DANGEROUS GOODS PANEL (DGP)

MEETING OF THE WORKING GROUP OF THE WHOLE

Abu Dhabi, 4 to 8 October 2004

LIMITED QUANTITIES

(Presented by the Secretary)

1. INTRODUCTION

Extracts from working and information papers referred to in the report on the discussion of limited quantities (DGP-WG/04-WP/19) are presented below for information.

International Maritime Organization ((IMO) ST/SG/AC.10/C.3/2004/8

Dangerous goods in limited quantities

The Sub-Committee considered a report by the chairman of the DSC Sub-Committee (DSC 8/3/11) and agreed that there was a need to consider this report in the context of facilitating multimodal transport and further agreed that issues related to the need for identification of and documentation for dangerous goods in limited quantities required detailed consideration in the context of maritime transport. The Sub-Committee also agreed that consolidation of dangerous goods in limited quantities could lead to a situation whereby considerable quantities of dangerous goods would be packed in one cargo transport unit and the consequences of such a development required in-depth study before a firm decision was taken.

In this context, the Sub-Committee agreed that issues related to excepted quantities of dangerous goods and consumer commodities required careful consideration.

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Belgium ST/SG/AC.10/C.3/2004/50

1. In the last few months, experts of the Sub-Committee have received many e-mails regarding the above subject. They reflect very diverging opinions. It is clear that the discussion on this topic will have to be very well structured in order to obtain results.

2. There are still several basic points where differences of opinion exist. Because these are interrelated it is impossible for the Sub-Committee to restrict itself to a simple choice between OPTION 1 and OPTION 2 of the Canadian/French document.

3. OPTION 1 differentiates between "dangerous goods packed in small quantities suitable for retail sale" and the other "dangerous goods packed in small quantities" whilst OPTION 2 does not. This is a basic decision to be made. The expert from Belgium is of the opinion that there should be no differentiation, for the following reasons:

   (a) The inherent properties of "retail" and "non-retail" shipments are the same;
   (b) There is no clear definition of "retail sale", let alone of "suitable for retail sale".

4. In OPTION 1, UN No. 8000 is only used for the "dangerous goods packed in small quantities suitable for retail sale"; the other "dangerous goods packed in small quantities" make use of their own UN number. In OPTION 2, where the retail sale aspect is not taken into account, UN 8000 is introduced for all "dangerous goods packed in small quantities". It is clear that here another basic choice could have been made : not to introduce UN 8000 at all. Before going into the proposed text any further, this basic point should be discussed and decided upon. In the discussion the arguments put forward in 5. should be taken into account.

5. The only information given by UN 8000 is: "here dangerous goods packed in small quantities are present". This information alone is insufficient for emergency purposes. In the Canadian/French document this difficulty has been overcome in the proposed 3.4.7 where the indication of the class, including subsidiary risk, is required in an alternate document. Belgium is of the opinion that the class and the subsidiary risk are the very minimum and that more (e.g. the UN number of the substances themselves) would be preferable.

6. Section 3.4.7 of the Canadian/French document indicates that an alternate document may replace the transport document described in 5.4.1 and specifies its content. However, according to 5.4.1, "a dangerous goods transport document may be in any form, provided it contains all of the information required by these Regulations". Therefore, it would be much more user-friendly simply to specify in 3.4.7 that the transport document only has to contain the information mentioned in this section.

7. Section 3.4.9 of the Canadian/French document indicates that "transport units" with more than a certain mass (still to be determined) of "dangerous goods packed in small quantities" shall be marked with UN 8000 within a white diamond. This proposal leaves out a very important aspect of limited quantity transports that still needs to be decided upon: is it necessary to impose a limit to the total amount of dangerous goods packed in small quantities that is allowed per "transport unit"? The study undertaken by France some time ago (ST/SG/AC.10/C.3/2002/47) clearly indicates that the behaviour of dangerous goods in accident situations (fire, etc.) is not improved very much by using small combination packagings. This can only lead to the conclusion that a limit is necessary to the total amount of dangerous goods packed in small quantities that is allowed per "transport unit". Moreover, Belgium is of the opinion that - because of the safety considerations mentioned above - this limit should not be too high and proposes 1000 kg.

8. If such a limit per "transport unit" is introduced, their marking with UN 8000 within a white diamond does no longer seem necessary. This point is to be discussed and decided upon.

