



**WORKING PAPER**

**DANGEROUS GOODS PANEL (DGP)  
MEETING OF THE WORKING GROUP OF THE WHOLE**

Auckland, New Zealand, 4 to 8 May 2009

- Agenda Item 2: Development of recommendations for amendments to the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) for incorporation in the 2011/2012 Edition**
- 2.3: Part 3 — Dangerous Goods List, Special Provisions and Limited and Excepted Quantities**

**DRAFT AMENDMENTS TO THE TECHNICAL INSTRUCTIONS TO ALIGN TO THE UN  
RECOMMENDATIONS — PART 3**

(Presented by the Secretary)

**SUMMARY**

This working paper contains draft amendments to Part 3 of the Technical Instructions to reflect the decisions taken by the UN Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals at its fourth session (Geneva, 12 December 2008). It also reflects amendments agreed by DGP-WG08 (The Hague, 3 to 7 November 2008).

The DGP-WG is invited to agree to the draft amendments in this working paper.

**Part 3**

**DANGEROUS GOODS LIST,  
SPECIAL PROVISIONS AND  
LIMITED AND EXCEPTED QUANTITIES**

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**Chapter 1**

**GENERAL**

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**1.2 PROPER SHIPPING NAME**

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### 1.2.7 Generic or “not otherwise specified” (n.o.s.) names

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1.2.7.1.1 The technical name must be a recognized chemical or biological name or other name currently used in scientific and technical handbooks, journals and texts. Trade names must not be used for this purpose. In the case of pesticides, only ISO common name(s), other name(s) in the World Health Organization (WHO) *Recommended Classification of Pesticides by Hazard and Guidelines to Classification*, or the name(s) of the active substance(s) may be used.

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### 1.3 MIXTURES OR SOLUTIONS

*Note.— Where a substance is specifically listed by name in Table 3-1, it must be identified in transport by the proper shipping name in Table 3-1. Such substances may contain technical impurities (for example, those deriving from the production process) or additives for stability or other purposes that do not affect its classification. However, a substance listed by name containing technical impurities or additives for stability or other purposes affecting its classification must be considered a mixture or solution (see 2;3.2 and 2;3.5).*

## Chapter 2

### ARRANGEMENT OF THE DANGEROUS GOODS LIST (TABLE 3-1)

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*Editorial Note.—* Amendments to Table 3-1 are presented in DGP-WG/09-WP/53.

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## Chapter 3

### SPECIAL PROVISIONS

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Table 3-2. Special provisions

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A21	This entry only applies to vehicles and equipment which are powered by wet batteries, sodium batteries or lithium batteries and which are transported with these batteries installed. Examples of such vehicles and equipment are electrically-powered cars, lawn mowers, wheelchairs and other mobility aids. Vehicles that also contain an internal combustion engine must be consigned under the entry Vehicle (flammable gas powered) or Vehicle (flammable liquid powered), as appropriate. Hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries or lithium batteries, transported with the battery(ies) installed, must be consigned under the entries UN 3166 <b>Vehicle, flammable gas powered</b> or UN 3166 <b>Vehicle, flammable liquid powered</b> , as appropriate. <u>Vehicles which contain a fuel cell must be consigned under the entries UN 3166 Vehicle, fuel cell powered with flammable gas or UN 3166 Vehicle, fuel cell powered with flammable liquid, as appropriate.</u>
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DGP-WG/08-WP/5:

A44	The entry chemical kit or first aid kit is intended to apply to boxes, cases, etc., containing small quantities of one or more compatible items of dangerous goods which are used, for example, for medical, analytical or testing or repair purposes. <u>The packing group assigned to the kit as a whole must be the most stringent packing group assigned to any individual substance in the kit. The assigned packing group must be shown on the dangerous goods transport document.</u>
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The only dangerous goods which are permitted in the kits are substances which may be transported as:

- a) excepted quantities as specified in column 9 of Table 3-1, provided the inner packagings and quantities are as prescribed in 5.1.2 and 5.2.1 a); or
- b) limited quantities under 3;4.1.2.

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A47 (219) Genetically modified micro-organisms (GMMOs) and genetically modified organisms (GMOs), which meet the definition of an infectious substance and the criteria for inclusion in Division 6.2 in accordance with 2;6, must be transported as UN 2814, UN 2900 or UN 3373, as appropriate, packed and marked in accordance with Packing Instruction 959 are not subject to any other requirements in these Instructions.

If GMMOs or GMOs meet the definition in 2;6 of a toxic substance or an infectious substance and the criteria for inclusion in Division 6.1 or 6.2, the requirements in these Instructions for transporting toxic substances or infectious substances apply.

