull and crossbones:</u><br><u>black</u>   | <u>White</u>      | <u>2</u><br><u>(black)</u>  |    | =  |
| <u>2.5</u>             | <u>Division 2.2 / Sub-hazard 5.1:</u><br><u>Oxidising gases</u> |  |                   |   |    | - Label model No. 2.5 is valid only for land transport within Australia.<br>- Hazard description on label may alternatively read 'OXIDIZING GAS' [DK9] |




# PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING

| <u>Label model No.</u>  | <u>Division or Category</u>   | <u>Symbol and symbol colour</u> | <u>Background</u>                        | <u>Figure in bottom corner (and figure colour)</u> | <u>Specimen labels</u>  | <u>Note</u> |
|---|---|---------------------------------|--|--|---|-------------|
| <b>Class 3: Flammable liquids</b>   |   |                                 |  |  |   |             |
| <u>3</u>  | =   | <u>Flame: black or white</u>    | <u>Red</u>                               | <u>3</u><br>(black or white)                       |       | =           |
| <b>Class 4: Flammable solids; substances liable to spontaneous combustions; substances which, in contact with water, emit flammable gases</b> |   |                                 |  |  |   |             |
| <u>4.1</u>  | <u>Division 4.1:</u><br><u>Flammable solids, self-reactive substances, polymerizing substances and solid desensitized explosives</u> [DK10] | <u>Flame: black</u>             | <u>White with 7 vertical red stripes</u> | <u>4</u><br>(black)                                |    | =           |
| <u>4.2</u>  | <u>Division 4.2:</u><br><u>Substances liable to spontaneous combustion</u>  | <u>Flame: black</u>             | <u>Upper half white, lower half red</u>  | <u>4</u><br>(black)                                |   | =           |
| <u>4.3</u>  | <u>Division 4.3:</u><br><u>Substances which, in contact with water, emit flammable gases</u>  | <u>Flame: black or white</u>    | <u>Blue</u>                              | <u>4</u><br>(black or white)                       |   | =           |


## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING



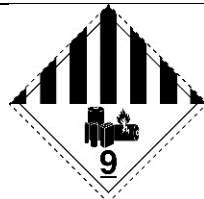
| <u>Label model No.</u>  | <u>Division or Category</u>                | <u>Symbol and symbol colour</u>                        | <u>Background</u>                        | <u>Figure in bottom corner (and figure colour)</u> | <u>Specimen labels</u>  | <u>Note</u>  |
|---|--|--|--|--|---|--|
| <b><u>Class 5: Oxidising substances and organic peroxides</u></b> |  |  |  |  |   |  |
| <u>5.1</u>  | <u>Division 5.1: Oxidising substances</u>  | <u>Flame over circle: black</u>                        | <u>Yellow</u>                            | <u>5.1 (black)</u>                                 |    | =  |
| <u>5.2</u>  | <u>Division 5.2: Organic peroxides</u>     | <u>Flame: black or white</u>                           | <u>Upper half red, lower half yellow</u> | <u>5.2 (black)</u>                                 |    | =  |
| <b><u>Class 6: Toxic substances and infectious substances</u></b> |  |  |  |  |   |  |
| <u>6.1</u>  | <u>Division 6.1: Toxic substances</u>      | <u>Skull and crossbones: black</u>                     | <u>White</u>                             | <u>6 (black)</u>                                   |   |  |
| <u>6.2</u>  | <u>Division 6.2: Infectious substances</u> | <u>Three crescents superimposed on a circle: black</u> | <u>White</u>                             | <u>6 (black)</u>                                   |  | <u>The lower half of the label may bear the inscription: 'In the case of damage or leakage immediately notify Public Health Authority' in black colour</u> |

## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING





| <u>Label model No.</u>               | <u>Division or Category</u>       | <u>Symbol and symbol colour</u> | <u>Background</u>  | <u>Figure in bottom corner (and figure colour)</u> | <u>Specimen labels</u>   | <u>Note</u>  |
|--------------------------------------|-----------------------------------|---------------------------------|--|--|--|--|
| <b>Class 7: Radioactive material</b> |                                   |                                 |  |  |  |  |
| <u>7A</u>                            | <u>Category I - WHITE</u> DK11    | <u>Trefoil: black</u>           | <u>White</u>   | <u>7</u><br>(black)                                |   | <u>Text (mandatory), black in lower half of label:</u><br><u>'RADIOACTIVE'</u><br><u>'CONTENTS ....'</u><br><u>'AVTIVITY ....'</u><br><u>One red vertical bar must follow the word 'RADIOACTIVE'</u>   |
| <u>7B</u>                            | <u>Category II - YELLOW</u> DK12  | <u>Trefoil: black</u>           | <u>Upper half yellow with white border, lower half white</u> | <u>7</u><br>(black)                                |   | <u>Text (mandatory), black in lower half of label:</u><br><u>'RADIOACTIVE'</u><br><u>'CONTENTS ....'</u><br><u>'AVTIVITY ....'</u><br><u>In a black outlined box:</u><br><u>'TRANSPORT INDEX'</u><br><u>Two red vertical bars must follow the word 'RADIOACTIVE'</u>   |
| <u>7C</u>                            | <u>Category III - YELLOW</u> DK13 | <u>Trefoil: black</u>           | <u>Upper half yellow with white border, lower half white</u> | <u>7</u><br>(black)                                |  | <u>Text (mandatory), black in lower half of label:</u><br><u>'RADIOACTIVE'</u><br><u>'CONTENTS ....'</u><br><u>'AVTIVITY ....'</u><br><u>In a black outlined box:</u><br><u>'TRANSPORT INDEX'</u><br><u>Three red vertical bars must follow the word 'RADIOACTIVE'</u> |

## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING






|           |                         |          |              |                            |   |   |
|-----------|-------------------------|----------|--------------|----------------------------|---|---|
| <u>7E</u> | <u>Fissile material</u> | <u>:</u> | <u>White</u> | <u>7</u><br><u>(black)</u> |  | <u>Text (mandatory), black in upper half of label: 'FISSILE'</u><br><u>In a black outlined box in the lower half of label: 'CRITICALITY SAFETY INDEX'</u> |
|-----------|-------------------------|----------|--------------|----------------------------|---|---|

| <u>Label model No.</u>  | <u>Division or Category</u> | <u>Symbol and symbol colour</u>   | <u>Background</u>   | <u>Figure in bottom corner (and figure colour)</u> | <u>Specimen labels</u>  | <u>Note</u> |
|---|-----------------------------|---|---|--|---|-------------|
| <u>8</u>  | <u>:</u>                    | <u>Liquids, spilling from two glass vessels and attacking a hand and a metal: black</u>                           | <u>Upper half white, lower half black with white border</u> | <u>8</u><br><u>(white)</u>                         |    | <u>:</u>    |
| <u>Class 9: Miscellaneous dangerous substances and articles, including environmentally hazardous substances</u> |                             |   |   |  |   |             |
| <u>9</u>  | <u>:</u>                    | <u>7 vertical stripes in upper half: black</u>  | <u>White</u>  | <u>9 underlined</u><br><u>(black)</u>              |   | <u>:</u>    |
| <u>9A</u>   | <u>:</u>                    | <u>7 vertical stripes in upper half: black; Battery group, one broken and emitting flame in lower half: black</u> | <u>White</u>  | <u>9 underlined</u><br><u>(black)</u>              |  | <u>:</u>    |

# PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING







| Label model No.                                  | Division or Category    | Symbol and symbol colour  | Background | Figure in bottom corner (and figure colour) | Specimen labels   | Note   |
|--|-------------------------|---|------------|---|---|--|
| <b>Class 1: Explosive substances or articles</b> |                         |   |            |   |   |  |
| 1  | Divisions 1.1, 1.2, 1.3 | Exploding bomb: black   | Orange     | 1 (black)                                   |    | -** Place for division – to be left blank if explosive is the subsidiary hazard<br>-* Place for compatibility group – to be left blank if explosive is the subsidiary hazard |
| 1.4  | Division 1.4            | 1.4: black<br>Numerals shall be about 30 mm in height and be about 5 mm thick (for a label measuring 100 mm × 100 mm) | Orange     | 1 (black)                                   |    | * Place for compatibility group  |
| 1.5  | Division 1.5            | 1.5: black<br>Numerals shall be about 30 mm in height and be about 5 mm thick (for a label measuring 100 mm × 100 mm) | Orange     | 1 (black)                                   |    | * Place for compatibility group  |
| 1.6  | Division 1.6            | 1.6: black<br>Numerals shall be about 30 mm in height and be about 5 mm thick (for a label measuring 100 mm × 100 mm) | Orange     | 1 (black)                                   |  | * Place for compatibility group  |

## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING





| Label model No.       | Division or Category  | Symbol and symbol colour     | Background | Figure in bottom corner (and figure colour) | Specimen labels   | Note |
|-----------------------|---|------------------------------|------------|---|---|------|
| <b>Class 2: Gases</b> |   |                              |            |   |   |      |
| 2.1                   | Division 2.1:<br>Flammable gases (except as provided for in 5.2.2.2.1.6 d)) | Flame: black or white        | Red        | 2<br>(black or white)                       |   | -    |
| 2.2                   | Division 2.2:<br>Non-flammable, non-toxic gases                             | Gas cylinder: black or white | Green      | 2<br>(black or white)                       |   | -    |
| 2.3                   | Division 2.3:<br>Toxic gases  | Skull and crossbones: black  | White      | 2<br>(black)                                |   | -    |







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| Label model No.  | Division or Category   | Symbol and symbol colour | Background                        | Figure in bottom corner (and figure colour) | Specimen labels   | Note |
|--|--|--------------------------|-----------------------------------|---|---|------|
| <b>Class 3: Flammable liquids</b>  |  |                          |                                   |   |   |      |
| 3  | -  | Flame: black or white    | Red                               | 3<br>(black or white)                       |       | -    |
| <b>Class 4: Flammable solids; substances liable to spontaneous combustion; substances which, in contact with water, emit flammable gases</b> |  |                          |                                   |   |   |      |
| 4.1  | Division 4.1:<br>Flammable solids, self-reactive substances, solid desensitized explosives and polymerizing substances | Flame: black             | White with 7 vertical red stripes | 4<br>(black)                                |    | -    |
| 4.2  | Division 4.2:<br>Substances liable to spontaneous combustion   | Flame: black             | Upper half white, lower half red  | 4<br>(black)                                |   | -    |
| 4.3  | Division 4.3:<br>Substances which, in contact with water emit flammable gases  | Flame: black or white    | Blue                              | 4<br>(black or white)                       |   | -    |




## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING

| Label model No.  | Division or Category                   | Symbol and symbol colour                              | Background                              | Figure in bottom corner (and figure colour) | Specimen labels   | Note  |
|--|--|---|---|---|---|---|
| <b>Class 5: Oxidizing substances and organic peroxides</b> |  |   |   |   |   |   |
| 5.1  | Division 5.1:<br>Oxidizing substances  | Flame over circle:<br>black                           | Yellow                                  | 5.1<br>(black)                              |    | -   |
| 5.2  | Division 5.2:<br>Organic peroxides     | Flame: black or<br>white                              | Upper half red,<br>lower half<br>yellow | 5.2<br>(black)                              |    | -   |
| <b>Class 6: Toxic substances and infectious substances</b> |  |   |   |   |   |   |
| 6.1  | Division 6.1:<br>Toxic substances      | Skull and<br>crossbones: black                        | White                                   | 6<br>(black)                                |   | -   |
| 6.2  | Division 6.2:<br>Infectious substances | Three crescents<br>superimposed on a<br>circle: black | White                                   | 6<br>(black)                                |  | The lower half of the label may bear the inscriptions: "INFECTIOUS SUBSTANCE" and "In the case of damage or leakage immediately notify Public Health Authority" in black colour |

