

# UN/SCETDG/24/INF.8

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## 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  
(Twenty-fourth session, 3-10 December 2003,  
agenda item 5)

### Report of the Working Group Meeting on Limited Quantities

#### Submitted by the Expert from Canada

1. The Working Group met in Ottawa on 22, 23 and 24 October 2003. The participants are listed in Annex 3 to this report.
2. The meeting was chaired by Sergio Benassai.
3. This report, and the proposals in Annex 1, are provided to ensure that the Sub-Committee is informed of the progress of the Working Group on Limited Quantities and to request comments and reactions from the members. As well, this report, in accordance with the Terms of Reference for the Working Group, is provided to the modes and to IAEA to seek their comments and reactions in addition to the comments provided during this meeting (for instance by IMO).
4. The Working Group began by reviewing the results of the meeting in Paris in June 2003, presented by Claude Pfauvadel.
5. The Working Group then considered documents comparing limited quantity requirements in the Model Regulations and 49 CFR, the ICAO TIs and the RID/ADR. These documents were prepared and presented by Bob Richard and Claude Pfauvadel. It was noted that the Joint Meeting ADR/RID/ADN took a decision to harmonize the size of outer packagings for limited quantity with the UN requirements but further harmonization was needed for some UN entries.
6. IMO has considered during its September 2003 meeting the report of the Paris meeting and indicated that identification and documentation were deemed essential information for the sea mode.
7. The Netherlands then presented a concept document referring to the Terms of Reference of the Working Group and suggesting that the Working Group focus on limited quantities first and, if agreement was reached on that issue, proceed to consider consumer commodities and excepted quantities, if necessary.

8. The Working Group agreed to focus, first, on the limited quantity requirements in Chapter 3.4 of the Model Regulations. The UK and the US had submitted proposals for the working group to consider and presented proposals for changes to Chapter 3.4.

9. The Working Group noted that terminology across the modes is not standardized. For example, limited quantities in the ICAO Technical Instructions are more restrictive than limited quantities in the UN as they related only to non specification packagings. The Working Group agreed that terminology should be the same and in Annex 1 there is a reference in 3.4.1 to "small packages" but more consideration must be given to this issue.

10. The Working Group noted that the air mode is the only mode that requires a label for limited quantities and in 3.4.7 that requirement is referenced, although in square brackets.

11. The Working Group agreed that a full transport document was not necessary for limited quantities and 3.4.8 has been changed to reflect that agreement. However, the Working Group did believe that a document, such as a consignment or delivery note was required, but there was no agreement on what information should be included in that alternative document. Section 3.4.8 contains a proposal to include the gross mass of the small packagings and there were suggestions to include the proper shipping name, number of packages, class and UN number. Some delegations felt that only the UN Number and Class should be required but not a shipping name. It was noted that the sea mode needs a document but not necessarily a full transport document.

12. While discussing section 3.4.9, some delegations indicated that they did not favour a diamond-shaped mark with UN numbers in it. They felt that the probability of having more than one UN number in the diamond-shaped mark did not serve emergency response needs and believed that multiple UN number are confusing to emergency responders. The Working Group did agree that the size of the mark and its location should be specified and these suggestions for change are noted in 3.4.9.

13. The Model Regulations do not currently require a transport unit to be marked. It was noted, however, that the sea mode does require transport unit to be marked to indicate that they contain limited quantities. Some delegations felt that a mark on a transport unit was not necessary while others held the opposite view. The Working Group noted that criteria for when a mark would be displayed needed further discussion. Some delegations also suggested a mark when the limited quantities reached a certain gross mass while other delegations suggested that, for a vehicle, the permissible maximum mass of the vehicle determine when a mark should be displayed. The proposal from the Working Group is contained in section 3.4.10 but more consideration of this issue is required.

14. The Working Group then considered consumer commodities. The UK and the US presented that portion of their papers related to consumer commodities. The Chairman asked the Working Group to consider whether consumer commodities should be a subset of limited quantities or whether there should be a separate regulatory regime for them.

15. There was considerable discussion around this question. Several delegations did not see any difference between limited quantities and consumer commodities while others did see a difference. It was noted by some delegations that the wording in the current Chapter 3.4 for consumer commodities based the exemption on use and questioned how this could be clear for consignors and enforcement personnel.

