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COMMITTEE OF EXPERTS ON THE TRANSPORT  
OF DANGEROUS GOODS

REPORT OF THE COMMITTEE OF EXPERTS ON ITS SIXTEENTH SESSION

(3-12 December 1990)

Addendum 3

Annex 4: Adopted text and amendments to chapters 3, 4, 5, 6 and 7 of  
the Recommendations on the Transport of Dangerous Goods  
(Sixth revised edition) (ST/SG/AC.10/Rev.6).

CHAPTER 3

- (1) Delete the following Special Provisions:

SP 41, SP 150, SP 151, SP 154, SP 211

- (2) Amend Special Provision 63 to read:

63: "The division of Class 2 and the subsidiary risks depend on the nature of the contents of the aerosol or small receptacle. Division 2.1 applies if the contents include more than 45% by mass, or more than 250 g, of flammable components. Flammable components are gases which are flammable in air at normal pressure or substances or preparations in liquid form which have a flash point less than or equal to 100° C."

Amend existing Special Provisions as follows:

- (a) Add the following sentence to the end of Special Provisions 44, 102, 112 and 185:

"Substances not meeting the criteria of Packing Group I, II or III are considered non-dangerous provided they do not meet the definition of any other class or division."

- (b) In Special Provisions 129 and 192, insert the words "or non-dangerous" immediately preceding the words "according to grouping criteria".

- (c) Add the following sentence to the end of Special Provision 184:

"Substances not meeting the criteria of Packing Groups II or III are considered non-dangerous provided they do not meet the definition of any other class or division."

- (d) Replace the text of Special Provision 194 with:

"The control and emergency temperatures, if any, and the generic entry number for each of the currently assigned self-reactive substances are given in table 14.1."

- (e) 168: "Asbestos which is immersed or fixed in a natural or artificial binder (such as cement, plastics, asphalt, resins or mineral ore) in such a way that no escape of hazardous quantities of respirable asbestos fibres can occur during transport is considered non-dangerous for transport. Manufactured articles containing asbestos and not meeting this requirement are nevertheless considered non-dangerous for transport when packed so that no escape of hazardous quantities of respirable asbestos fibres can occur during transport."

- (f) 178: for "... with the approval of the competent authority."

read "... with the approval of the competent authority of the country of origin."

- (q) 198: "Nitrocellulose solutions containing not more than 20% nitrocellulose may be transported as paint or printing ink as applicable. See UN 1210, 1263 and 3066."
- (3) Insert new entries after Special Provision 203 as follows:
- 204 Articles containing smoke-producing substance(s) corrosive according to the criteria for Class 8 should be labelled with a "CORROSIVE" subsidiary-risk label.
- 205 This entry should not be used for PENTACHLOROPHENOL, UN 3155.
- 206 This entry is not intended to include ammonium permanganate, the transport of which should be prohibited except with special authorization granted by the competent authorities.
- 207 These beads may be made from polystyrene, poly (methyl methacrylate) or other polymeric material.
- 208 The commercial grade of calcium nitrate fertilizer, when consisting mainly of a double salt (calcium nitrate and ammonium nitrate) containing not more than 10% ammonium nitrate and at least 12% water of crystallization, is considered non-dangerous.
- 209 The gas should be at a pressure corresponding to ambient atmospheric pressure at the time the containment system is closed and this should not exceed 105 kPa absolute. The gas should be contained in hermetically sealed glass or metal inner packagings and with a maximum net quantity per package of 5 litres or, in the case of a toxic gas, a maximum net quantity per package of 1 litre.
- 210 Toxins from plant, animal or bacterial sources which contain infectious substances, or are contained in them, should be classified as Division 6.2.
- 212 Packing Group I or II according to grouping criteria.
- 213 Self-reactive substances of type F may be transported in intermediate bulk containers (IBCs) provided the requirements of 14.2.2.9 and Chapter 16 are satisfied.
- 214 For certain self-reactive substances of types B or C, a smaller packaging than that allowed by packing methods OP5A (or OP5B) or OP6A (or OP6B) respectively should be used (see 14.2.2.7.4 and table 14.1).
- 215 When the SADT is higher than 75° C, the technically pure substance and formulations derived from it should not be regarded as self-reactive substances.

The requirements of special provision 181 should be applied to formulations showing a violent effect in laboratory tests involving heating under confinement.