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A78 Radioactive material with a subsidiary risk must:

- a) be labelled with subsidiary risk labels corresponding to each subsidiary risk exhibited by the material in accordance with the relevant provisions of 5;3.2; corresponding placards must be affixed to cargo transport units in accordance with the relevant provisions of 5;3.6;
- b) be allocated to Packing Groups I, II or III, as and if appropriate, by application of the grouping criteria provided in Part 2 corresponding to the nature of the predominant subsidiary risk. For packing, see also 4;9.1.5.

The description required in 5;4.1.5.7.1 b) must include a description of these subsidiary risks (e.g. "Subsidiary risk: 3,6.1"), the name of the constituents which most predominantly contribute to this (these) subsidiary risk(s) and, where applicable, the packing group.

Radioactive material with a subsidiary risk of Division 4.2 (Packing Group I) must be transported in Type B packages. Radioactive material with a subsidiary risk of Division 2.1 is forbidden from transport on passenger aircraft, and radioactive material with a subsidiary risk of Division 2.3 is forbidden from transport on passenger or cargo aircraft except with the prior approval of the appropriate authority of the State of Origin under the conditions established by that authority. A copy of the document of approval, showing the quantity limitations and the packaging requirements, must accompany the consignment.

A91 (198) A nitrocellulose solution containing not more than 20 per cent nitrocellulose may be transported under the requirements for "Paint", "Perfumery products" or "Printing ink" as applicable; see UN 1210, 1263, 1266, 3066, 3469 and 3470.

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DGP-WG/08-WP/27:

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[A97 These entries ~~may~~ must be used for substances which are hazardous to the environment but do not meet the classification criteria of any other class or other substance within Class 9. This must be based on the criteria as indicated in 2;9.2.1 a). This designation may also be used for wastes not otherwise subject to these Instructions but which are covered under the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*.]

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A124 (292) ~~Mixtures containing not more than 23.5 per cent oxygen by volume may be transported under this entry when no other oxidizing gases are present. A Division 5.1 subsidiary risk label is not required for any concentrations within this limit.~~ Not used.

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A130 When this radioactive material meets the definitions and criteria of other classes or divisions as defined in Part 2, it must be classified in accordance with the following:

a) Where the substance meets the criteria for dangerous goods in excepted quantities as set out in 3:5, the packagings must be in accordance with 3:5.2 and meet the testing requirements of 3:5.3. All other requirements applicable to radioactive material, excepted packages as set out in 1:6.1.5 must apply without reference to the other class or division;

b) Where the quantity exceeds the limits specified in 3:5.1.2, the substance must be classified in accordance with the predominant subsidiary risk. The dangerous goods transport document must describe the substance with ~~Such material must be declared under the proper shipping name and UN number applicable to the other class supplemented with appropriate for the material in that predominant Class or division, with the addition of the name applicable to this~~ the radioactive material excepted package according to column 1 of the Dangerous Goods List, and must be transported in accordance with the provisions applicable to that UN number. An example of the information shown on the dangerous goods transport document is:

UN 1993 Flammable liquid, n.o.s. (ethanol and toluene mixture), Radioactive material, excepted package — limited quantity of material, Class 3, PG II

In addition, ~~all other~~ the requirements specified in ~~of 1:6.1.5~~ 2:7.2.4.1.1 must apply.;

c) The provisions of 3:4 for the transport of dangerous goods packed in limited quantities must not apply to substances classified in accordance with sub-paragraph b);

d) When the substance meets a special provision that exempts this substance from all dangerous goods provisions of the other classes, it must be classified in accordance with the applicable UN number of Class 7 and all requirements specified in 1:6.1.5 must apply.

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A134 (312) Vehicles or machinery powered by a fuel cell engine must be consigned under the entries UN 3166 **Vehicle, fuel cell, flammable gas powered** or UN 3166 **Vehicle, fuel cell, flammable liquid powered**, or UN 3166 **Engine, fuel cell, flammable gas powered** or UN 3166 **Engine, fuel cell, flammable liquid powered** as appropriate. These entries include hybrid electric vehicles powered by both a fuel cell and an internal combustion engine with wet batteries, sodium batteries or lithium batteries, transported with the battery(ies) installed.

~~Other~~ Vehicles which contain an internal combustion engine must be consigned under the entries UN 3166 **Vehicle, flammable gas powered** or UN 3166 **Vehicle, flammable liquid powered**, as appropriate. These entries include hybrid electric vehicles powered by both an internal combustion engine and wet batteries, sodium batteries or lithium batteries, transported with the battery(ies) installed.