16. The Working Group's conclusion is reflected in the proposed section 3.4.11. This section does not refer to "consumer commodities" but to "small packages of dangerous goods" that are "suitable for sale through retail agencies". The Working Group agreed that instead of the marking required in 3.4.9 these small packages could be marked with "UN8000".

17. The Working Group then considered Excepted Quantities. The air mode currently has stringent operational provisions for the carriage of limited quantities, including full documentation, formal package acceptance checks, notification to aircraft captain and aircraft stowage. Excepted quantities, with a different package marking/labelling requirement, currently clearly differentiate from limited quantities, and provide for exception from operational provisions, allowing for much simpler and very cost effective carriage of these products. Difficulties with the interface with other modes since they do not include this provision. Some of the substances permitted to be excepted quantities are not allowed to be limited quantities. Some delegations felt that the UN Model Regulations should include excepted quantity provisions to solve the intermodal problem. Other delegations felt that this was not necessary for practical reasons and the problem should be solved with the model bodies.

18. Sections 3.4.12, 3.4.13 and 3.4.15 contain proposals for including excepted quantity provisions in the Model Regulations, if needed. The Working Group agreed as an interim solution that the quantities should be the same as the quantities in the ICAO Technical Instructions, that a separate packing instruction for these substances could be developed based on the requirements in the Technical Instructions, P650 and 6.1.5.1.7 of the Model Regulations. Marking and documentation requirements would be developed based on the Technical Instructions and the Model Regulations.

19. The issues that still require further consideration as far as excepted quantities are concerned are whether or not such provisions should be included in the Model Regulations and, if they are, whether "excepted" and "limited" quantity thresholds should be aligned and what packaging, marking and documentation should be required.

20. The working group then considered the applicability of Chapter 3.4 to Class 7; on the basis of the information provided by the IAEA representative it was agreed not to include for the moment provision for Class 7. It was however agreed that it would be sensible to move to Chapter 3.4 provisions for radioactive excepted packages (see 2.7.9).

ANNEX 1

CHAPTER 3.4

LIMITED QUANTITIES, CONSUMER COMMODITIES, EXCEPTED QUANTITIES [?]

3.4.1 This Chapter provides the provisions applicable to the transport of certain dangerous goods of ~~certain classes in small packages quantities packed in limited quantities.~~

LIMITED QUANTITIES

3.4.2 Limited quantities are dangerous goods transported in inner packagings in quantities not higher than the values ~~The applicable quantity for the inner packaging or article is~~ specified for each substance in Column 7 of the Dangerous Goods List in Chapter 3.2. In addition, the word "None" has been indicated in Column 7 of the Dangerous Goods List in Chapter 3.2 for each entry not permitted to be transported in accordance with this Chapter. All provisions and requirements of these Regulations apply to the transport of limited quantities except as specifically provided in this Chapter.

3.4.3 Dangerous goods shall be packed only in inner packagings placed in suitable outer packagings. However, the use of inner packagings is not necessary for the transport of articles such as aerosols or "receptacles, small, containing gas". The packagings shall meet the provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 and be so designed that they meet the constructions requirements of 6.1.4. The total gross mass of the package shall not exceed 30 kg.

3.4.4 Shrink-wrapped or stretch-wrapped trays meeting the conditions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8 are acceptable as outer packagings for articles or inner packagings containing dangerous goods transported in accordance with this Chapter, except that inner packagings that are liable to break or be easily punctured such as those made of glass, porcelain, stoneware or certain plastics, materials, etc., shall not be transported in such packagings. The total gross mass of the package shall not exceed 20 kg.

3.4.5 Liquid goods of Class 8, packing group II in glass, porcelain or stoneware inner packagings shall be enclosed in a compatible and rigid intermediate packaging.

3.4.6 Different dangerous goods packed in limited quantities may be placed in the same outer packaging provided they will not interact dangerously in the event of leakage.

3.4.7 [Except for air transport] packages of dangerous goods transported according to this Chapter need not be labeled. Any segregation provisions for dangerous goods need not apply within a ~~vehicle or freight container~~ transport unit.