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| Label model No.                      | Division or Category | Symbol and symbol colour | Background  | Figure in bottom corner (and figure colour) | Specimen labels   | Note  |
|--------------------------------------|----------------------|--------------------------|---|---|---|---|
| <b>Class 7: Radioactive material</b> |                      |                          |   |   |   |   |
| 7A                                   | Category I           | Trefoil: black           | White   | 7<br>(black)                                |    | Text (mandatory), black in lower half of label:<br>"RADIOACTIVE"<br>"CONTENTS ..."<br>"ACTIVITY ..."<br>One red vertical bar shall follow the word:<br>"RADIOACTIVE"  |
| 7B                                   | Category II          | Trefoil: black           | Upper half yellow with white border, lower half white | 7<br>(black)                                |    | Text (mandatory), black in lower half of label:<br>"RADIOACTIVE"<br>"CONTENTS ..."<br>"ACTIVITY ..."<br>In a black outlined box:<br>"TRANSPORT INDEX";<br>Two red vertical bars shall follow the word:<br>"RADIOACTIVE"   |
| 7C                                   | Category III         | Trefoil: black           | Upper half yellow with white border, lower half white | 7<br>(black)                                |   | Text (mandatory), black in lower half of label:<br>"RADIOACTIVE"<br>"CONTENTS ..."<br>"ACTIVITY ..."<br>In a black outlined box:<br>"TRANSPORT INDEX".<br>Three red vertical bars shall follow the word:<br>"RADIOACTIVE" |
| 7E                                   | Fissile material     | -                        | White   | 7<br>(black)                                |  | Text (mandatory): black in upper half of label:<br>"FISSILE";<br>In a black outlined box in the lower half of label:<br>"CRITICALITY SAFETY INDEX"  |

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| Label model No.   | Division or Category | Symbol and symbol colour  | Background   | Figure in bottom corner (and figure colour) | Specimen labels  | Note |
|---|----------------------|---|--|---|--|------|
| <b>Class 8: Corrosive substances</b>  |                      |   |  |   |  |      |
| 8   | -                    | Liquids, spilling from two glass vessels and attacking a hand and a metal: black                              | Upper half white, lower half black with white border | 8 (white)                                   |   | -    |
| <b>Class 9: Miscellaneous dangerous substances and articles, including environmentally hazardous substances</b> |                      |   |  |   |  |      |
| 9   | -                    | 7 vertical stripes in upper half: black   | White  | 9 underlined (black)                        |   | -    |
| 9A  | -                    | 7 vertical stripes in upper half: black;<br>battery group, one broken and emitting flame in lower half: black | White  | 9 underlined (black)                        |  | -    |

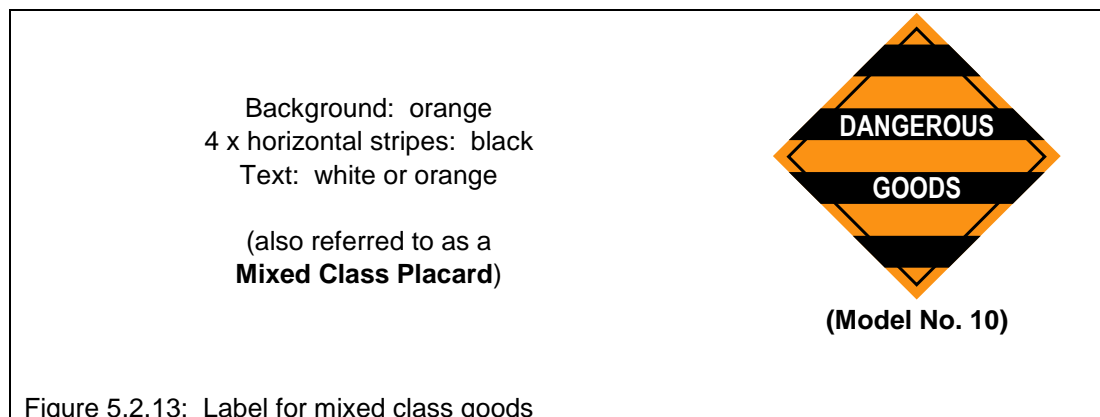
## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING

### 5.2.2.2.3 *Mixed Class Label*

**NOTE:** The Mixed Class Label is used as a placard on cargo transport units transporting more than one class or division of dangerous goods, excluding limited quantities only loads which are described in 5.2.2.2.4. It is not a package label.

The Mixed Class Label depicted here is not part of the UN labelling system and is not included in the modal codes. Its use as a transport placard and is therefore valid only for road or rail transport within Australia.

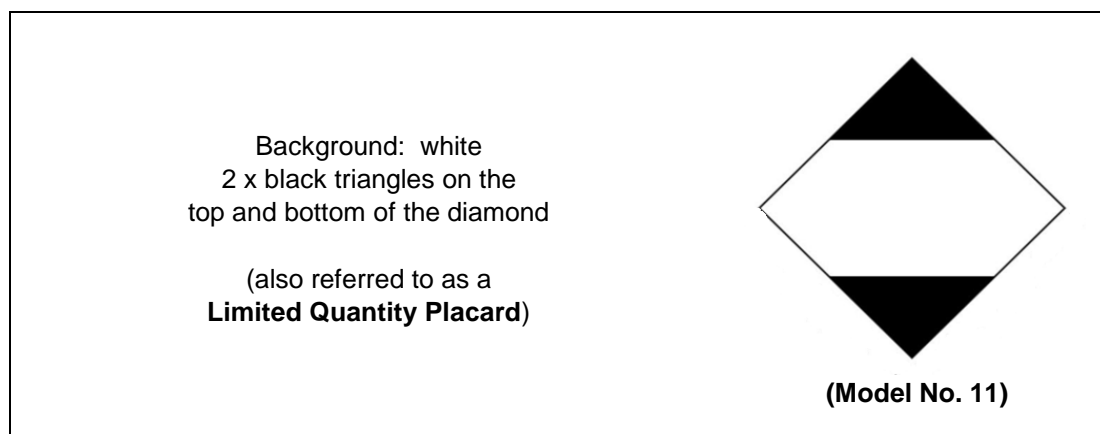
**Figure 5.2.7: Mixed load label**



### 5.2.2.2.4 *Limited Quantity Label*

- The Limited Quantity Label or Mark's use is described in 3.4.
- It is the applicable placard for cargo transport units transporting only limited quantities dangerous goods or loads using the Concessional Limited Quantities requirements.

**Figure 5.2.8: Limited Quantity label**



## CHAPTER 5.3 - PLACARDING AND MARKING OF CARGO TRANSPORT UNITS, PLACARDABLE UNITS AND BULK CONTAINERS

### Introductory Note

- Section 5.3.1** Details the placarding requirements applicable to all cargo transport units, bulk containers and placardable units and provides the specifications for placards.
- Section 5.3.2** Specifies additional marking that is required on some cargo transport units, bulk containers or placardable units when they contain particular loads of dangerous goods.
- Sections 5.3.3–5.3.9** Specify detailed placarding requirements for different types of cargo transport units, bulk containers, placardable units and loads.

### 5.3.1 GENERAL PLACARDING REQUIREMENTS

#### 5.3.1.1 Placarding Principles

- 5.3.1.1.1<sup>3</sup> Placards must be affixed to the exterior surface of cargo transport units that contain a placard load of dangerous goods as determined from Table 5.3, and to bulk containers and DK14 placardable units. A placard warns others that the cargo transport unit contains dangerous goods and it presents risks.

| <b><u>Table 5.3: Placard Load (Minimum Quantities)</u></b><br>(A placard load is defined in 1.2.1.1)  |  |
|---|--|
| <b><u>Dangerous Goods in Cargo Transport Unit</u></b>   | <b><u>Placard Load Quantity</u></b>  |
| <b><u>(a)</u></b> <u>Any dangerous goods in a receptacle (other than an article) with a:</u> <ul style="list-style-type: none"><li><u>capacity &gt; 500 L; or</u></li><li><u>net mass &gt; 500 kg</u></li></ul>             | <u>One or more such receptacles (i.e. one or more placardable units)</u>                                       |
| <b><u>(b)</u></b> <u>Any quantity of:</u> <ul style="list-style-type: none"><li><u>Division 2.1 (except Aerosols); or</u></li><li><u>Division 2.3; or</u></li><li><u>Packing group I of any Class or Division</u></li></ul> | <u>Aggregate quantity of all dangerous goods in the cargo transport unit ≥ 250 kg(L)</u>                       |
| <b><u>(c)</u></b> <u>Division 6.2 Category A</u>  | <u>All quantities</u>  |
| <b><u>(d)</u></b> <u>Division 6.2 (other than Category A)</u>   | <u>≥ 10 kg(L)</u>  |
| <b><u>(e)</u></b> <u>Limited quantities dangerous goods and / or domestic</u>   | <u>The load includes limited quantities dangerous goods and/or domestic consumable dangerous goods, from a</u> |

<sup>3</sup> The terms 'placardable unit' and 'transport unit' used throughout this Chapter are defined in 1.2.1.1 and 1.2.1.2.10 respectively.

PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING

|  |   |   |
|--|---|---|
|  | <u>consumable dangerous goods (defined as 1.2.1) - See Note 5</u>   | <u>single consignor, where the aggregate quantity of any one UN number is <math>\geq</math> 2,000kg(L)</u>                              |
| <b>(f)</b>   | <u>Limited quantities dangerous goods and / or domestic consumable dangerous goods (defined as 1.2.1) to which (e) does not apply. See Note 5</u> | <u><math>&gt; 8</math> tonnes Gross Mass</u>  |
| <b>(g)</b>   | <u>Loads where (a) – (f) do not apply</u>   | <u>Aggregate quantity of dangerous goods <math>\geq 1,000</math> kg(L) - unless the load is a Fumigated Unit (UN 3359 –see Note 3).</u> |
| <b>Table notes:</b><br><b>NOTE 1:</b> For placarding quantities of Class 1, see the Australian Explosives Code.<br><b>NOTE 2:</b> For placarding quantities of Class 7, see the Codes of Practice for the Safe Transport of Radioactive Substances.<br><b>NOTE 3:</b> A Fumigated Unit (UN 3359) complying with Chapter 5.5 that does not contain any other dangerous goods is not a placard load, and should not be included in the aggregate quantity of dangerous goods when determining a placard load.<br><b>NOTE 4:</b> For land transport wholly within Australia, this Code requires placards to be displayed on cargo transport units if they contain a placard load, as determined from Table 5.3. It should be noted that cargo transport units containing lesser quantities may need to be placarded in accordance with the IMDG Code before they are acceptable for transport by sea, even within Australian waters.<br><b>NOTE 5:</b> When transporting a load of limited quantities dangerous goods and/or domestic consumer commodities (defined in 1.2.1) with other dangerous goods the quantity of dangerous goods packed in limited quantities does not need to be included when calculating the aggregate quantity of the load. The applicable placard load quantity applies to the most stringent requirement. |   |   |

| <b>Table 5.3: Placard Load (Minimum Quantities)</b>  |   |
|--|---|
| A placard load is defined as a load in a cargo transport unit, as defined in 1.2.1, with either:   |   |
| <b>Dangerous Goods in Cargo Transport Unit</b>   | <b>Placard Load Quantity</b>  |
| <b>(a)</b> Any dangerous goods in a receptacle (other than an article) with a: <ul style="list-style-type: none"> <li>• capacity <math>&gt; 500</math> L; or</li> <li>• net mass <math>&gt; 500</math> kg</li> </ul> | One or more such receptacles (i.e. one or more placardable units)   |
| <b>(b)</b> Any quantity of: <ul style="list-style-type: none"> <li>• Division 2.1 (except Aerosols); or</li> <li>• Division 2.3; or</li> <li>• Packing group I of any Class or Division</li> </ul>                   | Aggregate quantity of all dangerous goods in the cargo transport unit $\geq 250$ kg(L)  |
| <b>(c)</b> Division 6.2 Category A   | All quantities  |
| <b>(d)</b> Division 6.2 (other than Category A)  | $\geq 10$ kg(L)   |
| <b>(e)</b> Limited quantities dangerous goods and / or domestic consumer commodities (defined as 1.2.1) – See Note 5   | $\geq 2,000$ kg(L)  |
| <b>(f)</b> Loads where a – e do not apply  | Aggregate quantity of dangerous goods $\geq 1,000$ kg(L) – unless the load is: <ul style="list-style-type: none"> <li>(ii) a Fumigated Unit (UN 3359 –see Note 3).</li> </ul> |

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### **Table notes:**

~~NOTE 1: For placarding quantities of Class 1, see the Australian Explosives Code.~~

~~NOTE 2: For placarding quantities of Class 7, see the Codes of Practice for the Safe Transport of Radioactive Substances.~~

~~NOTE 3: A Fumigated Unit (UN 3359) complying with Chapter 5.5 that does not contain any other dangerous goods is not a placard load, and should not be included in the aggregate quantity of dangerous goods when determining a placard load.~~

~~NOTE 4: For land transport wholly within Australia, this Code requires placards to be displayed on cargo transport units if they contain a placard load, as determined from Table 5.3. It should be noted that cargo transport units containing lesser quantities may need to be placarded in accordance with the IMDG Code before they are acceptable for transport by sea, even within Australian waters.~~

~~NOTE 5: When transporting a load of limited quantities dangerous goods and/or domestic consumer commodities (defined in 1.2.1) with other dangerous goods the applicable placard load quantity applies to the most stringent requirement.~~

5.3.1.1.2 Placards must correspond to the primary hazard of the goods contained in the cargo transport unit, bulk container or placardable unit except that:

- (a) placards are not required on cargo transport units carrying any quantity of explosives of Division 1.4, Compatibility Group S, unless they are also carrying other dangerous goods; and
- (b) where there is dangerous goods of more than one class or division in a cargo transport unit, a placard in the form of a mixed class label (model No. 10 in 5.2.2.2.3) may be used in lieu of multiple placards where permitted in Sections 5.3.3 to 5.3.7 inclusive.