A135 (313) ~~Substances and mixtures meeting the criteria for Class 8 must be labelled with a “Corrosive” subsidiary risk label.~~ Not used.

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A144 Protective breathing equipment (PBE) containing a small chemical oxygen generator for use by aircrew members may be transported on passenger aircraft in accordance with Packing Instruction 523 subject to the following conditions:

a) the PBE must be serviceable and contained in the manufacturer’s original unopened inner packaging (i.e. vacuum sealed bag and protective container);

b) the PBE may only be consigned by, or on behalf of, an operator in the event that a PBE(s) has been rendered unserviceable or has been used and there is a need to replace such items so as to restore the number of PBEs on an aircraft to that required by pertinent airworthiness requirements and operating regulations;

c) a maximum of two PBE may be contained in a package;

d) the statement “Aircrew protective breathing equipment (smoke hood) in accordance with Special Provision A144” must be:

(i) included on the dangerous goods transport document;

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(ii) marked adjacent to the proper shipping name on the package.

DGP-WG/08-WP/17:

If the above conditions are met, the requirements of Special Provision A1 do not apply. All other requirements applicable to chemical oxygen generators must apply except that the "cargo aircraft only" handling label must not be displayed.

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A147 (329) ~~Where substances have a flash point of 60°C or less, the package(s) must bear a "FLAMMABLE LIQUID" subsidiary risk label in addition to the hazard label(s) required by these Instructions.~~ Not used.

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DGP-WG/08-WP/28:

A152 Insulated packagings containing refrigerated liquid nitrogen fully absorbed in a porous material ~~and intended for transport, at low temperature, of non-dangerous products~~ are not subject to these Instructions provided the design of the insulated packaging would not allow the build-up of pressure within the container and would not permit the release of any refrigerated liquid nitrogen irrespective of the orientation of the insulated packaging. When used to contain substances not subject to these Instructions, the words "not restricted" and the special provision number A152 must be provided on the air waybill when an air waybill is issued.

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A165 (347) ~~This entry must not be used for transport on passenger aircraft when testing in accordance with the UN Manual of Tests and Criteria Test Series 6 (a), upon which classification was based, has shown evidence of a hazardous effect outside the package. This includes denting or perforation of the witness plate beneath the package. From 1 January 2010, for transport aboard passenger aircraft, this entry may only be used if the results of Test Series 6 (d) of Part I of the UN Manual of Tests and Criteria have demonstrated that any hazardous effects arising from functioning are confined within the package (see 2;1.4.2.1).~~

~~— Note. — If the 6 (d) test is successfully completed before 1 January 2010, this entry may be used for transport on passenger aircraft.~~

A166 (342) Glass inner receptacles (such as ampoules or capsules) intended only for use in sterilization devices, when containing less than 30 mL of ethylene oxide per inner packaging with not more than 300 mL per outer packaging, may be transported in accordance with the provisions in 3;5, irrespective of the indication of E0 in column 9 of Table 3-1 provided that:

a) after filling, each glass inner receptacle has been determined to be leak-tight by placing the glass inner receptacle in a hot water bath at a temperature, and for a period of time, sufficient to ensure that an internal pressure equal to the vapour pressure of ethylene oxide at 55°C is achieved. Any glass inner receptacle showing evidence of leakage, distortion or other defect under this test must not be transported under the terms of this special provision;

b) in addition to the packaging required by 3;5.2, each glass inner receptacle is placed in a sealed plastics bag compatible with ethylene oxide and capable of containing the contents in the event of breakage or leakage of the glass inner receptacle; and

c) each glass inner receptacle is protected by a means of preventing puncture of the plastics bag (e.g. sleeves or cushioning) in the event of damage to the packaging (e.g. by crushing).

A167 (343) This entry applies to crude oil containing hydrogen sulphide in sufficient concentration that vapours evolved from the crude oil can present an inhalation hazard. The packing group assigned must be determined by the flammability hazard and inhalation hazard, in accordance with the degree of danger presented.

A168 (344) The provisions of 6;5.4 must be met.

A169 (345) This gas contained in open cryogenic receptacles with a maximum capacity of 1 L constructed with glass double walls having the space between the inner and outer wall evacuated (vacuum insulated) is not subject to these Instructions provided each receptacle is transported in an outer packaging with suitable cushioning or absorbent materials to protect it from impact damage.

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A170 (346) Open cryogenic receptacles conforming to the requirements of Packing Instruction 202 and containing no dangerous goods except for UN 1977, Nitrogen, refrigerated liquid, which is fully absorbed in a porous material, are not subject to any other requirements of these Instructions.

