

## Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

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Global harmonization of transport of dangerous goods regulations with the Model Regulations

### Information on decisions taken by the ICAO Dangerous Goods Panel Working Group of the Whole (DGP-WG/13)

Transmitted by the International Civil Aviation Organization (ICAO)

#### Introduction

1. The Dangerous Goods Panel Working Group of the Whole Meeting (DGP-WG/13) was held in Montreal from 15 to 19 April 2013. The working group made an initial review of amendments proposed to the Technical Instructions in order to harmonize with the 18th revised edition of the UN Model Regulations. The report of the meeting can be found on the ICAO dangerous goods public website ([www.icao.int/safety/DangerousGoods/Pages/WG13.aspx](http://www.icao.int/safety/DangerousGoods/Pages/WG13.aspx)). The final review and decisions on the amendments proposed will be made at the twenty-fourth meeting of the ICAO Dangerous Goods Panel (DGP/24) which will be held in Montreal from 28 October to 8 November 2013.

2. This information paper highlights issues which DGP-WG/13 determined should be brought to the attention of the 43rd Session of the Sub-Committee. If necessary, issues will be raised formally at the next session of the Sub-Committee.

### Harmonization of the ICAO Technical Instructions with the 18th revised edition of the UN Model Regulations

#### Editorial amendments

3. A reference to Test O.2 (test for oxidizing liquids) was added to Part 2;5.2.3.1.1 of the Technical Instructions (2.5.2.3.1.1 of the Model Regulations) since Tests O.1 and O.3 were referred to in 2;5.2.2.1.1 (2.5.2.2.1.1 of the Model Regulations):

**“5.2.3 Oxidizing liquids**

5.2.3.1 Criteria for classification in Division 5.1

5.2.3.1.1 A test is performed to determine the potential for a liquid substance to increase the burning rate or burning intensity of a combustible substance or for spontaneous ignition to occur when the two are thoroughly mixed. The procedure is given in the UN Manual of Tests and Criteria, Part III, subsection 34.4.2 ([Test O.2](#)). It measures the pressure rise time during combustion. Whether a liquid is an oxidizing substance of Division 5.1 and, if so, whether Packing Group I, II or III

must be assigned, is decided on the basis of the test result (see also precedence of hazards characteristics).”.

4. The list of fire extinguishers in Special Provision 225 was made less prescriptive in the Technical Instructions (Special Provision A19) by replacing “comprise” with “includes” in the preamble to that list:

“Fire extinguishers must be manufactured, tested, approved and labelled according to the provisions of the country of manufacture. Fire extinguishers under this entry [include](#):

- a) portable fire extinguishers for manual handling and operation;
- b) fire extinguishers for installation in aircraft;
- c) fire extinguishers mounted on wheels for manual handling;
- d) fire extinguishing equipment or machinery mounted on wheels or wheeled platforms or units transported similar to (small) trailers, and
- e) fire extinguishers composed of a non-rollable pressure drum and equipment, and handled e.g. by fork lift or crane when loaded or unloaded.”.

5. An amendment was made to specify that transport of neutron radiation detectors containing non-pressurized boron trifluoride gas was subject to the requirements in the Technical Instructions in addition to the conditions set out in Special Provision A190 (SP 373 in the Model Regulations). Additionally, references to “housed” and “housing” in the same special provision were changed to “contained” and “casing” respectively, as it was felt these words were more commonly understood.

“Neutron radiation detectors containing non-pressurized boron trifluoride gas in excess of 1 gram and radiation detection systems containing neutron radiation detectors as components may be transported on cargo aircraft in accordance [with all applicable requirements of these Instructions](#) irrespective of the indication of “forbidden” in columns 12 and 13 of the Dangerous Goods List and with “Toxic gas” and “Corrosive” labels displayed on each package irrespective of no labels being indicated in column 5, provided the following conditions are met:

...

- c) completed neutron radiation detector systems containing detectors meeting the conditions of paragraph a) must be transported as follows:
  - i) the detectors must be ~~housed~~ [contained](#) in a strong sealed outer casing;
  - ii) the ~~housing casing~~ must contain sufficient absorbent material to absorb the entire gas contents.

...”.