**NOTE:** The use of the mixed class label as a placard is valid only in Australia, for road or rail transport.

5.3.1.1.3 Placards must also be displayed for those subsidiary hazard for which a subsidiary hazard label is required according to 5.2.2.1.2. However, cargo transport units containing goods of more than one class or division need not bear a subsidiary hazard placard if the hazard represented by that placard is already indicated by a primary hazard placard or where a mixed class placard is displayed where permitted in this chapter.

5.3.1.1.4 Placards must be displayed on:

- (a) all placardable units containing dangerous goods or the residue of dangerous goods, in accordance with Section 5.3.3; and
- (b) portable tanks and bulk containers containing dangerous goods or the residue of dangerous goods, in accordance with Section 5.3.4; and
- (c) freight containers containing a placard load of dangerous goods for transport, in accordance with Section 5.3.5; and
- (d) road vehicles transporting a placard load of dangerous goods, in accordance with Section 5.3.6; and
- (e) rail wagons transporting a placard load of dangerous goods, in accordance with Section 5.3.7.



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AND PLACARDING

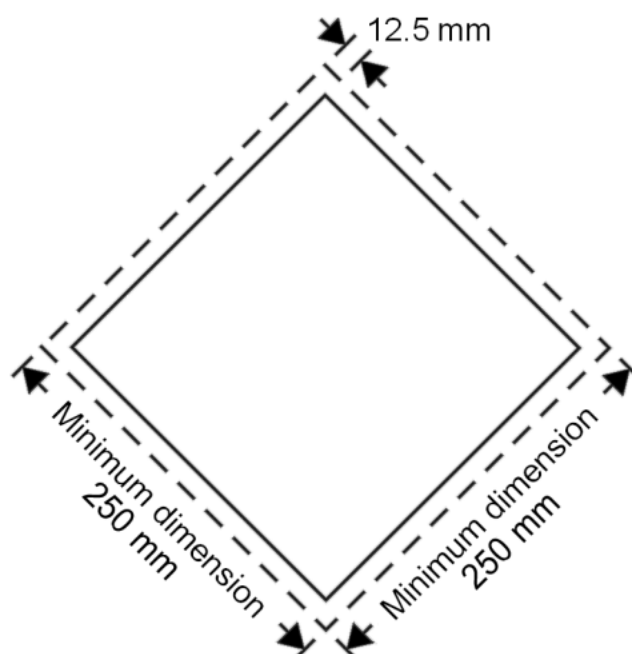
5.3.1.1.5 <Reserved>

5.3.1.1.6 If a class or division label is incorporated in an emergency information panel displayed on a face of a cargo transport unit in accordance with this Chapter, the cargo transport unit need not on that face display additional placards for the hazard represented by that label for any other goods in the cargo transport unit.

**5.3.1.2 Specifications for placards**

5.3.1.2.1 Except as provided in 5.3.1.2.2 for the Class 7 placard, and in 5.3.2.3.2 for the environmentally hazardous substance mark a placard must be configured as shown in figure 5.3.0.

**Figure 5.3.0: Specimen for placards**



Placard (except for class 7)

The placard must be in the form of a square set at an angle of 45 degrees (diamond-shaped). The minimum dimensions must be 250 mm x 250 mm (to the edge of the placard). The line inside the edge must be parallel and 12.5 mm from the outside of that line to the edge of the placard. The symbol and line inside the edge must correspond in colour to the label for the class or division of the dangerous goods in question. The class or division symbol/numeral must be positioned and sized in proportion to those prescribed in 5.2.2.2 for the corresponding class or division of the dangerous goods in question. The placard must display the number of the class or division (and for goods in Class 1, the compatibility group letter) of the dangerous goods in question in the manner prescribed in 5.2.2.2 for the corresponding label, in digits not

## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING

less than 25 mm high. Where dimensions are not specified, all features must be in approximate proportion to those shown.

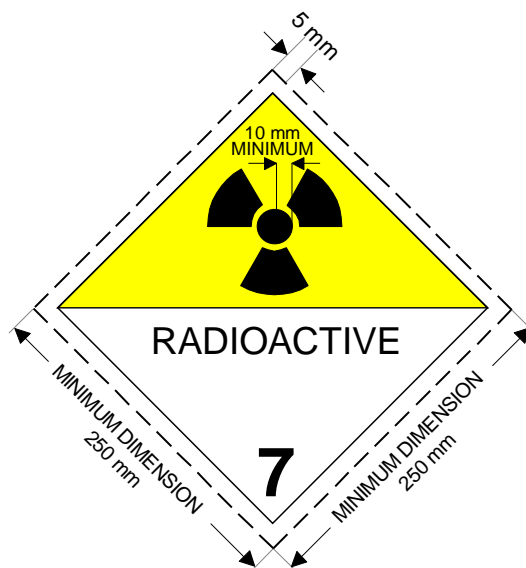
### 5.3.1.2.2 *Placard for radioactive material of Class 7*

For Class 7, the placard must have minimum overall dimensions of 250 mm by 250 mm (except as permitted by 5.3.1.1.5.2 of UN20) with a black line running 5 mm inside the edge and parallel with it, and must be otherwise as shown in Figure 5.3.1 below. When different dimensions are used, the relative proportions must be maintained. The number “7” must not be less than 25 mm high. The background colour of the upper half of the placard must be yellow and of the lower half white, the colour of the trefoil and the printing must be black. The use of the word “RADIOACTIVE” in the bottom half is optional to allow the use of this placard to display the appropriate United Nations number for the consignment.

**NOTE:** 5.3.1.2.2 and Figure 5.3.1 are reproduced from UN20 for information only.

**Figure 5.3.1: Placard for radioactive material of Class 7(No. 7D)**

Symbol (trefoil): black;  
Background: upper half yellow with white border, lower half white;  
The lower half must show the word RADIOACTIVE; or alternatively, when required (see 5.3.2.1), the appropriate UN number; and the figure “7” in the bottom corner



### 5.3.1.3 **Emergency Information Panels**

The loads that require an Emergency Information Panel are defined in Sections 5.3.3 to 5.3.8.

5.3.1.3.1 An emergency information panel is a placard that is substantially of the colour (unless otherwise exempted by the Competent Authority), format and design specified in Figure 5.3.2 and that, except as provided in 5.3.1.3.2, 5.3.1.3.3 and 5.3.1.3.4, includes the following particulars:

- (a) in space (a)
  - the proper shipping name for the dangerous goods being transported; except that where the proper shipping name includes the expression “N.O.S.”, that expression and the names of

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substances which contribute to the hazard of the goods may be omitted;

- (b) in space (b)
  - the UN Number for the dangerous goods;
- (c) in space (c)
  - any Hazchem Code assigned to the dangerous goods in Appendix C;
- (d) in space (d)
  - the expression: "IN EMERGENCY DIAL 000, POLICE or FIRE BRIGADE";
- (e) in space (e)
  - the class or division label for the dangerous goods and any subsidiary hazard label or labels applicable to the dangerous goods;
- (f) in space (f)
  - the name of an organisation responsible for providing the telephone advisory service, and a telephone number of the service, including (STD) area code,

**NOTE:** Figure 5.3.2 is in three parts as follows:

- Figure 5.3.2(a) shows the layout and dimensions of an emergency information panel;
- Figure 5.3.2(b) is an example of a completed emergency information panel;
- Figure 5.3.2(c) provides examples of a completed emergency information panel for substances having one or more subsidiary hazards.

### 5.3.1.3.2 *Multi-load Emergency Information Panel*

A multi-load emergency information panel is a placard substantially of the colour (unless otherwise exempted by the Competent Authority), format and design specified in Figure 5.3.2 that includes the following particulars:

- (a) in space (a)
  - nothing, the space is to be left blank;
- (b) in space (b)
  - the expression "MULTI-LOAD";
- (c) in space (c)
  - the multi-load Hazchem Code ascertained in accordance with Appendix C for the combination of the dangerous goods being transported in the cargo transport unit or placardable unit;
- (d) in space (d)
  - the expression: "In emergency dial 000, POLICE or FIRE BRIGADE";
- (e) in space (e):
  - (i) if the dangerous goods all belong to the same class or division:
    - the label appropriate to that class or division; or

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- (ii) if the dangerous goods do not all belong to the same class or division
  - the mixed class label (Model No. 10 in 5.2.2.2.3);

- (f) in space (f)
  - the name of an organisation responsible for providing the telephone advisory service and a telephone number of the service, including (STD) area Code.

### 5.3.1.3.3 *Mixed Load (Refined Petroleum Product) Emergency Information Panel*

A mixed load (refined petroleum product) emergency information panel, the use of which is subject to the conditions of 3.2.5.4, is a placard substantially of the colour (unless otherwise exempted by the Competent Authority), format and design specified in Figure 5.3.2 that includes the following particulars:

- (a) in space (a)
  - the expression "PETROLEUM FUEL"; or
  - if ethanol is included on the vehicle the following expressions may also be used: PETROL AND ETHANOL / PETROL MIXTURE or DIESEL AND ETHANOL / PETROL MIXTURE or PETROLEUM FUEL AND ETHANOL / PETROL MIXTURE
- (b) in space (b)
  - the expression "1270"
  - for PETROL AND ETHANOL / PETROL MIXTURE "1203 / 3475"
  - for PETROLEUM FUEL AND ETHANOL / PETROL MIXTURE "1270 / 3475"
- (c) in space (c)
  - the multi-load Hazchem Code ascertained in accordance with Appendix C for the combination of the dangerous goods being transported in the cargo transport unit or placardable unit;
  - note if ethanol is on the load the ethanol specific Hazchem code must be used
- (d) in space (d)
  - the expression: "In emergency dial 000, POLICE or FIRE BRIGADE";
- (e) in space (e)
  - a Class 3 label (model No. 3, see 5.2.2.2.2);
- (f) in space (f)
  - the name of an organisation responsible for providing the telephone advisory service and a telephone number of the service, including (STD) area Code.

### 5.3.1.3.4 *Emergency Information Panel for Unodourised LP Gas, Butane or Propane*

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Where an emergency information panel is required by this Code for a portable tank, tank vehicle or placardable unit that contains the following substances, the following particulars must be included:

|  | Unodourised LP gas                            | Unodourised Butane                            | Unodourised Propane                             |
|--|---|---|---|
| in space (a) in lieu of the proper shipping name, the expression | "UNODOURISED LP GAS" or "LP GAS, UNODOURISED" | "UNODOURISED BUTANE" or "BUTANE, UNODOURISED" | "UNODOURISED PROPANE" or "PROPANE, UNODOURISED" |
| in space (b), the expression                                     | "1075"  | "1011"  | "1978"  |

Note: UNODOURISED" may alternatively be spelled 'UNODOURIZED'

In all other respects, the emergency information panel must comply with 5.3.1.3.1.

**NOTE:** The transport of unodourised LP Gas, Butane and Propane are subject to Special Provision AU03 in Chapter 3.3.

### 5.3.1.3.5 *Dimensions of an Emergency Information Panel*

Except where permitted by Section 5.3.3, an emergency information panel must be of the dimensions specified in Figure 5.3.2.

### 5.3.1.3.6 *Dividing an Emergency Information Panel*

If, because of an obstruction on the vehicle, container or unit, it is not reasonably practicable to mount an emergency information panel as a whole, the panel may be divided vertically into two parts and mounted on either side of the obstruction.

## 5.3.1.4 **Placarding Methods**

5.3.1.4.1 If a cargo transport unit, [bulk container](#) or placardable unit must be placarded, the placard must be displayed in a substantially vertical plane and:

- (a) securely fixed to the unit; or
- (b) stencilled onto or printed on the unit; or
- (c) placed securely in a frame that is securely fixed to the unit.

5.3.1.4.2 The placard must:

- (a) be durable and weather resistant; and
- (b) have letters and numerals that are legible; and
- (c) not be obscured.

5.3.1.4.3 The part of the unit immediately behind the placard must be of a contrasting colour to the colour of the placard unless:

- (a) the border of the placard is of a contrasting colour and design; or
- (b) the placard is a label having a dotted or solid outer boundary line in accordance with 5.2.2.2.1.1.