*Editorial Note.*— Text from new UN SP348 (“Batteries manufactured after 31 December 2011 must be marked with the Watt hour rating on the outside case”) has been added to Section I of Packing Instructions 965, 966 and 967 (lithium ion battery packing instructions).

A171 (349) Mixtures of a hypochlorite with an ammonium salt are not to be accepted for transport. UN No. 1791 Hypochlorite solution is a substance of Class 8.

A172 (350) Ammonium bromate and its aqueous solutions and mixtures of a bromate with an ammonium salt are not to be accepted for transport.

A173 (351) Ammonium chlorate and its aqueous solutions and mixtures of a chlorate with an ammonium salt are not to be accepted for transport

A174 (352) Ammonium chlorite and its aqueous solutions and mixtures of a chlorite with an ammonium salt are not to be accepted for transport.

A175 (353) Ammonium permanganate and its aqueous solutions and mixtures of a permanganate with an ammonium salt are not to be accepted for transport.

A176 (354) This substance is toxic by inhalation.

A177 (355) Oxygen cylinders for emergency use transported under this entry may include installed actuating cartridges (cartridges, power device of Division 1.4, Compatibility Group C or S), without changing the classification of Division 2.2 provided the total quantity of deflagrating (propellant) explosives does not exceed 3.2 g per oxygen cylinder. The cylinders with the installed actuating cartridges as prepared for transport must have an effective means of preventing inadvertent activation.

A178 (356) Metal hydride storage system(s) installed in conveyances or in completed conveyance components or intended to be installed in conveyances must be approved by the competent authority before acceptance for transport. The transport document must include an indication that the package was approved by the competent authority or a copy of the competent authority approval must accompany each consignment.

A179 (357) Petroleum crude oil containing hydrogen sulphide in sufficient concentration that vapours evolved from the crude oil can present an inhalation hazard must be consigned under the entry UN 3494 Petroleum sour crude oil, flammable, toxic.

## Chapter 4

### DANGEROUS GOODS IN LIMITED QUANTITIES

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#### 4.5 PACKAGE MARKING

4.5.1 Packages containing limited quantities of dangerous goods must be marked as required by the applicable paragraphs of 5;2, except that 5;2.4.4.1 does not apply.

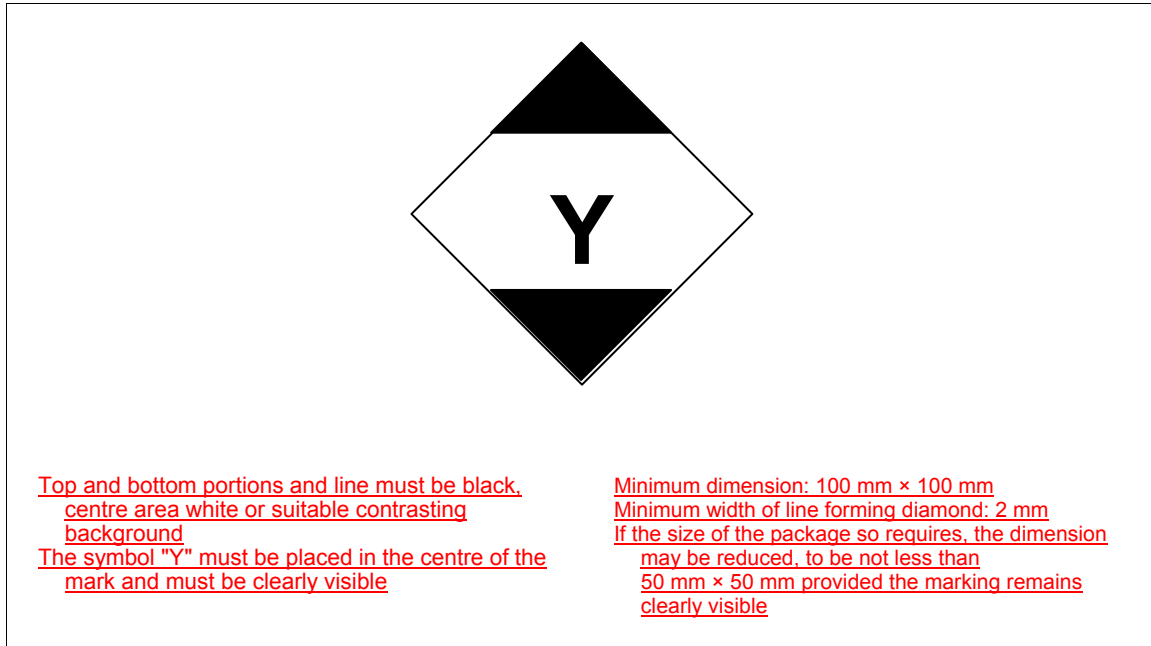
4.5.2 Packages containing limited quantities of dangerous goods and prepared in accordance with this chapter must be marked “limited quantity(ies)” or “LTD-QTY”, bear the marking shown in Figure 3-1 below. The marking must be readily visible, legible and able to withstand open weather exposure without a substantial reduction in effectiveness.