If the Sub-Committee should nevertheless decide to impose such a marking, it should not differ unnecessarily from the normal labelling and marking provisions for “transport units”.

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ICAO UN/SCETDG/25/INF.6

The ICAO Dangerous Goods Panel (DGP) held its 19th meeting in Montreal from 27 October to 7 November 2003. The primary purpose of the meeting was to finalize the content of the 2005-2006 edition of the ICAO Technical Instructions.

During the meeting the Chairman of the UN Sub-Committee of Experts on the Transport of Dangerous Goods presented to the Panel the report of the meeting of Sub-Committee's Working Group on Limited Quantities. The Working Group meeting was held in Ottawa, 22 – 24 October 2003.

The report of the DGP/19 meeting on this issue states:

"2.2.3.2 It was agreed that ICAO and the DGP should take a constructive role in this process to ensure that the air mode's position was clearly stated. Time did not allow the DGP/19 meeting to study the report in depth. It was however evident that there were significant differences between the views of the air mode and the surface modes on this subject. Some other modes went so far as to question the need for limited quantity provisions whereas they were of great importance in the air mode. Moreover, there were also differences between the views of DGP members on the subject. It was agreed that there was a need for a review of the Technical Instructions provisions concerning limited quantities, but it was difficult to see how this could be done in time to present a unified air mode position to the UNSCETDG before its meeting in December 2004, at which time it would probably finalize its recommendations.

2.2.3.3 It was therefore agreed that DGP members should study the report after DGP/19 and discuss it with other members as far as possible. They would also, whenever possible, make sure that their national UNSCETDG members were made aware of the air mode's views on the matter. Members should also communicate their views to the Secretary in time for an air mode position to be put before the UNSCETDG meeting in July 2004."

It should be noted that the Panel members have not been able to provide comments on the report of the Ottawa Working Group Meeting or on the formal paper developed by the Experts from France and Canada.

The Working Group as a Whole will meet in October 2004 and it is anticipated that the formal paper from France and Canada as well as any decisions taken at this July 2004 meeting of the Sub-Committee will be discussed.

Following the October 2004 meeting, the Working Group as a Whole should be able to provide the Sub-Committee with the views of the air mode for the Sub-Committee's meeting in December 2004.

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Netherlands UN/SCETDG/25/INF.17

By this document the expert form the Netherlands want to express their comments and reaction on document ST/SG/AC.10/C.3/2004/44 of the experts from Canada and France and document ST/SG/AC.10/C.3/2004/50 of the expert from Belgium with regard to the proposed alternative proposals concerning requirements for DANGEROUS GOODS PACKED IN SMALL QUANTITIES.

General view of the Netherlands

2. Dangerous goods, including dangerous goods packed in small quantities, should always be recognizable as such during transport (see also Chapter 5 of ST/SG/AC.10/C.3/2002/47).
Therefore the main objective in this work should be to achieve an acceptable safety level for the safe **multimodal** transport of dangerous goods packed in small quantities and to maintain all necessary information for all parties concerned in the multimodal transport chain.

3. The focus in this work should be on a **multimodal** harmonization as mentioned in the terms of reference for the working group (see attachment 1 of UN/SCETDG/23/INF.30) and how that this harmonization can be achieved. However some mode specific differences may be introduced, e.g. for distribution transport in the inland-mode, if such a transport is not a part of the multimodal transport chain.

Specific reaction/comments

Reaction on ST/SG/AC.10/C.3/2004/50

4. The Netherlands can agree with the views expressed by the expert of Belgium respect to:

- the given two options in ST/SG/AC.10/C.3/2004/44 are not the only possible options – *pending the decision on the(final) basic principles, more options are possible*;
- the differentiation between dangerous goods packed in small quantities and consumer commodities/"not suitable for sale" versus "suitable for sale" cannot be made – *from a multimodal perspective the introduction of Consumer Commodities (CC) have no added-value. CC-products have no different properties and already comply with the current provisions for dangerous goods packed in small quantities*; and,
- the introduction of a "UN 8000"entry in either of the options is not acceptable – '*UN 8000' only indicates that dangerous goods in small quantities are present. This information alone is felt insufficient for a safe transport as for emergency purposes*;

Comments on ST/SG/AC.10/C.3/2004/44

5. Both options given in document ST/SG/AC.10/C.3/2004/44 can in general not be supported by the Netherlands.

6. Although not formally proposed the Netherlands is not in favour of the introduction of an EXCEPTED QUANTITIES (EQ) system. There is, in the view of the Netherlands, no added-value for the introduction of multimodal EQ-provisions. The current (mode-specific) EQ-provisions in ICAO are not based upon a safety-rational, but based upon economic arguments. Moreover the current used 'rational' in ICAO differs fundamental from the current Limited Quantities–rational used in the UN (e.g. PG I substances are allowed in the ICAO EQ-provisions).