Figure 5.3.2(a): Format and Colour of Emergency Information Panel

Background: white  
Lines and text: black  
All measurements in millimetres

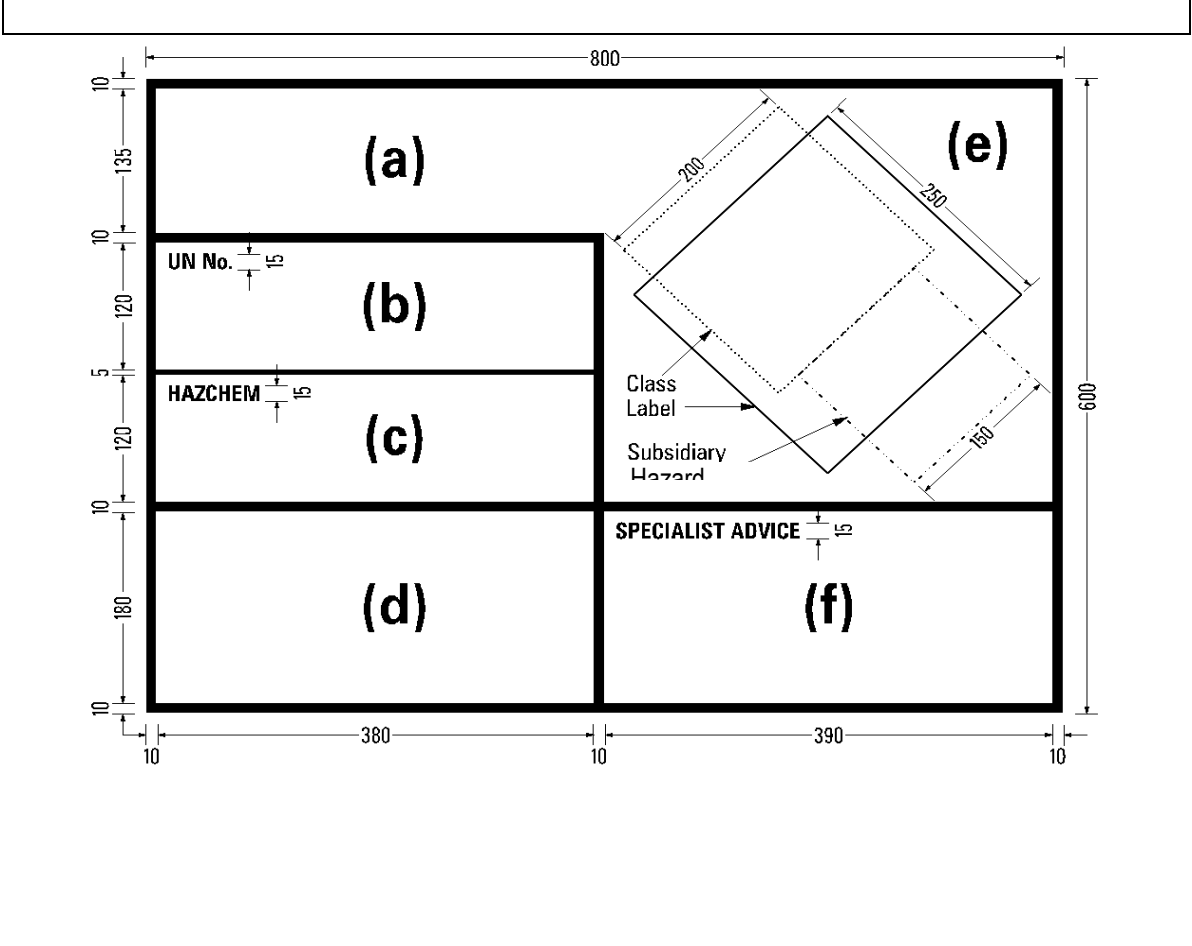


Figure 5.3.2(b): Example of Completed Emergency Information Panel

All measurements in millimetres

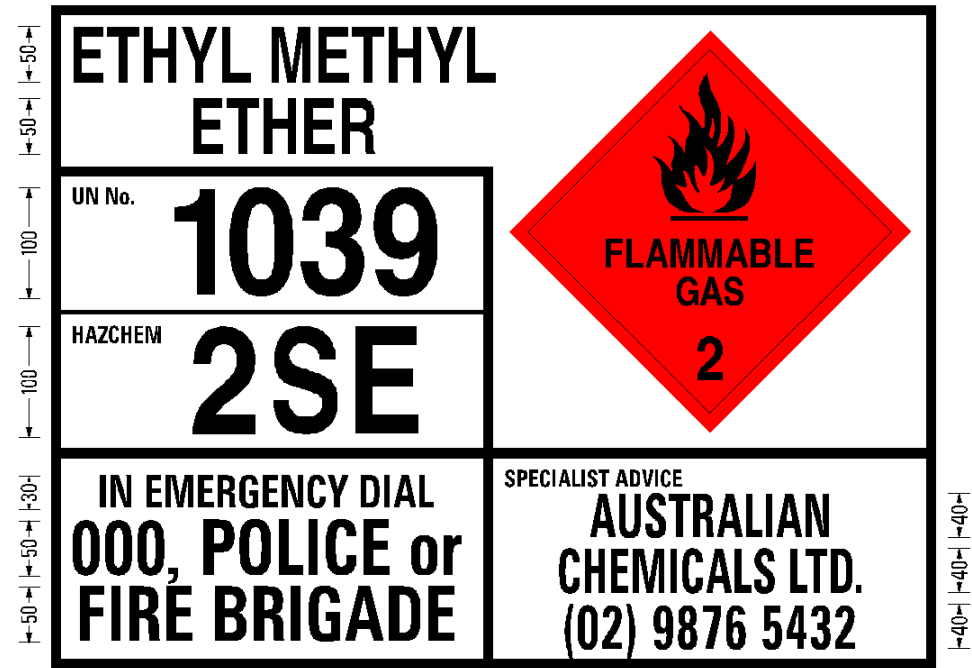
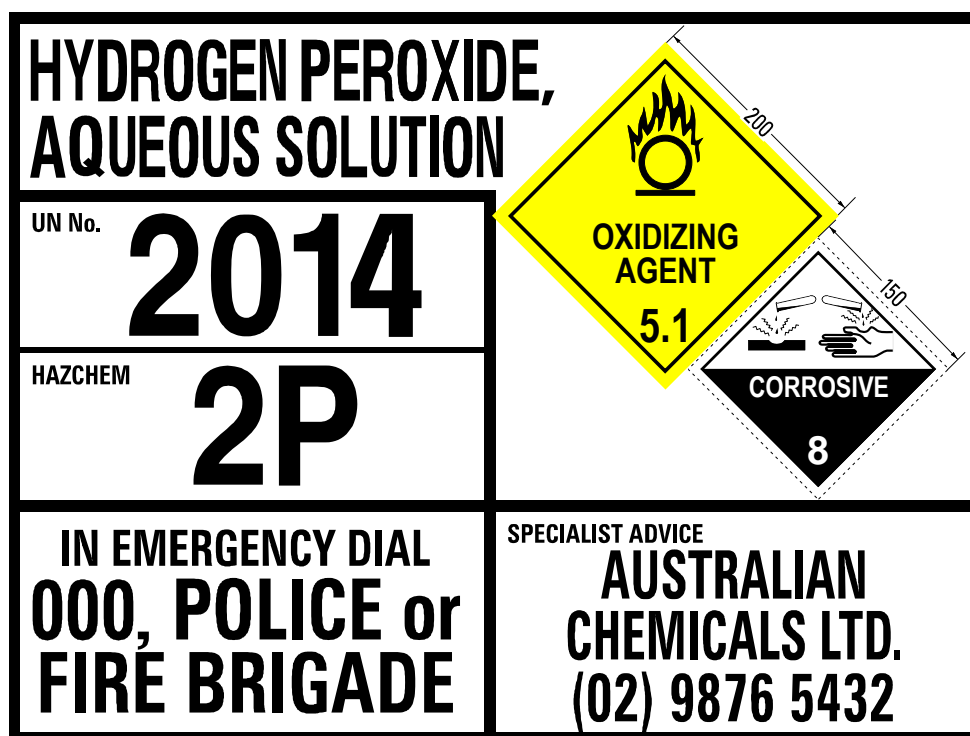


Figure 5.3.2(c): Examples of Completed Emergency Information Panels

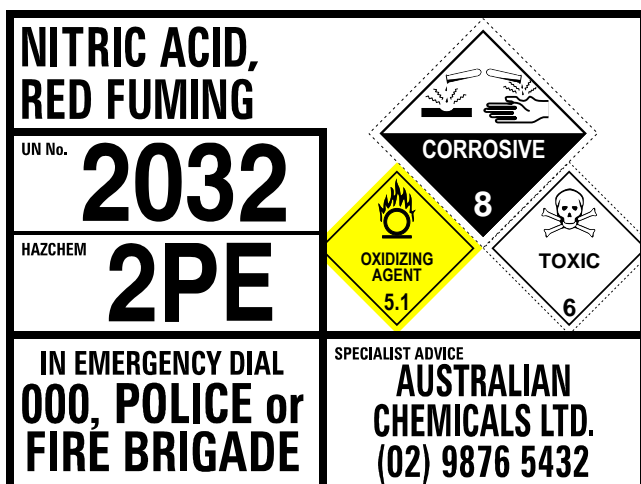
(i) Single Sub-Hazard



(ii) Two Sub-Hazards

Permissible alternatives

A.



B.



200 mm square [Primary Hazard Label](#), 150 mm square [Sub-Hazard Labels](#)

[Primary Hazard Label](#)

[A. trimmed to fit](#)

[B. permitted to overlap borders](#)



## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING

### 5.3.2 MARKING

#### 5.3.2.1 Display of UN numbers

The requirements of this sub-section 5.3.2.1 do not apply to consignments of dangerous goods being transported only by road or rail within Australia.

**NOTE:** 5.3.2.1 is a requirement of UN20, the IMDG Code, ICAO Rules and IATA Regulations and therefore applies to all transport by sea and air. It is included here for the information of exporters or those intending to transport dangerous goods domestically by sea or air, and to assist in interpreting placarding and marking of containers arriving by sea or air.

5.3.2.1.1 For transport by sea or air, the IMDG Code, ICAO Rules and IATA Regulations require that, except for goods of Class 1, the UN number must be displayed as described in this section on consignments of:

- (a) solids, liquids or gases transported in tank cargo transport units including on each component of a multi-compartment tank cargo transport unit; and
- (b) solids in bulk containers; and
- (c) packaged dangerous goods of a single commodity which constitute a full load for the cargo transport unit; and
- (d) unpackaged ~~LSA-I material, SCO-I or SCO-III LSA-1 or SCO-1 material of Class 7~~ in or on a vehicle, or in a freight container, or in a tank; and
- (e) packaged radioactive material with a single UN number in or on a vehicle, or in a freight container, when required to be transported under exclusive use.

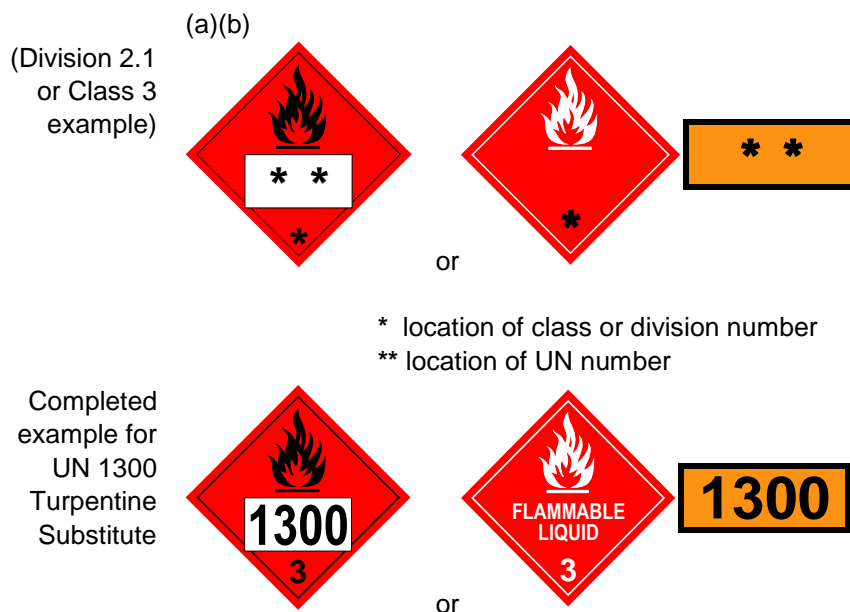
5.3.2.1.2 When required for intermodal transport, the UN number for the goods must be displayed in black digits not less than 65 mm high, either:

- (a) against a white background in the area below the pictorial symbol and above the class or division number and the compatibility group letter in a manner that does not obscure or detract from the other required label elements; or
- (b) on an orange rectangular panel not less than 120 mm high and 300 mm wide, with a 10 mm black border, to be placed immediately adjacent to each placard. For portable tanks with a capacity of not more than 3000 litres and with an available surface area insufficient to affix the prescribed placards the UN number may be displayed on an orange rectangular panel of appropriately reduced size on the external surface of the tank in characters not less than 25 mm high.