4.5.3 When packages containing dangerous goods in limited quantities are placed in an overpack, the overpack must be marked with the word "OVERPACK" and the marking required by this chapter unless the markings representative of all dangerous goods in the overpack are visible.

#### 4.6 DANGEROUS GOODS TRANSPORT DOCUMENT

[The dangerous goods transport document required by 5.4.1 must contain the words “limited quantity” or “LTD QTY” after the description of the dangerous goods to indicate that the consignment contains limited quantities of dangerous goods.]

*Insert new Figure 3-1:*



**Figure 3-1. Limited quantities mark**

## Chapter 5

### DANGEROUS GOODS PACKED IN EXCEPTED QUANTITIES

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#### 5.4 MARKING OF PACKAGES

5.4.1 Packages containing excepted quantities of dangerous goods prepared in accordance with this chapter must be durably and legibly marked with the mark shown in Figure 3-42. The primary hazard class or, when assigned, the division of each of the dangerous goods contained in the package must be shown in the mark. Where the name of the shipper or consignee is not shown elsewhere on the package, this information must be included within the mark.

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Change dimension of Excepted quantities mark as follows  
(2.76" x 2.76"):

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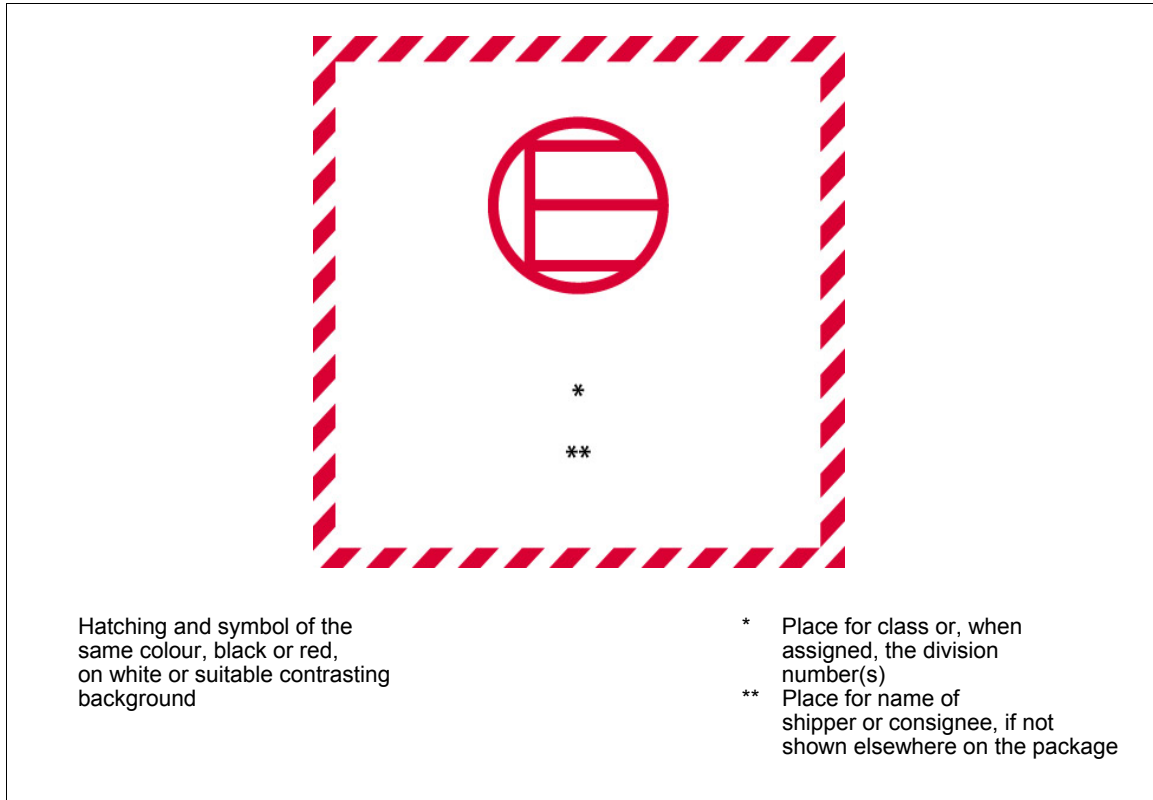


Figure 3-4.2. Excepted quantities mark

— END —