The packing method should be one of the following:

- (i) a fibre drum, which may be lined, of maximum contents 50 kg;
  - (ii) an inner packaging of a single plastics bag in a fibreboard box, of maximum contents 50 kg; or
  - (iii) inner packagings of plastics bottles, jars, bags or boxes, of maximum contents 5 kg each, within an outer packaging of fibreboard box or drum of maximum contents 25 kg.
- 216 Mixtures of non-dangerous solids and flammable liquids may be transported under this entry without first applying the classification criteria of Division 4.1, provided there is no free liquid visible at the time the substance is loaded or at the time the packaging or transport unit is closed. Each packaging or transport unit should be leakproof.
- 217 Mixtures of non-dangerous solids and poisonous liquids may be transported under this entry without first applying the classification criteria of Division 6.1, provided there is no free liquid visible at the time the substance is loaded or at the time the packaging or transport unit is closed. Each packaging or transport unit should be leakproof. This entry should not be used for solids containing a Packing Group I liquid.
- 218 Mixtures of non-dangerous solids and corrosive liquids may be transported under this entry without first applying the classification criteria of Class 8, provided there is no free liquid visible at the time the substance is loaded or at the time the packaging or transport unit is closed. Each packaging or transport unit should be leakproof.
- 219 Substances transported under this entry should be packaged in accordance with 6.13. Genetically modified micro-organisms which are infectious should be transported as UN 2814 or UN 2900.
- 220 The technical name of the flammable liquid component only of this solution or mixture should be shown in parenthesis immediately following the Proper Shipping Name.
- 221 Substances included under this entry should not be of Packing Group I and should have a maximum net quantity per package of 5 litres or 5 kg.
- 222 Where the term "water-reactive" is used to describe a substance in these Recommendations, it means a substance which in contact with water emits flammable gas.
- 223 If the chemical or physical properties of a substance covered by this description are such that when tested it does not meet the established defining criteria for the class or division listed in column (b1), or any other class or division, it is considered non-dangerous.

CHAPTER 4

- (a) In paragraph 4.3.1 delete the second sentence.
- (b) In paragraph 4.4.1:

Replace the third sentence by two new sentences to read:

"Assessment of the compatibility group is usually made without test data except for Compatibility Groups N and S for which testing is necessary. In the case of Compatibility Group S the tests may be waived by the competent authority if classification by analogy is possible using test results for a comparable article."

- (d) In paragraph 4.4.4 add at the end the following sentence:

"Compatibility Groups N and S should be used if justified by the results of tests."

- (e) In paragraph 4.8 (glossary):

Delete from the descriptions of the terms "Cartridges for weapons" and "CARTRIDGES, SMALL ARMS" the word "military".

In the description of "Charges, propelling" print the name in capital letters, delete the words "in a cannon or" and add at the end "or for reducing the drag of projectiles". In the French text replace "réduire" by "modifier".

In the description of "POWDER, SMOKELESS" add at the end the phrase "or CHARGES, PROPELLING FOR CANNON". Last words "Charges, propelling" should be printed in capital letters.

In the description of "Propellants" add at the end "or for reducing the drag of projectiles".

Insert a new entry to read:

"CHARGES, PROPELLING FOR CANNON

Articles consisting of a propellant charge in any physical form, with or without a casing, for use in a cannon."

- (f) Table 4.3:

Delete the entries 0273, 0274 and 0416.

Add the entry "0491" to the term "Charges, propelling".

Add the entries 0492 and 0493 to the term "signals" (English version only).

Add the entry "0494" to the term "Jet perforating guns, oil well".

CHAPTER 5

In 5.4 amend the United Kingdom entry to:

"United Kingdom (British Standards Institution, Linford Wood,  
Milton Keynes, MK14 6LE  
British Standard BS 2000 Part 34  
British Standard BS 2000 Part 170"

CHAPTER 6

(a) Amend paragraph 6.6 to read:

"6.6 Classification of pesticides

6.6.1 All active pesticide substances and their preparations for which the LC<sub>50</sub> and/or LD<sub>50</sub> values are known and which are classified in Division 6.1 should be classified under appropriate Packing Groups in accordance with the criteria given in paragraph 6.4. Substances and preparations which are characterized by subsidiary risks should be classified according to the precedence of hazard table with the assignment of appropriate Packing Group.

6.6.2 If the LC<sub>50</sub> and/or LD<sub>50</sub> values of the active pesticide substance or preparation are not known but the active substance is named in table 6.1, such substance or preparations containing this substance in concentrations mentioned in table 6.1 and which are characterized as having no subsidiary risks should be classified in Division 6.1 and assigned to the Packing Group as shown in table 6.1. Preparations containing the active substance in concentrations below the minimum stated in the Packing Group III columns of table 6.1 are considered non-dangerous. Active substances and preparations which are named in table 6.1, and which are characterized by subsidiary risks should be classified using the precedence of hazard table.