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### 5.3.2.1.3 Examples of display of UN numbers

**Figure 5.3.3: Examples of display of UN numbers**

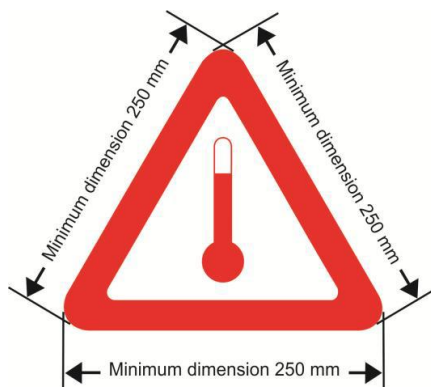


### 5.3.2.2 Elevated temperature substance mark

5.3.2.2.1 Cargo transport units containing a substance that is transported or offered for transport in a liquid state at a temperature equal to or exceeding 100 °C, in a solid state at a temperature equal to or exceeding 240 °C must bear on each side and on each end the mark shown in Figure 5.3.4.

5.3.2.2.2 Despite 5.3.2.2.1, where the prescribed mark for carriage at elevated temperature is incorporated as a subsidiary hazard label in an emergency information panel, the sides of the triangle must measure at least 150 mm.

**Figure 5.3.4: Mark for carriage at elevated temperature**



The mark must be an equilateral triangle. The colour of the mark must be red. The minimum dimension of the sides must be 250 mm. For

## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING

portable tanks with a capacity of not more than 3 000 litres and with an available surface area insufficient to affix the prescribed marks, the minimum dimensions of the sides may be reduced to 100 mm. Where dimensions are not specified, all features must be in approximate proportion to those shown.

### **5.3.2.3 Environmentally hazardous substance mark**

5.3.2.3.1 Subject to Special Provision AU01 in Chapter 3.3, a cargo transport unit or bulk container containing environmentally hazardous substances meeting the criteria of 2.9.3 (UN Nos. 3077 and 3082) must be marked with the environmentally hazardous substance mark (Figure 5.2.2). The mark must be placed on each surface of the cargo transport unit or bulk container that is required by this Chapter to be placarded, as near as is practicable to the class or division label.

5.3.2.3.2 The environmentally hazardous substance mark for cargo transport units and bulk containers must be as described in 5.2.1.6.3 and Figure 5.2.2, except that the minimum dimensions must be 250 mm x 250 mm. For portable tanks with a capacity of not more than 3 000 litres and with an available surface area insufficient to affix the prescribed marks, the minimum dimensions may be reduced to 100 mm x 100 mm.

5.3.2.3.3 If the environmentally hazardous substance mark is incorporated in an emergency information panel, the sides of the mark must measure at least 150 mm.

### **5.3.3 PLACARDING PLACARDABLE UNITS**

5.3.3.1 Except as provided in 5.3.3.6, this section applies to placardable units, being all receptacles, other than cargo transport units, that have a capacity > 500 kg(L), including:

- (a) IBCs; and
- (b) pressure drums; and
- (c) tubes; and
- (d) MEGCs; and
- (e) demountable tanks.

5.3.3.2 A placardable unit that contains dangerous goods, or has contained dangerous goods and is not free from dangerous goods, must be placarded with emergency information panels as specified in 5.3.1.3.

5.3.3.3 Except where 5.3.3.4 applies, two emergency information panels must be displayed in accordance with 5.3.1.4, in a substantially vertical plane. Panels should, where practicable, be displayed on opposite sides, so as to be best seen:

- (a) from a forklift when approaching to pick up the unit; and
- (b) when loaded onto a vehicle.

5.3.3.4 Despite 5.3.3.3, only one emergency information panel is required on pressure drums, tubes and other placardable units having a diameter or side dimension of less than 1 metre.

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5.3.3.5 Despite 5.3.1.3.5, if a placardable unit has a capacity of not more than 3 cubic metres, an emergency information panel fixed to the unit may have dimensions not less than half those shown in Figure 5.3.2<sup>4</sup>, in which case the size of each label and the height of lettering and numerals on the panel must be reduced in proportion to the reduced dimensions of the panel.

### 5.3.3.6 Exception to placarding with EIPs

This section 5.3.3 does not apply to a placardable unit that is being transported in a closed freight container that has been imported into, or is to be exported from Australia, if:

- (a) the placardable unit is marked and labelled in accordance with the applicable modal code (IMDG Code, ICAO Rules or IATA Regulations); and
- (b) the freight container is placarded in accordance with the applicable modal code (IMDG Code, ICAO Rules or IATA Regulations); and
- (c) no goods (dangerous or not) have been removed from or added to the freight container since:
  - (i) if imported:
    - its arrival in Australia; or
  - (ii) if to be exported:
    - the load was first consigned for transport to the place from which it is to be exported.

## 5.3.4 PLACARDING PORTABLE TANKS AND BULK CONTAINERS

5.3.4.1 Except as exempted by 5.3.8, a portable tank or bulk container that contains dangerous goods, or has contained dangerous goods and has not been cleaned free from dangerous goods, must be placarded with emergency information panels that are:

- (a) selected in accordance with 5.3.4.2; and
- (b) displayed in accordance with 5.3.1.4; and
- (c) located on two sides of the tank or container so that, when it is placed on a vehicle, the emergency information panels will, as far as practicable, be visible from both sides of the vehicle.

### 5.3.4.2 EIP Selection

5.3.4.2.1 A portable tank or bulk container that contains only one type of dangerous goods must be placarded with emergency information panels describing those dangerous goods in accordance with 5.3.1.3.1.

5.3.4.2.2 A multi-compartment tank or bulk container that contains different types of dangerous goods in different compartments must:

- (a) have, at each outlet point of each compartment of the tank or container, a mark identifying the dangerous goods contained in that compartment; and
- (b) be placarded with the following:

---

<sup>4</sup> An Emergency Information Panel printed on an A3 sheet with minimum printing margins all round is deemed to meet this minimum size requirement.

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- (i) if the dangerous goods in the compartments constitute a mixed load of refined petroleum products - mixed load (refined petroleum product) emergency information panels in accordance with 5.3.1.3.3; or
- (ii) if the dangerous goods in the compartments have different UN Numbers and are not a mixed load of refined petroleum products - multi-load emergency information panels in accordance with 5.3.1.3.2; or emergency information panels for each compartment containing dangerous goods, together with a rear facing multi-load information panel.

### 5.3.5 PLACARDING FREIGHT CONTAINERS

**NOTE 1:** This Section 5.3.5 applies to the placarding of freight containers loaded with dangerous goods in packages, large packages, overpacks, IBCs and other placardable units. Section 5.3.4 applies to freight containers that are used as bulk containers in accordance with Chapter 4.3.

**NOTE 2:** If the loaded container is intended for transport by sea or air, then:

- (a) the placarding threshold of this Code does not apply and placarding may be required for all loads that include dangerous goods (reference should be made to the IMDG Code, ICAO Rules or IATA Regulations as applicable); and
- (b) see 5.3.2.1.1 to determine if the UN Number must also be displayed.

5.3.5.1 A freight container that contains a placard load of dangerous goods, as determined from Table 5.3, must be placarded in accordance with 5.3.1.4, on both long sides, with placards indicating what dangerous goods are contained, selected in accordance with 5.3.5.2.

#### 5.3.5.2 Placard selection

5.3.5.2.1 Where all of the dangerous goods are of a single class or division, except where 5.3.8.2 applies, the placards required by 5.3.5.1 must include:

- (a) the class or division label; and
- (b) any subsidiary hazard label that is applicable to the goods.

5.3.5.2.2 Where there is more than one class or division in the freight container, except where 5.3.8.2 applies, the placards required by 5.3.5.1 must include either or both of the following:

- (a) a mixed class label (model No. 10 in 5.2.2.2.3);
- (b) ~~(b)~~ all class and division labels for each primary and subsidiary hazard of the dangerous goods in the container, in accordance with 5.3.1.1.2 and 5.3.1.1.3.

5.3.5.2.3 Where any dangerous goods are transported in one or more placardable units, the placards required on the freight container by 5.3.5.1 must, except where 5.3.8 applies, include emergency information panels selected in accordance with 5.3.5.3.

5.3.5.2.4 The requirement of 5.3.5.2.1 or 5.3.5.2.2 for a label is met if it is included in an emergency information panel required by 5.3.5.2.3.

## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING

### 5.3.5.3 EIP Selection

- 5.3.5.3.1 A freight container in which only one type of dangerous goods is transported in placardable units must be placarded with emergency information panels describing those dangerous goods in accordance with 5.3.1.3.1.
- 5.3.5.3.2 A freight container in which different types of dangerous goods are transported in placardable units must be placarded with either:
- (a) multi-load emergency information panels in accordance with 5.3.1.3.2; or
  - (b) emergency information panels for each of the dangerous goods in accordance with 5.3.1.3.1.

### 5.3.5.4 Placard location

When a freight container must be placarded with class, division or mixed class labels, or with emergency information panels, each placard must be placed on the sides of the container so that when the container is placed on the vehicle, each different placard is visible from either side of the vehicle and in accordance with 5.3.1.4.

## 5.3.6 PLACARDING ROAD VEHICLES

**NOTE:** Some illustrations of the placement of placards for typical vehicle configurations are set out in Figure 5.3.6 at the end of this Chapter.

### 5.3.6.1 All placard loads

- 5.3.6.1.1 All road vehicles transporting a placard load of dangerous goods, as determined from Table 5.3, must be placarded in accordance with 5.3.1.4 on the front and rear with placards indicating what dangerous goods are being carried.
- 5.3.6.1.2 Where all of the dangerous goods are of a single class or division, the placards required by 5.3.6.1.1 are:
- (a) the class or division label; and
  - (b) any subsidiary hazard labels applicable to the goods
- 5.3.6.1.3 Where there is more than one class of dangerous goods on the vehicle during the journey, the placards required by 5.3.6.1.1 are either or both of the following:
- (a) mixed class labels (model No. 10 in 5.2.2.2.3);
  - (b) all class and division labels for each primary and subsidiary hazard of the dangerous goods on the vehicle, in accordance with 5.3.1.1.2 and 5.3.1.1.3.
- 5.3.6.1.4 If the vehicle is a combination road vehicle, additional placards must be fitted when required by 5.3.6.2.
- 5.3.6.1.5 Where some or all of the dangerous goods are carried in placardable units, bulk containers, portable tanks or tanks which are integral with the vehicle, additional placards must be fitted when required by 5.3.6.3.

## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING

### 5.3.6.2 Combination Road Vehicles

- 5.3.6.2.1 Sub-section 5.3.6.2 applies to a combination road vehicle where the aggregate quantity of dangerous goods carried on all units of the combination comprises a placard load.
- 5.3.6.2.2 The placards that must be fitted in accordance with 5.3.6.1 and 5.3.6.3 to the front and rear of a combination vehicle must be determined based on the aggregate load carried on all units of the combination vehicle.
- 5.3.6.2.3 In addition, placards must be fitted to both sides of each trailer or rigid vehicle that forms part of the combination and is individually carrying a placard load, indicating the dangerous goods that are carried on the individual unit.
- 5.3.6.2.4 Placards fitted to the sides of a unit in accordance with 5.3.6.2.3 must include:
- (a) class, division and/or mixed class labels determined in accordance with 5.3.6.1.2 and 5.3.6.1.3; and
  - (b) emergency information panels determined in accordance with 5.3.6.3 if any of the dangerous goods on the unit are carried in bulk containers, tanks or placardable units.

### 5.3.6.3 Dangerous goods in bulk containers, tanks or placardable units

- 5.3.6.3.1 In addition to placards required by 5.3.6.1, a road vehicle on which any dangerous goods are carried in bulk containers, tanks or placardable units must be placarded with emergency information panels in accordance with this sub-section 5.3.6.3.