Dutch view on the basic principles to be used

7. An acceptable safety level for the multimodal transport of dangerous goods in small quantities can be achieved by the following principles:

- *application:* in principle all provisions of Chapters 1 – 6 of the Model regulations apply, except as specifically provided otherwise;
- *packagings*; relaxation can be given with regard to requirements for the use and construction and testing for the packaging (e.g. see 3.4.2 and 3.4.3);
- *documentation*; all information as specified in 5.4.1 and the words "***dangerous goods packed in small quantities***" to be added;
- *marking of the packaging*; the hazard(s) should be indicated on the packaging ⇒ to be marked with the UN Number(s) and the applicable danger class label and, if applicable, a subsidiary risk label – *the hazard label may be adapted for the purpose to indicate that the package contains dangerous goods packed in small quantities*;
- *marking of the transport unit;* the primary hazard should be indicated on the transport unit ⇒ to be placarded with the applicable danger class placard and, if applicable, a subsidiary risk placard - *the hazard placard may be adapted for the purpose to indicate that the package contains dangerous goods packed in small quantities*;
- *limit for marking the transport unit;* as dangerous goods packed in small quantities do not significantly behave different in an accident situation, for safety reasons, no limit should be introduced.

8. If the above mentioned basic principles can be agreed upon, this can be achieved by amending 3.4.1, 3.4.6, 3.4.7, 3.4.8. and 3.4.9 of the current Chapter 3.4.

Action requested of the Sub-Committee:

9. The Sub-Committee is invited to consider the views of the Netherlands given in this document and take action as deemed appropriate.

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IATA UN/SCETDG/25/INF.37

The International Air Transport Association would like to comment on the specific proposals contained in document ST/SG/AC.10/C.3/2004/44 produced by the Experts from Canada and France and also to offer some general comments on some of the basic principles with regard to "Limited Quantities".

Specific Comments

The proposals contained in the document may appear attractive from a 'harmonized' approach for multi-modal transport, but they do not meet the needs of the air transport industry. The specific concerns of the air transport industry on the proposals are:

1. **Classification.** The original request to the UN by ICAO was for the allocation of a UN number, UN 8000, for 'Consumer commodities'. Consumer commodities under the ICAO provisions are restricted to aerosols in Division 2.1 and Division 2.2, Class 3 (Packing Group II or III), Division 6.1 (Packing Group III only) and UN 3175. In addition, such substances must not have a

subsidiary risk. The proposals contained in the document extend the air mode concept of consumer commodities significantly to any substance currently permitted under the Limited Quantities provisions of Chapter 3.4.

2. **Packaging.** The ICAO packaging requirements for Limited Quantities require outer packagings that while not UN Specification must still meet a defined standard. The proposals in the document would permit packaging of a lesser standard than currently applies for air transport.

3. **Marking and Labelling.** The air mode provisions provide no relaxation for Limited Quantities or Consumer commodities from the marking and labelling requirements applicable to dangerous goods, except that when shipped as "Consumer commodities" they are classified in Class 9 and segregated on board an aircraft accordingly. For air transport, hazard labels on all packages containing dangerous goods, including those under the limited quantity and consumer commodity provisions form an essential part of risk communication for all persons involved in the transport chain. For persons in the warehouse and on the ramp, hazard labels are the only method by which dangerous goods can be clearly identified and appropriate segregation / separation applied.

4. **Documentation.** As with marking and labelling, for air transport, Limited Quantities / Consumer commodities must comply with all of the provisions of the ICAO Technical Instructions for the dangerous goods transport document. The air mode requires that operators must use an acceptance checklist for dangerous goods consignments. The dangerous goods transport document and the information provided on it by the shipper forms an essential component of that acceptance check.