6. The text in the first sentence of paragraph g) to SP 371 was modified in the Technical Instructions (Special Provision A195) for the sake of clarity. It now reads: “The design type of the article must be subjected to the following test.”

“1. This entry also applies to articles, containing a small pressure receptacle with a release device. Such articles must comply with the following requirements:

...

- g) the design type of the article must be subjected to [the following](#) ~~a single package~~ test. A stimulating mechanism must be used to initiate one article in the

middle of the packaging. There must be no hazardous effects outside the package such as disruption of the package, metal fragments or a receptacle which passes through the packaging.”.

7. For the sake of consistency, text in sub-paragraph 1) of Packing Instruction P208 was modified in the Technical Instructions (Packing Instruction 219) by replacing “authorized” with “permitted”.

“This Instruction applies to Class 2 adsorbed gases.

1) The following packagings are ~~authorized~~ permitted provided the general packing requirements of 4.1.1 are met:”

8. The wording in paragraph 4.1.9.1.7 was simplified in the Technical Instructions (Part 4;9.1.7) by replacing “contains neither” with “does not contain” and the conjunction “nor” between subparagraph a) and b) with “or”.

“9.1.7 Before each shipment of any package, it must be ensured that the package ~~contains neither~~ does not contain:

- a) radionuclides different from those specified for the package design; ~~not or~~
- b) contents in a form, or physical or chemical state different from those specified for the package design.”.

### **Classification of self-reactive substances not listed in Table 2-6**

9. It was suggested at DGP-WG/13 that a review of the classification criteria of self-reactive substances not listed in paragraph 2.4.2.3.2.3 of the Model Regulations (Table 2-6 of the Technical Instructions) was needed. Paragraph 2.4.2.3.2.4 (Part 2;4.2.3.2.5 of the Technical Instructions) refers to a statement of approval containing classification and relevant transport conditions despite the fact that there is no text requiring that an approval be granted. The paragraph also refers to the competent authority assigning a generic entry on the basis of a test report. It was questioned whether this meant that classification was subject to approval or if it meant that classification was actually done by the authority. The working group felt a review of the text by the Sub-Committee was warranted.

### **Inconsistencies in classification of articles such as emergency locator transmitters, emergency position indicating radio beacons and personal locating beacons containing only lithium batteries**

10. It was reported that some manufacturers classified life-saving appliances (not self-inflating) containing only lithium batteries as UN 3072 (LIFE-SAVING APPLIANCES, NOT SELF-INFLATING) while others classified them as UN 3091 (LITHIUM METAL BATTERIES CONTAINED IN EQUIPMENT or LITHIUM METAL BATTERIES PACKED WITH EQUIPMENT) or UN 3481 (LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT). The working group believed that these articles should be subject to the requirements for transporting lithium batteries and should therefore be classified as either UN 3091 or UN 3481. A special provision containing this requirement was therefore assigned to UN 3072 (Special Provision A182).

## **Substances liable to exothermic decomposition at elevated temperatures**

11. Special Provision 314, which states that substances are liable to exothermic decomposition at elevated temperatures and must be protected from heat during transport, is assigned to UN Nos. 1748, 2208, 2880, 3485, 3486 and 3487. A proposal was made at DGP-WG/13 to amend the applicable special provision in the Technical Instructions (A136) to require that this risk be stated on the dangerous goods transport document and that the “keep away from heat label” (contained in the Technical Instructions) be applied. The Instructions currently contain these requirements for self-reactive substances of Division 4.1 and organic peroxides of Division 5.2. There was some support for the proposal recognizing that there needed to be a way to communicate this safety concern. There had been discussion in the past, however, on whether requiring the “keep away from heat” label was necessary or of any value on the basis that if temperature control was needed, the substance should be forbidden from transport by air since this would be difficult to comply with. The proposal prompted further discussion on whether there would only be a risk of exothermic decomposition at elevated temperatures in higher quantities for these substances and that perhaps there would be none for the low quantities permitted in the Instructions (5 kg for PG II and 25 kg for PG II on passenger aircraft and 25 kg for PG II and 100 kg for PG III on cargo aircraft). The working group asked that this question be raised to the Sub-Committee.

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