#### 5.3.6.3.2 Placement of Emergency Information Panels

- 5.3.6.3.2.1 Except as provided in 5.3.6.4, emergency information panels, selected in accordance with 5.3.6.3.3, must be fitted:
- (a) on the rear of a vehicle or vehicle combination on any part of which dangerous goods are carried in one or more bulk containers, tanks or placardable units; and
  - (b) on the sides of each trailer or rigid vehicle on which dangerous goods are carried in bulk containers, tanks or placardable units.
- 5.3.6.3.2.2 Emergency information panels required by 5.3.6.3 must be placed on the vehicle:
- (a) in a substantially vertical plane; and
  - (b) with the lower edge at least 450 millimetres<sup>5</sup> above the ground; and
  - (c) when fitted to the sides of the vehicle, as close as practicable to the front of the loading area of the vehicle<sup>6</sup>; and

---

<sup>5</sup> This minimum of 450 mm above ground is intended to accommodate the sides of step-deck trailers transporting portable tanks and other vehicles where location of the emergency information panel in the normal line of vision is not practicable. On road tankers and, where practicable, on other vehicles, it is recommended that panels be at least 1 m above the ground.

<sup>6</sup> Except where this is inconsistent with the placement of a placardable unit on the vehicle, as illustrated in Figure 5.3.6(e).

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(d) in accordance with 5.3.1.4.

### **5.3.6.3.3 EIP Selection**

5.3.6.3.3.1 A road vehicle transporting only one type of dangerous goods in bulk containers, tanks or placardable units must be placarded with emergency information panels describing those dangerous goods in accordance with 5.3.1.3.1.

5.3.6.3.3.2 A road vehicle transporting different types of dangerous goods in placardable units, bulk containers or tanks (including multi-compartment tanks, containers or units) must:

(a) be placarded with:

- (i) if the dangerous goods constitute a mixed load of refined petroleum products:
  - mixed load (refined petroleum product) emergency information panels in accordance with 5.3.1.3.3; or
- (ii) if the goods are not a mixed load of refined petroleum products:
  - multi-load emergency information panels in accordance with 5.3.1.3.2; or
- (iii) in lieu of either (i) or (ii):
  - individual emergency information panels describing each of the dangerous goods in accordance with 5.3.1.3.3, displayed in such a way that it is clear which goods are in what units; and

(b) have at each outlet point of each tank or compartment of a multi-compartmented tank, a mark identifying the dangerous goods contained in that tank or compartment.

### **5.3.6.4 Exceptions to placarding road vehicles**

5.3.6.4.1 Where a class, division or mixed class label is required to be displayed on the rear of a vehicle or side of a trailer or rigid vehicle by 5.3.6.1 or 5.3.6.2, it is sufficient compliance with those clauses if the label is incorporated in:

- (a) an emergency information panel displayed on the vehicle in accordance with 5.3.6.3; or
- (b) a placard in accordance with 5.3.3 on a placardable unit carried on the vehicle; or
- (c) a placard in accordance with 5.3.4 on a portable tank or bulk container carried on the vehicle; or
- (d) a placard in accordance with 5.3.5 on a freight container carried on the vehicle; or

that in each case faces, and is clearly visible from, the rear or side, as applicable, of the vehicle where it is required to be displayed.

5.3.6.4.2 Where a road vehicle is transporting dangerous goods in a portable tank, bulk container, freight container or placardable unit, it is sufficient compliance with 5.3.6.3 if the emergency information panel required by that sub-section is placarded on the tank, container or unit such that it



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faces, and is clearly visible from, the side of the unit or rear of the vehicle where it is required to be displayed.

5.3.6.4.3 Despite 5.3.6.3, emergency information panels are not required on a road vehicle transporting dangerous goods that are all in freight containers, portable tanks or bulk containers to which Section 5.3.8 applies.

5.3.6.4.4 A multi-load or mixed load (refined petroleum product) emergency information panel is not required on a side or rear of a road vehicle transporting different types of dangerous goods in portable tanks, bulk containers or placardable units, if:

- (a) all portable tanks, bulk containers and placardable units are placarded in accordance with Section 5.3.5; and
- (b) at least one emergency information panel for each of the dangerous goods is facing, and is clearly visible from, that side or rear of the vehicle on which:
  - (i) the dangerous goods are being transported; and
  - (ii) the multi-load or mixed load (refined petroleum product) emergency information panel would otherwise be required.

5.3.6.4.5 Emergency information panels on a spray vehicle may be removed or covered during spraying operations.

### **5.3.7 PLACARDING RAIL WAGONS**

#### **5.3.7.1 Rail tank wagons**

5.3.7.1.1 A rail tank wagon transporting only one type of dangerous goods must be placarded on both sides with an emergency information panel describing those goods in accordance with 5.3.1.3.1.

5.3.7.1.2 A rail tank wagon transporting different types of dangerous goods in different compartments must:

- (a) be placarded on both sides with either:
  - (i) if the goods are a mixed load of refined petroleum products:
    - mixed load (refined petroleum product) emergency information panels in accordance with 5.3.1.3.3; or
  - (ii) if the goods are not a mixed load of refined petroleum products:
    - multi-load emergency information panels in accordance with 5.3.1.3.2; and
- (b) have at each outlet point of each tank or compartment of a multi-compartmented tank, a mark identifying the dangerous goods contained in that tank or compartment.

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### 5.3.7.2 Other rail wagons

5.3.7.2.1 Where the only dangerous goods transported on a rail wagon are in freight containers, portable tanks, bulk containers or placardable units, no additional wagon placarding is required provided:

- (a) each placardable unit that contains dangerous goods is either:
  - (i) placarded in accordance with 5.3.3; or
  - (ii) transported in a freight container that is placarded in accordance with sub-clause (b); and
- (b) each freight container in which there is a placard load of dangerous goods is placarded in accordance with 5.3.5 or 5.3.8; and
- (c) each portable tank or bulk container that contains dangerous goods is placarded in accordance with 5.3.4 or 5.3.8; and
- (d) the placards on the tanks, containers and units face both sides of the wagon and are not obscured except as permitted by sub-clause (a)(ii).

5.3.7.2.2 A rail wagon transporting a placard load of dangerous goods, which are not all in cargo transport units or placardable units that are placarded in accordance 5.3.7.2.1, must be placarded on both sides with:

- (a) if there is only one class or division of dangerous goods on the wagon:
  - (i) the class or division label for the goods; and
  - (ii) any subsidiary hazard labels applicable to the goods; or
- (b) if there is more than one class or division of dangerous goods on the wagon:
  - (iii) a mixed class label (model No. 10 in 5.2.2.2.3).

5.3.7.2.3 A closed rail wagon transporting dangerous goods in one or more placardable units must be placarded with:

- (a) emergency information panels describing those goods in accordance with 5.3.1.3.1 if there is only one type of dangerous goods; or
- (b) multi-load emergency information panels in accordance with 5.3.1.3.2 if there is more than one type of dangerous goods in placardable units.

5.3.7.2.4 Where a placard that is expected on a container, tank or unit in accordance with 5.3.7.2.1 is missing or obscured, the required placard must be replaced or duplicated on the container, tank, unit or wagon in such a way that it is clearly visible, and evident to which container, tank or unit it applies.

### 5.3.8 PLACARDING INTERMODAL LOADS

5.3.8.1 A freight container, portable tank or bulk container in which dangerous goods are being transported does not need to be placarded with emergency information panels, despite a requirement in this chapter, if:

- (a) the tank or container has been:
  - (i) placarded outside Australia and imported into Australia; or

## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING

(ii) filled or packed for export from Australia, or for transport between Australian locations by sea or air; or

(iii) placarded outside Australia and imported into Australia, emptied, and is being returned overseas while containing residues; and

(b) the tank or container is marked and placarded fully in accordance with the applicable modal code (IMDG Code, IATA Regulations or ICAO Rules); and

(c) no goods (dangerous or not) have been removed from or added to the tank or container:

(i) if imported: since its arrival in Australia; or

(ii) if to be exported: since the load was first consigned for transport to the place from which it is to be exported; or

(iii) if loaded for transport between Australian locations by sea or air: the duration of the complete journey including road or rail transport to and from the nominated ports or airports.

5.3.8.2 Despite anything to the contrary in this Chapter, a freight container in which the only dangerous goods being transported are in limited quantities may be placarded with the marking shown in 3.4.6 or 3.4.8, if the conditions specified in paragraphs (a), (b) and (c) of 5.3.8.1 apply.

### 5.3.9 PLACARD REMOVAL

5.3.9.1 Placards must not be removed from a placardable unit, portable tank, bulk container, road tank vehicle or rail tank wagon that has contained dangerous goods unless all receptacles, tanks and compartments are free from dangerous goods.

5.3.9.2 Placards must be removed from a placardable unit or cargo transport unit that has transported dangerous goods when it has been freed from dangerous goods.

5.3.9.3 Placards indicating a particular hazard must be removed from a placardable unit or cargo transport unit that is free from dangerous goods with that hazard.

**NOTE:** See 7.1.7.1.2 regarding restrictions on placard removal from contaminated cargo transport units.

**Figure 5.3.6: Illustrations of Placarding Typical Road Vehicle Configurations**

**NOTE:** These illustrations are included for guidance only. They do not apply to all combinations of loads. To ascertain the placarding requirements for any particular load, refer to the text.

**Key to symbols used in these illustrations**

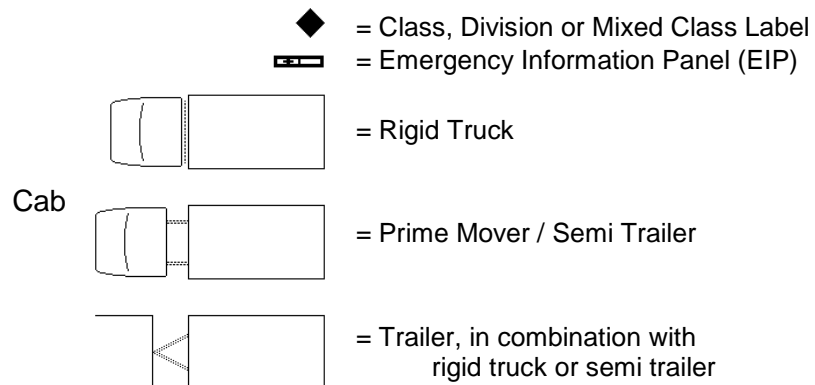
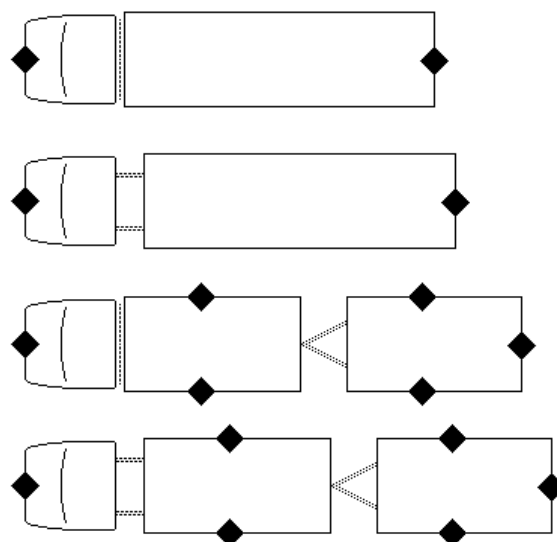


Figure 5.3.6(a): Road vehicles and combination road vehicles transporting dangerous goods in:

- (i) cylinders, packages, large packages, overpacks; or
- (ii) pressure drums, tubes or IBCs each  $\leq 500$  kg(L).



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Figure 5.3.6(b): Road tank vehicles and combination road tank vehicles.

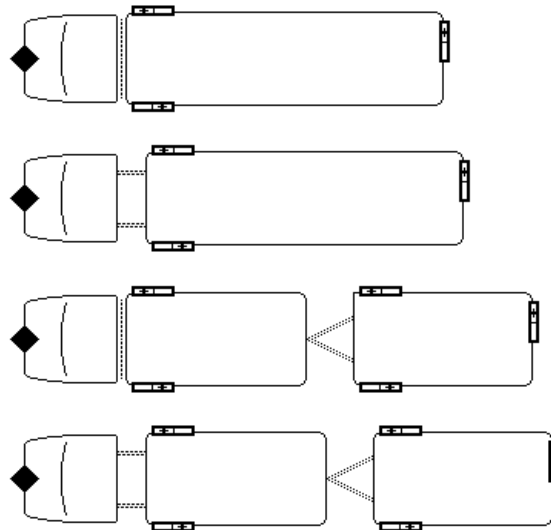
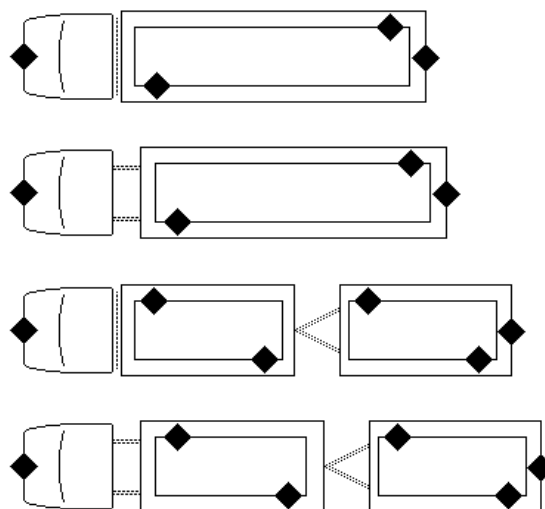


Figure 5.3.6(c): Road vehicles and combination road vehicles transporting dangerous goods in freight containers (not containing placardable units).