3.4.8 Information on dangerous goods transported as limited quantities (i.e. ....) shall be provided in written form, but the Ffor the transport of dangerous goods in small packagings, a transport document prescribed in 5.4 is not required. However, an alternate document (such as a consignment or delivery note) shall be supplied indicating that dangerous goods in small packagings of [XX kg gross mass, ....] are being transported.

3.4.9 Packages containing dangerous goods in limited quantities need not be marked with the proper shipping name of the contents, but shall be marked with [the UN number of the contents (preceded by the letters "UN")] placed within a diamond with minimum dimension of [100x100] mm (if the size of the package so requires, the dimensions may be reduced, provided the marking remain clearly visible). The width of line forming the diamond shall be at least 2 mm; the number shall be at least 6 mm high. [Where more than one substance is included in the package and the substances are assigned to different UN numbers, then the diamond shall be large enough to include each relevant UN number]. The mark shall be applied on at least one side or end of the outer packaging and conform to the provisions of paragraphs 5.2.1.2(a) to (d).

[3.4.10 Transport units where the total load of limited quantities exceeds ..... (gross mass) shall be marked with....., but with dimensions.....]

3.4.11 [Small packages of dangerous goods ~~for personal or household use, that are packaged and distributed in a form intended or suitable for sale through retail agencies~~ may be marked with UN 8000 instead of the UN number of the contents as indicated in 3.4.9.] ~~the requirements for a dangerous goods transport document.~~

~~3.4.12 Consumer commodities shall be transported in accordance with the requirements for limited quantities. [The only differences with limited quantities would be:~~

- ~~—fewer information on documentation (?)~~
- ~~—a different mark (UN 8000 instead of UN....)~~
- ~~marking on transport unit (only sea?)~~

### **EXCEPTED QUANTITIES**

**3.4.123 Excepted quantities are dangerous goods transported in quantities not greater than the quantities for inner packagings and outer packagings stated in the ICAO TIs(see Annex 2).**

3.4.134 Excepted quantities shall be transported in packagings according to P 004 (to be developed based on the ICAO TIs, P 650 and 6.1.5.1.7 of the UN Model Regulations.)

3.4.14 Marking and documentation requirements (to be developed based on ICAO TIs and the UN Model Regulations).]

Annex 2

Excepted quantities from the ICAO Technical Instructions

<b>Class or Division</b>	<b>PG</b>	<b>Qty per inner</b>	<b>Qty per outer package</b>
Division 2.2 Without subsidiary risk		30mL	1 litre
Class 3 All packing groups	<b>I</b>	30mL	300mL
	<b>II</b>	30mL	500mL
	<b>III</b>	30mL	1 litre
Class 4(excluding all self-reactive substances)	<b>II</b>	30mL/ 30g	500mL/500g
	<b>III</b>	30mL/ 30g	1 litre/1kg
Division 5.1	<b>II</b>	30mL / 30g	500mL/500g
	<b>III</b>	30mL/ 30g	1litre/1kg
Division 5.2 Only when contained in a chemical kit or a first-aid kit		30ml/ 30g	250mL/500g
<b><i>Division 6.1 All substances other than those having an inhalation toxicity of Packing Group I</i></b>	<b><i>I</i></b>	<b><i>1mL/1g</i></b>	<b><i>300mL/300g</i></b>
	<b><i>II</i></b>	<b><i>1mL/1g</i></b>	<b><i>500mL/500g</i></b>
	<b><i>III</i></b>	<b><i>30mL/ 30g</i></b>	<b><i>1litre/1kg</i></b>
Class 8(excluding UN Nos. 2803 and 2809)	<b>II</b>	30mL/ 30g	500mL/500g
	<b>III</b>	30mL/ 30g	1litre/1kg
Class 9 (excluding UN 2807 magnetized material)	<b>II</b>	30mL/ 30g	500mL/500g
	<b>III</b>	30mL/ 30g	1litre/1kg

