



WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTIETH MEETING

Montréal, 24 October to 04 November 2005

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 2007-2008 Edition

EXCEPTED QUANTITIES

(Presented by the Secretary)

1. INTRODUCTION

1.1 At the twenty-seventh session of the UN Sub-Committee of Experts on the Transport of Dangerous Goods (4 to 8 July 2005), a working paper to introduce new provisions for excepted quantities into the UN Recommendations was presented, (ST/SG/AC.10/C.3/20005/17 plus INF.27; see Appendices A and B). The report of the discussion is presented in Appendix C.

2. PROPOSAL

2.1 Panel members are invited to review the proposal and, in particular, to examine the differences to the equivalent provisions in the Technical Instructions and to see which, if any, are judged acceptable. It is proposed an information paper on the outcome of this discussion will be presented at the November 2005 meeting of the UNSCOE.

APPENDIX A**ST/SG/AC.10/C.3/2005/17**Excepted QuantitiesTransmitted by the expert from the United Kingdom

1. The Sub-Committee will recall the discussions that have taken place during the last two biennia on this subject; the last full discussion was held during the July 2004 session. Unfortunately despite extensive debate, the Sub-Committee found it difficult to reach a clear decision on suitable text that could be adopted. However it did agree that work could continue during this biennium and the United Kingdom hopes that momentum can be maintained to enable some progress in this difficult area to be made.
2. As a first step the United Kingdom proposes the adoption of text on Excepted Quantities. The expert from the United Kingdom recalls that during the last full debate the suggestion put forward by the expert from the United Kingdom and others that text based on the air mode's existing Excepted Quantities provisions should be incorporated into the Model Regulations received support from some of the Sub-Committee. Excepted Quantities has been in use in the air mode for at least twenty years without any incidents that could cause concern, largely because of the stringent packaging requirements applied. Excepted quantities are also permitted for transport on board passenger aircraft and are not subject to the usual acceptance checks.
3. The expert from the United Kingdom asks that the Sub-Committee consider and adopt the proposals below as a first step to reforming the limited quantity provisions.
4. Proposal

Article I. Include in Chapter 3.4 and renumber limited quantities as 3.4.1

New Chapter title; Dangerous Goods packed in Limited or Excepted Quantities**3.4.1 Limited Quantities**

Delete the first sentence of 3.4.1

Amend the existing second sentence by adding at the beginning of the sentence "For dangerous goods of certain classes packed in limited quantities; the applicable quantity"...

3.4.2 Excepted quantities

3.4.2.1 Small quantities of dangerous goods of certain classes meeting the provisions of 3.4.2.2, 3.4.2.3 and 3.4.2.4 are not subject to the other provisions of these Regulations except for the:

- (a) Classification procedures and packing group criteria in Part 2;
- (b) Conditions set down in any Special Provisions in Column 6 of the dangerous goods list.

3.4.2.2 Excepted quantities of dangerous goods may only be carried in accordance with the limitations and provisions contained in table 3.4.2.1 below:

Table 3.4.2.1

CLASS/ DIVISION	Packing Group I		Packing Group II		Packing Group III	
	Packagings		Packagings		Packagings	
	Inner	Outer	Inner	Outer	Inner	Outer
2.2	Inner packagings 30ml Outer packagings 1L					
3	30mL	300mL	30mL	500mL	30mL	1L
4.1 ¹	Transport prohibited		30g	500g	30g	1kg
4.2 ²	Transport prohibited		30g	500g	30g	1kg
4.3	Transport prohibited		30g or 30mL	500g or 500mL	30g or 30mL	1kg or 1L
5.1	Transport prohibited		30g or 30mL	500g or 500mL	30g or 30mL	1kg or 1L
5.2	Inner 30ml or 30g/Outer 500g or 500ml ONLY WHEN CONTAINED IN A CHEMICAL KIT OR FIRST AID KIT					
6.1	Inner 1g or 1ml/Outer 250g or 250ml ³		1g or 1mL	500g or 500mL	30g or 30mL	1kg or 1L
8	Transport prohibited		30g or 30mL	500g or 500mL	30g or 30mL	1kg or 1L
9	N/A		30g or 30mL	500g or 500mL	30g or 30mL	1kg or 1L

¹ other than self-reactive substances

² other than pyrophoric substances

³ other than substances toxic by inhalation where transport is prohibited

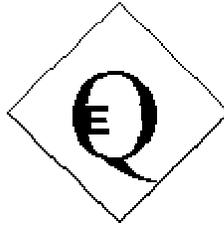
3.4.2.3 Packagings, including their closures, used for the transport of dangerous goods in excepted quantities shall be of good quality. Packaging materials which may come into contact with the substance or article shall not react dangerously with the substance or article and shall not adversely affect its packaging functions. In addition:

- a) Each inner packaging shall be constructed of plastic, glass, earthenware or metal;
- b) Each inner packaging shall be securely packed in an intermediate packaging with cushioning material. The intermediate packaging shall completely contain the contents in case of breakage or leakage, regardless of package orientation. For liquid dangerous goods, the intermediate packaging shall contain sufficient absorbent material to absorb the entire contents of the inner packaging. In such cases, the absorbent material may be the cushioning material. Dangerous goods shall not react dangerously with cushioning and absorbent material or adversely affect their properties;
- c) The intermediate packaging shall be securely packed in a strong, rigid outer packaging

(wooden, fibreboard or other equally strong material);

- d) Dangerous goods in excepted quantities shall not be packed together in the same outer packaging if they react dangerously with each other and cause:
 - i) combustion and/or evolution of considerable heat;
 - ii) evolution of flammable, toxic or asphyxiant gases;
 - iii) the formation of corrosive substances; or
 - iv) the formation of unstable substances;
- e) Each package shall be of such size that there is adequate space to apply all necessary markings; and
- f) Overpacks may be used and may also contain packages of dangerous goods or goods not subject to these Regulations provided there are no packages enclosing different substances that might react dangerously with each other.