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Figure 5.3.6(d): Road vehicles and combination road vehicles transporting portable tanks, bulk containers or placardable units displaying EIPs, or freight containers loaded with placardable units.

~~NOTE: These illustrations in Figure 5.3.6 are included for guidance only. They do not apply to all combinations of loads. To ascertain the placarding requirements for any particular load, refer to the text.~~

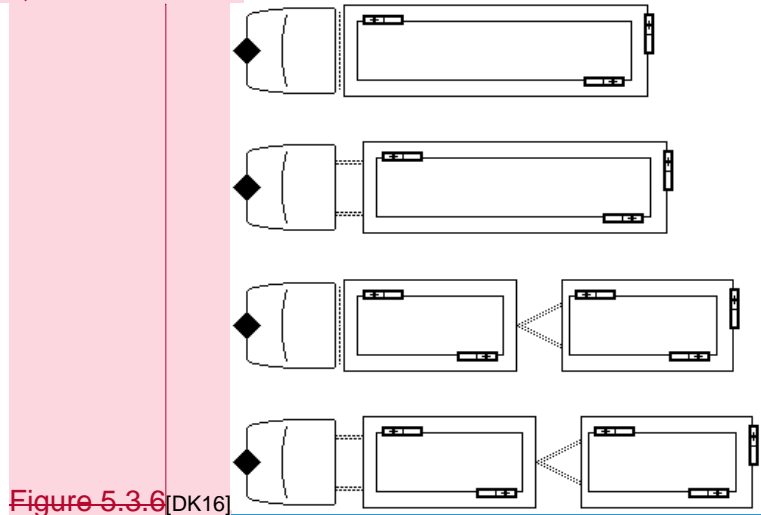
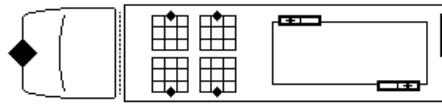
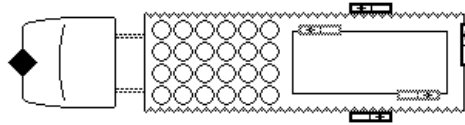


Figure 5.3.6(e): Road vehicles transporting dangerous goods both in packages etc. as in (a), and in placardable units.

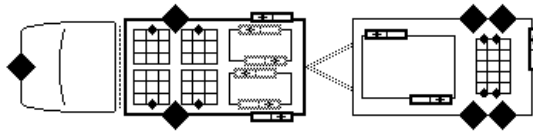
## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING



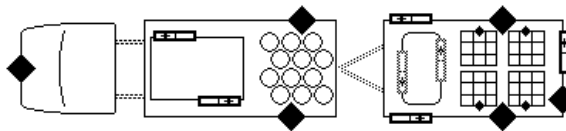
- Gated vehicle
- Same class goods in packages and placardable units
- EIPs on placardable units visible from side



- Curtain sided vehicle
- Same class goods in packages and placardable units
- EIPs on placardable units obscured



- Rigid truck fully enclosed, with packages and placardable units of different classes
- Gated trailer. Packaged goods have a sub hazard and are different class to placardable unit



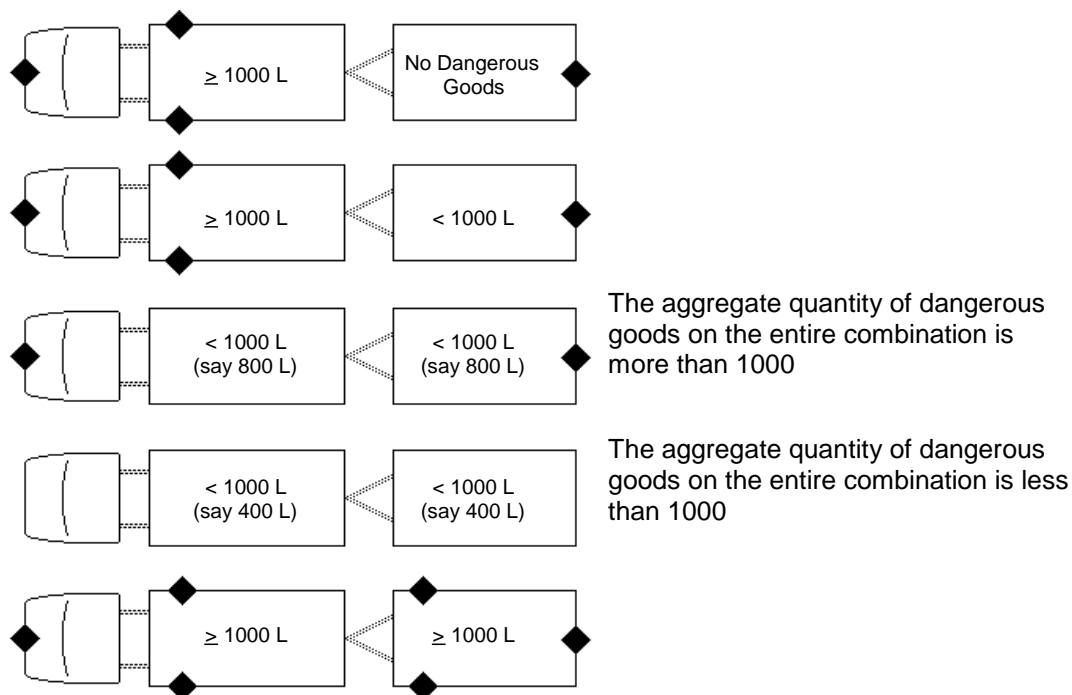
- Multi-load EIP on rear, Mixed Class label on front
- Gated combination vehicle
- Placardable units of one class, different materials
- Packages all one (different) class EIPs on trailer sides as placardable unit obscured
- Multi-load, one class EIP plus Class Label on rear
- Mixed Class on front, Class Label on all sides

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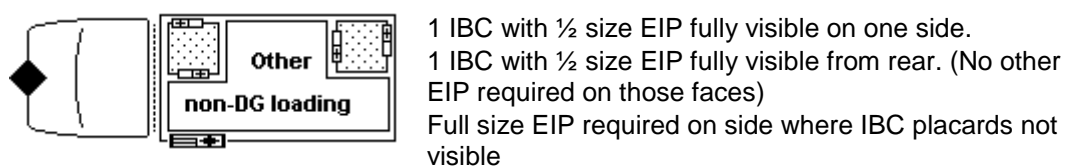
Figure 5.3.6(f): Combination vehicles transporting placard and non-placard loads.

**NOTE:** Assume that in each of the illustrations in (f) above, the goods being transported are dangerous goods of Class 3, packing group II or III. [DK17]



**NOTE:** Assume that in each of the illustrations in (f) above, the goods being transported are dangerous goods of Class 3, packing group II or III. [DK18]

Figure 5.3.6(g): Small vehicle transporting 2 IBCs of same dangerous goods with other non dangerous goods.








**NOTE:** These illustrations in Figure 5.3.6 are included for guidance only. They do not apply to all combinations of loads. To ascertain the placarding requirements for any particular load, refer to the text.



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**Figure 5.3.7: Colours for Labels and Placards**

| Sample Colour   | Colour Reference                              |                                       |
|---|---|---------------------------------------|
|   | AS 2700 Colour Standards for General Purposes | Pantone <sup>1</sup> Colour Reference |
|  <b>ORANGE</b>   | X 15 Orange                                   | Pantone 151                           |
|  <b>RED</b>      | R 13Signal Red                                | Pantone 192 <sup>2</sup>              |
|  <b>GREEN</b>   | G 24Fern Green                                | Pantone 361 <sup>2</sup>              |
|  <b>BLUE</b>   | B 21Ultramarine                               | Pantone 300 <sup>2</sup>              |
|  <b>YELLOW</b> | Y 11Canary                                    | Pantone 109                           |

Notes:

- 1 The Pantone Colour Reference is the numbered sample colour appearing in the Pantone Matching System published by Pantone Inc. USA.
- 2 USA legislation specifies Pantone 186U for red, 335U for green and 285U for blue. For import or export labels, these are acceptable alternatives to the colours specified above.

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**CHAPTER 5.4 - <RESERVED>**

**NOTE 1:** Chapter 5.4 of the UN20 provides details of documentation required for international, intermodal transport.

**NOTE 2:** Detailed requirements for documentation are provided in Part 11 of this Code.

**NOTE 3:** Some sample documentation is displayed in Appendix B.

## **CHAPTER 5.5 - SPECIAL PROVISIONS**

### **5.5.1 DELETED**

### **5.5.2 SPECIAL PROVISIONS APPLICABLE TO FUMIGATED CARGO TRANSPORT UNITS (UN 3359)**

#### **5.5.2.1 General**

5.5.2.1.1 Fumigated cargo transport units (UN 3359) containing no other dangerous goods are not subject to any provisions of this Code other than those of this section.

5.5.2.1.2 When the fumigated cargo transport unit is loaded with dangerous goods in addition to the fumigant, any provision of this Code relevant to these goods (including placarding, marking and documentation) applies in addition to the provisions of this section.

5.5.2.1.3 Only cargo transport units that can be closed in such a way that the escape of gas is reduced to a minimum must be used for the transport of cargo under fumigation.

#### **5.5.2.2 Training**

Persons engaged in the handling of fumigated cargo transport units must be trained commensurate with their responsibilities.

#### **5.5.2.3 Marking and placarding**

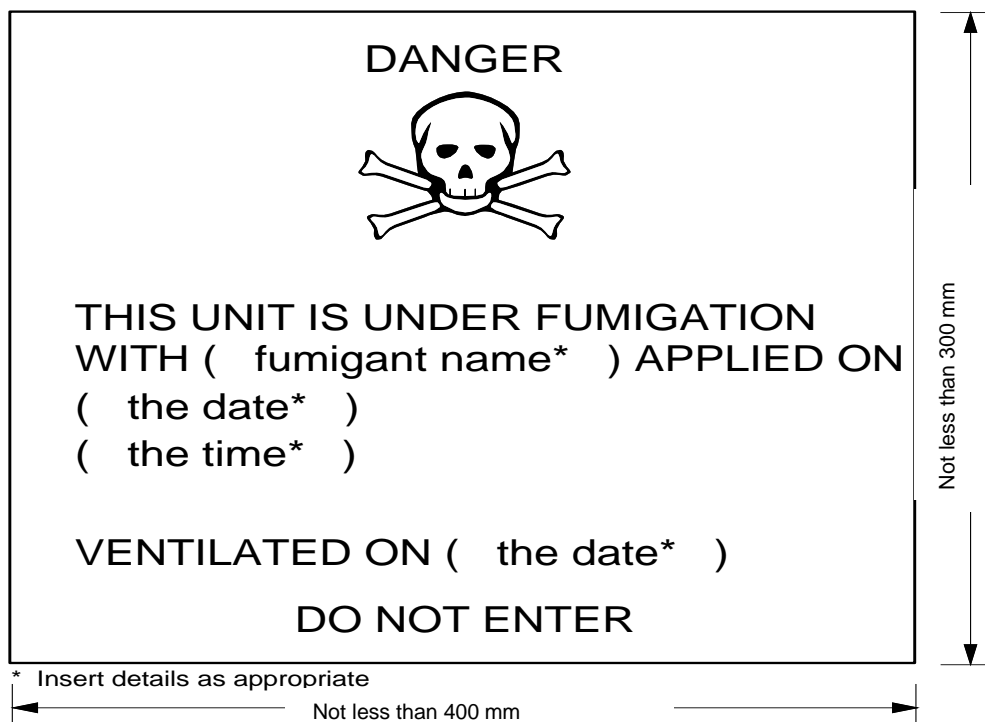
5.5.2.3.1 A fumigated cargo transport unit must be marked with a warning mark, as specified in 5.5.2.3.2, affixed at each access point in a location where it will be easily seen by persons opening or entering the cargo transport unit. This mark must remain on the cargo transport unit until the following provisions are met:

- (a) The fumigated cargo transport unit has been ventilated to remove harmful concentrations of fumigant gas; and
- (b) The fumigated goods or materials have been unloaded.

## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING

5.5.2.3.2 The fumigation warning mark must be as shown in Figure 5.5.1.

**Figure 5.5.1: Fumigation warning mark**



The mark must be a rectangle. The minimum dimensions must be 400 mm wide x 300 mm high and the minimum width of the outer line must be 2 mm. The mark must be in black print on a white background with lettering not less than 25 mm high. Where dimensions are not specified, all features must be in approximate proportion to those shown.

5.5.2.3.3 If the fumigated cargo transport unit has been completely ventilated either by opening the doors of the unit or by mechanical ventilation after fumigation, the date of ventilation must be marked on the fumigation warning mark.

5.5.2.3.4 When the fumigated cargo transport unit has been ventilated and unloaded, the fumigation warning mark must be removed.

5.5.2.3.5 Class 9 placards (Model No. 9, see 5.2.2.2.2) must not be affixed to a fumigated cargo transport unit except as required for other Class 9 substances or articles packed therein.

### 5.5.2.4 Documentation

5.5.2.4.1 Documents associated with the transport of cargo transport units that have been fumigated and have not been completely ventilated before transport must include the following information:

- UN 3359, fumigated cargo transport unit, 9, or UN 3359, fumigated cargo transport unit, class 9;
- The date and time of fumigation; and
- The type and amount of the fumigant used.

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- 5.5.2.4.2 The transport document may be in any form, provided it contains the information required in 5.5.2.4.1. This information must be easy to identify, legible and durable.
- 5.5.2.4.3 Instructions for disposal of any residual fumigant including fumigation devices (if used) must be provided.
- 5.5.2.4.4 A document is not required when the fumigated cargo transport unit has been completely ventilated and the date of ventilation has been marked on the warning mark (see 5.5.2.3.3 and 5.5.2.3.4).

### 5.5.3 SPECIAL PROVISIONS APPLICABLE TO PACKAGES AND CARGO TRANSPORT UNITS CONTAINING SUBSTANCES PRESENTING A RISK OF ASPHYXIATION WHEN USED FOR COOLING OR CONDITIONING PURPOSES (SUCH AS DRY ICE (UN 1845) OR NITROGEN, REFRIGERATED LIQUID (UN 1977) OR ARGON, REFRIGERATED LIQUID (UN 1951) OR NITROGEN<sup>[DK19]</sup>)

*NOTE: In the context of this section the term “conditioning” may be used in a broader scope and includes protection.*<sup>[DK20]</sup>

#### 5.5.3.1 Scope

- 5.5.3.1.1 This section is not applicable to substances which may be used for cooling or conditioning purposes when transported as a consignment of dangerous goods. When they are transported as a consignment, these substances must be transported under the relevant entry of the Dangerous Goods List in Chapter 3.2 in accordance with the associated conditions of transport.
- 5.5.3.1.2 This section is not applicable to gases in cooling cycles.
- 5.5.3.1.3 Dangerous goods used for cooling or conditioning portable tanks or MEGCs during transport are not subject to this section.
- 5.5.3.1.4 Cargo transport units containing substances used for cooling or conditioning purposes include cargo transport units containing substances used for cooling or conditioning purposes inside packages as well as cargo transport units with unpackaged substances used for cooling or conditioning purposes.

#### 5.5.3.2 General

- 5.5.3.2.1 Cargo transport units containing substances used for cooling or conditioning purposes (other than fumigation) during transport are not subject to any provisions of this Code other than those of this section.
- 5.5.3.2.2 When dangerous goods are loaded in cargo transport units containing substances used for cooling or conditioning purposes any provisions of this Code relevant to these dangerous goods apply in addition to the provisions of this section.
- 5.5.3.2.3 For air transport, arrangements between consignor and operator must be made for each consignment, to ensure that ventilation safety procedures are followed.

## PART 5: CONSIGNMENT PROCEDURES - INCLUDING LABELLING, MARKING AND PLACARDING

- 5.5.3.2.4 Persons engaged in the handling or transport of cargo transport units containing substances used for cooling or conditioning purposes must be trained commensurate with their responsibilities.

### **5.5.3.3 Packages containing a coolant or conditioner**

- 5.5.3.3.1 Packaged dangerous goods requiring cooling or conditioning assigned to packing instructions P203, P620, P650, P800, P901 or P904 of 4.1.4.1 must meet the appropriate requirements of that packing instruction.

- 5.5.3.3.2 For packaged dangerous goods requiring cooling or conditioning assigned to other packing instructions, the packages must be capable of withstanding very low temperatures and must not be affected or significantly weakened by the coolant or conditioner. Packages must be designed and constructed to permit the release of gas to prevent a build-up of pressure that could rupture the packaging. The dangerous goods must be packed in such a way to prevent movement after the dissipation of any coolant or conditioner.

- 5.5.3.3.3 Packages containing a coolant or conditioner must be transported in well ventilated cargo transport units.

### **5.5.3.4 Marking of packages containing a coolant or conditioner**

- 5.5.3.4.1 Packages containing dangerous goods used for cooling or conditioning must be marked with the proper shipping name of these dangerous goods followed by the words "AS COOLANT" or "AS CONDITIONER" as appropriate.

- 5.5.3.4.2 The marks must be durable, legible and placed in such a location and of such a size relative to the package as to be readily visible.

### **5.5.3.5 Cargo transport units containing unpackaged dry ice**

- 5.5.3.5.1 If dry ice in unpackaged form is used, it must not come into direct contact with the metal structure of a cargo transport unit to avoid embrittlement of the metal. Measures must be taken to provide adequate insulation between the dry ice and the cargo transport unit by providing a minimum of 30 mm separation (e.g. by using suitable low heat conducting materials such as timber planks, pallets etc.).

- 5.5.3.5.2 Where dry ice is placed around packages, measures must be taken to ensure that packages remain in the original position during transport after the dry ice has dissipated.

### **5.5.3.6 Marking of cargo transport units**

- 5.5.3.6.1 Cargo transport units containing dangerous goods used for cooling or conditioning purposes must be marked with a warning mark, as specified in 5.5.3.6.2 affixed at each access point in a location where it will be easily seen by persons opening or entering the cargo transport unit. This mark must remain on the cargo transport unit until the following provisions are met:

- (a) The cargo transport unit has been ventilated to remove harmful concentrations of coolant or conditioner; and

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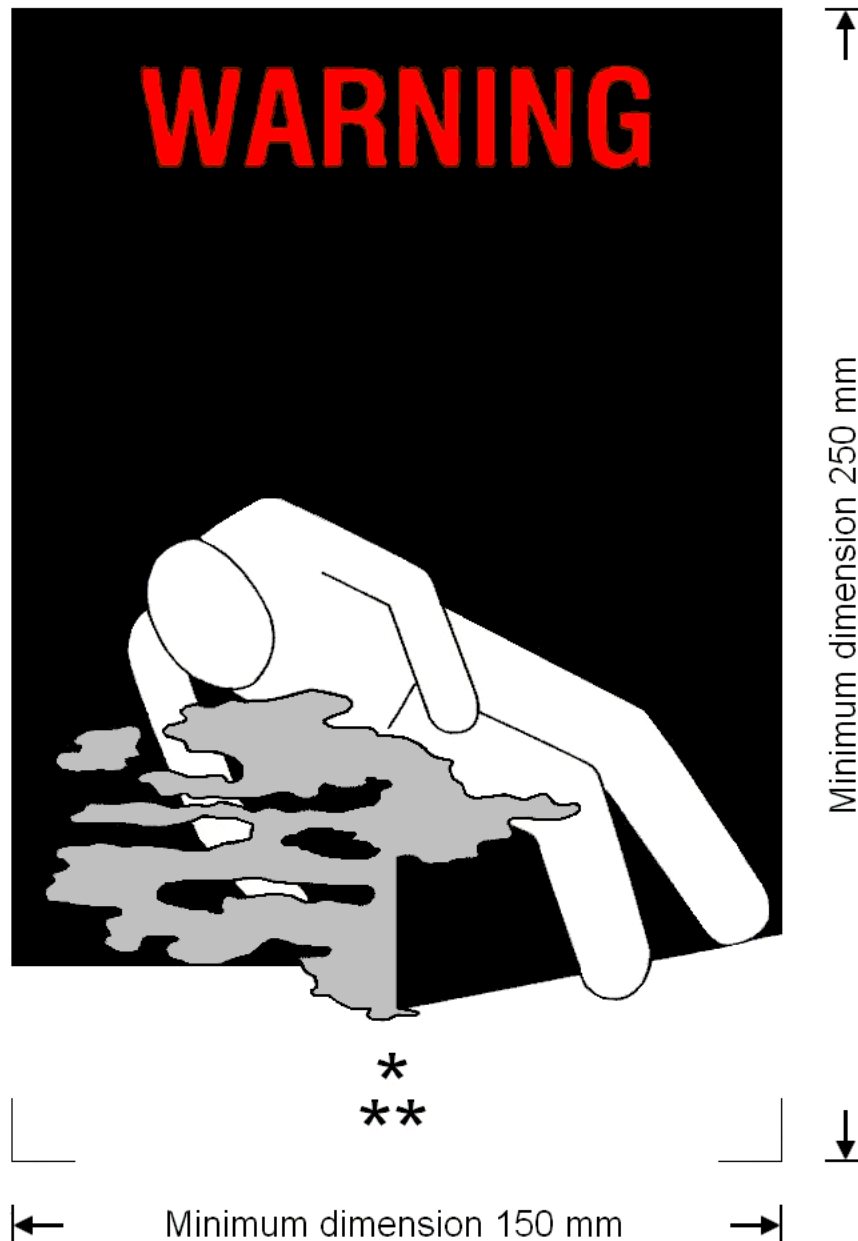
(b) The cooled or conditioned goods have been unloaded.

5.5.3.6.2 The warning mark must be as shown in Figure 5.5.2.

**Figure 5.5.2:** ~~Coolant/conditioning~~ Asphyxiation [DK21] warning mark for cargo transport units



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Legend for symbols in Figure 5.5.2:

- \* Insert proper shipping name of the coolant/conditioner. The lettering must be in capitals, all be on one line and must be at least 25 mm high. If the length of the proper shipping name is too long to fit in the space provided, the lettering may be reduced to the maximum size possible to fit. For example: CARBON DIOXIDE, SOLID. [Additional information such as "AS COOLANT" or "AS CONDITIONER" may be added.](#)

**\*\*** ~~Insert "AS COOLANT" or "AS CONDITIONER" as appropriate. The lettering must be in capitals, all be on one line and be at least 25 mm high.~~ [DK22] The mark must be a rectangle. The minimum dimensions must be 150 mm wide x 250 mm high. The word "WARNING" must be in red or white and be at least 25 mm high.



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Where dimensions are not specified, all features must be in approximate proportion to those shown.

### 5.5.3.7 Documentation

5.5.3.7.1 Documents (such as a bill of lading or cargo manifest) associated with the transport of cargo transport units containing or have contained substances used for cooling or conditioning purposes and have not been completely ventilated before transport must include the following information:

- (a) The UN number preceded by the letters "UN"; and
- (b) The proper shipping name followed by the words "AS COOLANT" or "AS CONDITIONER" as appropriate.

For example: UN 1845, CARBON DIOXIDE, SOLID, AS COOLANT.

5.5.3.7.2 The transport document may be in any form, provided it contains the information required in 5.5.3.7.1. This information must be easy to identify, legible and durable.

### 5.5.4 Dangerous goods in equipment in use or intended for use during transport

5.5.4.1 Dangerous goods (e.g. lithium batteries, fuel cell cartridges) contained in equipment such as data loggers and cargo tracking devices, attached to or placed in packages, overpacks, containers or load compartments are not subject to any provisions of this Code other than the following:

- (a) the equipment must be in use or intended for use during transport;
- (b) the contained dangerous goods (e.g. lithium batteries, fuel cell cartridges) must meet the applicable construction and test requirements specified in this Code; and
- (c) the equipment must be capable of withstanding the shocks and loadings normally encountered during transport.

5.5.4.2 When such equipment containing dangerous goods is transported as a consignment, the relevant entry of the Dangerous Goods List in Chapter 3.2 must be used and all applicable provisions of this Code shall apply."<sup>1)</sup>[DK23]