**ANNEX 3**

AUTRALIA	Paul Steele	PAUL.STEELE@casa.gov.au
BELGIUM	Patrick Van Lancker	patrick.vanlancker@mobilite.fgov.be
CANADA	Linda Hume-Sastre	humel@tc.gc.ca
FRANCE	Claude Pfauvadel Joseph Le-Tonqueze	<a href="mailto:claude.pfauvadel@equipement.gouv.fr">claude.pfauvadel@equipement.gouv.fr</a> <a href="mailto:joseph.le-tonqueze@aviation-civile.gouv.fr">joseph.le-tonqueze@aviation-civile.gouv.fr</a>
GERMANY	Karl-Heinz Bell Dr. Peter Blümel	<a href="mailto:karl.bell@bmvbw.bund.de">karl.bell@bmvbw.bund.de</a> <a href="mailto:peter.bluemel@bam.de">peter.bluemel@bam.de</a>
NETHERLANDS	Sibrand Hassing	sibrand.hassing@dgg.minvenw.nl
IRAN	Hassan Ghadiri	<a href="mailto:hassan.ghadiri@yahoo.com">hassan.ghadiri@yahoo.com</a>
ITALY	Sergio Benassai	<a href="mailto:benassai@apat.it">benassai@apat.it</a>
JAPAN	Yoshio Yasogawa	<a href="mailto:y-yasogawa@nkkk.or.jp">y-yasogawa@nkkk.or.jp</a>
UNITED KINGDOM	Jeff Hart Martin Castle	<a href="mailto:Jeff.Hart@dft.gsi.gov.uk">Jeff.Hart@dft.gsi.gov.uk</a> <a href="mailto:Martinc@pira.co.uk">Martinc@pira.co.uk</a>
UNITED STATES	Bob Richard Janet McLaughlin	<a href="mailto:bob.richard@rspa.dot.gov">bob.richard@rspa.dot.gov</a> <a href="mailto:Janet.McLaughlin@faa.gov">Janet.McLaughlin@faa.gov</a>
ASSOCIATION OF HAZMAT SHIPPERS	Alicia Brown	<a href="mailto:alicia.brown@abbott.com">alicia.brown@abbott.com</a>
CANADIAN CHEMICAL PRODUCERS' ASSOCIATION	Louis Laferriere	<a href="mailto:llaferriere@ccpa.ca">llaferriere@ccpa.ca</a>
CANADIAN CONSUMER SPECIALTY PRODUCTS ASSOCIATION (CCSPA)	Stephen Rathlou	<a href="mailto:skrathlo2@scj.com">skrathlo2@scj.com</a>
CANADIAN PAINT AND COATINGS ASSOCIATION	Ilse Bacchus	<a href="mailto:bacchus@ppg.com">bacchus@ppg.com</a>
CONFERENCE ON TRANSPORTATION OF HAZARDOUS ARTICLES (COSTHA)	E. Altemos John D'Aloia Richard Hessen	<a href="mailto:ealtemos@pipeline.com">ealtemos@pipeline.com</a> <a href="mailto:john.d'aloia@mkcorp.com">john.d'aloia@mkcorp.com</a> <a href="mailto:Richard.Hessen@reckittbenckiser.com">Richard.Hessen@reckittbenckiser.com</a>
EUROPEAN COMMITTEE OF PAINT, PRINTING INK ARTISTS COLOURS MANUFACTURER'S ASSOCIATIONS (CEPE)	Nicolas Noisette	<a href="mailto:nicolas.noisette@sicpa.com">nicolas.noisette@sicpa.com</a>
FEDERATION OF EUROPEAN AEROSOL ASSOCIATIONS (FEA)	Volker Krampe	<a href="mailto:Volker.Krampe@Beiersdorf.com">Volker.Krampe@Beiersdorf.com</a>

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)	Jean Abouchaar Patrick Oppenheimer	abouchaarj@iata.org
INTERNATIONAL ATOMIC ENERGEY AGENCY (IAEA)	Gerardus J. Dicke	G.Dicke@iaea.org
INTERNATIONAL CIVIL AVIATION ORGANIZATION, DANGEROUS GOODS PANEL, CANADA	Judith Code	CODEJ@tc.gc.ca
INTERNATIONAL EXPRESS CARRIERS CONFERENCE (IECC)	Alex McCulloch	alex.mcculloch@europe.ups.com eurlagm@europe.ups.com
INTERNATIONAL MARITIME ORGANIZATION, SUB- COMMITTEE ON DANGEROUS GOODS, SOLID CARGOES AND CONTAINERS	Jan Zwaan	zwaanja@tc.gc.ca

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