3.4.2.4 Each package prepared according to these provisions shall be durably and legibly marked as below:



Author's note: the symbol EQ can be taken to mean "Excepted quantity" or "Quantité exceptée".

APPENDIX B

LIMITED QUANTITIES

Excepted quantitiesComments on ST/SG/AC.10/C.3/2005/17 (United Kingdom)Transmitted by the International Council of Chemical Associations (ICCA)**Summary**

The United Kingdom is proposing the adoption of text on Excepted Quantities. The aim of this document is to amend Table 3.4.2.1 listing the Quantities per Inner and per Outer. The Quantities per Inner are not compatible with the Quantities per Outer. We therefore propose to amend the Inner-Quantities to make them user-friendly.

Proposal

We propose to amend Table 3.4.2.1 in said document as follows:

Table 3.4.2.1

CLASS/ DIVISION	Packing Group I		Packing Group II		Packing Group III	
	Packagings		Packagings		Packagings	
	Inner	Outer	Inner	Outer	Inner	Outer
2.2	Inner packagings 50ml Outer packagings 1L					
3	50mL	300mL	50mL	500mL	50mL	1L
4.1 ¹	Transport prohibited		50g	500g	50g	1kg
4.2 ²	Transport prohibited		50g	500g	50g	1kg
4.3	Transport prohibited		50g or 50mL	500g or 500mL	50g or 50mL	1kg or 1L
5.1	Transport prohibited		50g or 50mL	500g or 500mL	50g or 50mL	1kg or 1L
5.2	Inner 50ml or 50g/Outer 500g or 500ml ONLY WHEN CONTAINED IN A CHEMICAL KIT OR FIRST AID KIT					
6.1	Inner 1g or 1ml/Outer 250g or 250ml ³		1g or 1mL	500g or 500mL	50g or 50mL	1kg or 1L
8	Transport prohibited		50g or 50mL	500g or 500mL	50g or 50mL	1kg or 1L
9	N/A		50g or 50mL	500g or 500mL	50g or 50mL	1kg or 1L

The Quantity per Inner shall be increased from 30 mL / g to 50 mL/g (except for Div. 6.1, PG II).

Justification

- 30 mL or 30 g are not compatible with 500 mL or g. An outer of 500 g could contain – mathematically - 16.66 inners of 30 g each. This doesn't make sense.

- A buyer of 100 mL/g of a product would prefer receiving two inners of 50 mL/g rather than 3 of 30 and 1 of 10 mL/g.

An inner-quantity of 50 mL/g would be easier to enforce.

APPENDIX C

LIMITED QUANTITIES

Document: ST/SG/AC.10/C.3/2005/17 (United Kingdom)

Informal document: INF.27 (ICCA)

36. The proposal by the United Kingdom to introduce new provisions for excepted quantities was the subject of numerous comments.

37. Some experts and representatives of industry were emphatic that the provisions of ICAO in that regard were indispensable in certain cases, for example, for the carriage of laboratory samples. In their opinion, it was not realistic to believe that the provisions of the Model Regulations could be applied in those special cases and, as a result, dangerous goods were currently carried in practice in very small quantities in breach of the majority of regulations applicable to carriage by sea and land. It was essential, therefore, to address this issue in the Model Regulations in a simplified form.

38. Some experts were in favour of introducing the provisions of the Technical Instructions of ICAO for excepted quantities, as they stand, into the Model Regulations in order to resolve current problems of multimodal transport. They pointed out, however, that the United Kingdom's proposal was not in line with those provisions and that, if they were not accepted by ICAO the proposal would do nothing to resolve the problem of harmonization. They pointed out that quantity limits should correspond to those of ICAO, that substances of packing group I should not be permitted and that a reference should be provided in the transport document. Some experts would also like some form of hazard communication to be provided for cargo transport units. The representative of ICAO pointed out that the ICAO Dangerous Goods Panel would be willing to review the current ICAO provisions in the light of debate in the UN Sub-Committee.

39. Several experts found unacceptable the proposal by ICCA to almost double the quantity limit per inner packaging.

40. Some experts considered that the concept of carriage in excepted quantities should only apply to special cases where it was difficult to apply the regulations. The proposal by the United Kingdom would be tantamount to authorizing the transport of large quantities of dangerous goods packed in small quantities in full loads in vehicles or containers with no information being provided as to the dangerous nature of the load. In their opinion, that was not acceptable in that exceptions existed for limited quantities and already gave rise to problems on that account.

41. It was also pointed out that an exception for toxic substances of packing group I would lead to a security problem since very small quantities of some of those substances could be used for terrorist purposes.

42. The representative of IMO said that his organization considered that all dangerous goods represented a potential hazard and that it was not in favour of multiplying exemptions for safety reasons. He believed that, at this stage, the question was specific to a given transport mode and should not, therefore, be addressed in the Model Regulations.

43. Several experts regretted that the proposal by the United Kingdom had not been backed by detailed justifications. However, the expert from the United Kingdom pointed out that this had been subject to intensive discussion over the previous biennium. There had been twenty years of experience in air transport with no reported incident. On the other hand, experience with the air mode was not necessarily relevant for other modes, and the expert from France recalled the study he had presented about the risks related to the carriage of dangerous goods in limited quantities which showed that the risks presented by full loads of dangerous goods packed in small quantities was far from negligible. One expert suggested that the question of excepted quantities should be discussed in an informal working group.

44. The expert from the United Kingdom said that he would submit a new proposal at the next session.

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