6.6.3 If preparations of pesticides cannot be classified according to paragraphs 6.6.1 and 6.6.2 and the LD<sub>50</sub> value of their active substance is known, the LD<sub>50</sub> value of such preparations can be obtained from the following formula:

$$\text{LD}_{50} \text{ value of preparation} = \frac{\text{LD}_{50} \text{ value of active substance} \times 100}{\text{percentage of active substance by mass}}$$

6.6.4 A classification according to paragraphs 6.6.2 and 6.6.3 should not be carried out when a preparation contains additives which affect the overall toxic hazard, or when a preparation contains several active substances. In such cases the classification should be based on the LC<sub>50</sub> and/or LD<sub>50</sub> values of the preparation as a whole, determined according to the criteria in the table in 6.4.1. If the LC<sub>50</sub> and/or LD<sub>50</sub> values are not known, the preparation should be classified under Packing Group I."

(b) Amend subparagraph 6.9 (a) to read:

"(a) 'Infectious substances' are those substances containing viable micro-organisms, including a bacterium, virus, rickettsia, parasite, fungus, or a recombinant, hybrid or mutant, that are known or reasonably believed to cause disease in animals or humans."

(c) Amend the text of the Note at the end of paragraph 6.9 (a) to read:

"Note: Toxins from plant, animal or bacterial sources which do not contain any infectious substances or organisms or which are not contained in them should be considered for transport as UN 3172."

(d) Add at the end of subparagraph 6.9 (b) the following Note:

"Note: Some licensed vaccines may present a biohazard only in certain parts of the world. In that case competent authorities may require these vaccines to comply with the requirements for infectious substances or may impose other restrictions."

(e) In paragraph 6.9 insert a new subparagraph (d) to read:

"(d) For purposes of these recommendations biological products and diagnostic specimens are divided into the following groups:

(1) those known or thought likely to contain infectious substances. For example, diagnostic specimens to undergo confirmatory testing should be considered to fall within this group

(2) those where a relatively low probability exists that infectious substances are present. For example, diagnostic specimens being transported to undergo routine screening tests or for the purpose of initial diagnosis should be considered to fall within this group.

(3) those known not to contain infectious substances."

(f) Delete the text of paragraph 6.10 and replace it by two new paragraphs:

"6.10.1 Biological products known to contain, or thought likely to contain, any infectious substances should meet all the requirements for infectious substances. Biological products referred to in paragraph 6.9 (d) (2) should meet all the provisions for infectious substances except when the following conditions are met:

(a) the primary receptacle(s) contains (contain) not more than 50 ml;

(b) the outer packaging contains not more than 50 ml when fragile primary receptacle(s) is (are) used and 100 ml for other primary receptacle(s);

(c) the primary receptacle(s) is (are) leakproof; and

(d) the packaging is in accordance with paragraph 6.13.

6.10.2 Diagnostic specimens known to contain, or thought likely to contain, any infectious substances should meet all the requirements for infectious substances. Diagnostic specimens referred to in paragraph 6.9 (d) (2) should meet all the provisions for infectious substances except when the following conditions are met:

- (a) the primary receptacle(s) contains (contain) not more than 100 ml;
- (b) the outer packaging contains not more than 500 ml;
- (c) the primary receptacle(s) is (are) leakproof; and
- (d) the packaging is in accordance with paragraph 6.13."

In paragraph 6.13.3 amend:

"the primary receptacle and the secondary packaging" to read:

"the primary receptacle or the secondary packaging".

(a) Modify the text after the first sentence in paragraph 6.14.3 to read:

"For outer packagings, the headings in the table relate to fibreboard or similar materials whose performance may be rapidly affected by moisture; plastics which may embrittle at low temperature; and other materials such as metal whose performance is not affected by moisture or temperature. Where a primary receptacle and a secondary packaging of an inner packaging are made of different materials, the material of the primary receptacle determines the appropriate test. In instances where a primary receptacle is made of two materials, the material most liable to damage should determine the appropriate test."

6.9 (a) Change the present "Note" to "Note 1".

Add "Note 2. For the purposes of these recommendations, genetically modified substances are divided into the following groups:

- (a) genetically modified micro-organisms which meet the definition of an infectious substance given above should be classified in Division 6.2 and assigned UN number 2814 for 2900;
- (b) animals which contain, or are contaminated with, genetically modified substances that meet the definition of an infectious substance should be transported in accordance with chapter 6 and assigned UN number 2814 or 2900;
- (c) except when authorized for unconditional use by the Governments of the countries of origin, transit and destination, genetically modified micro-organisms which do not meet the definition of infectious substances and which are capable of altering animals, plants or microbiological substances in a way not normally the result of natural reproduction should be assigned UN number 3245;
- (d) genetically modified organisms, which are known or suspected to be dangerous to humans, animals or the environment, should be transported according to relevant national regulations."



~~CHA~~PTER 7

In paragraph 7.1 amend the third sentence to read:

"The IAEA Regulations contain the following specific restriction:

Account shall be taken of the formation of other dangerous substances which may result from the reaction between the contents of a consignment and the atmosphere or water in the event of breaking of the containment system caused by an accident (see para. 208 of the IAEA Regulations)."  
(Note that clause (b) is thereby deleted).