5. In addition, the information provided on the dangerous goods transport document is essential for provision of the required information for the notification to pilot-in-command. Removal of this information would compromise the ability of operators to confirm that the consignment complies with all of the regulatory requirements. The impact of this is a potential reduction in the level of safety for air transport.

Basic Principles

The original request from ICAO to the Sub-Committee was for a UN number to be allocated to "Consumer commodities" as UN 8000. As identified above, in the ICAO Technical Instructions, consumer commodities are a very limited group of dangerous goods that, provided that they are packed in accordance with ICAO Packing Instruction 910, may be treated as Class 9. These substances are still subject to all of the marking, labelling and documentation requirements of the ICAO Technical Instructions.

Following this request, a much wider discussion evolved that brought in the whole concept of Limited Quantities and Excepted Quantities from ICAO to see how this could be harmonized with the UN concept of Limited Quantities. The result being the proposals contained in document ST/SG/AC.10/C.3/2004/44.

IATA believes that the issues should be separated and that the original request from ICAO for UN 8000 should be revisited and the various request considered in isolation. The potential for a single harmonized standard for Limited Quantities should still continue, but also should include adopting into the UN Model Regulations the air mode provisions for Dangerous Goods in Excepted Quantities. It is understood that the classification criteria for the air mode provisions for Dangerous Goods in Excepted Quantities may need to be streamlined in order not to be less restrictive than limited quantities.

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International Union of Railways (UIC/IUR) UN/SCETDG/25/INF.42

Reference is made to the Canadian/French proposal ST/SG/AC.10/C.3/2004/44 and the comments by the expert from Belgium ST/SG/AC.10/C.3/2004/50.

The UIC/IUR can agree with most of the comments by the expert from Belgium. We should like to point out again our main problem with the proposals from the working group, i.e. the following question:

WHY HAS THE INFORMATION ABOUT THE NATURE AND THE HAZARDS OF DANGEROUS GOODS SHIPPED IN SMALL QUANTITIES TO BE KEPT SECRET BY ALL MEANS?

Is this because of tradition in some modes of transport or in certain countries?

According to legislation for safety at work or consumer safety all over the world, information about the hazards of the products has to be indicated on the inner packaging of dangerous goods shipped in small quantities. No useful information is however proposed by the working group for indications on the outer packaging or the transport unit.

That is to say, workers in the transport industry and emergency responders, confronted with leakages and other accidents with shipments of dangerous goods packed in small quantities, have to open the transport unit and the package, to find relevant hazard information on the leaking substance.

According to the proposal no useful information is to be found in the transport documentation either.

We fail to understand, why it is so difficult to use in the documentation for the transport of small quantities of dangerous goods the description according to 5.4.1.4.1, e.g.:

> UN 1263 PAINT 3, III, instead of
> UN 8000 DANGEROUS GOODS PACKED IN SMALL QUANTITIES.

We furthermore want to point out, that the use of the shipping name ‘Dangerous goods packed in small quantities’ only, is not allowed according to international conventions and agreements for the railway transport of goods and for customs purposes. In the cases, where an individual proper shipping name, according to UN, is not indicated in the documentation, the Harmonised Commodity Name, according to the Customs Cooperation Council, shall be used, however without indication of UN-nr., class or PG.

In RID/ADR we have at present the situation, that no indication at all is prescribed in the case of shipments of dangerous goods in limited quantities. In the transport document, however, the goods are indicated with their shipping name according to the Harmonised Commodity Name system. This situation leads to unacceptable confusion, if the Harmonised Commodity Name is similar to the Proper Shipping Name according to UN, because it is impossible to decide if it is a limited quantity shipment or a normal dangerous goods shipment with an incomplete dangerous goods description.

The UIC/IUR therefore would be very grateful, if the Sub-Committee could take a decision where the differences in regard to labelling, placarding, marking and information in the documentation between shipments of dangerous goods in small quantities and normal shipments would be eliminated, or kept as small as possible.

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United States of America UN/SCETDG/25/INF.44

The expert from the United States of America has reviewed the proposal by the experts from France and Canada concerning requirements for limited quantities and consumer commodities and has considered the two options indicated in the annex of ST/SG/AC.10/C.3/2004/44. Limited quantity and consumer commodity shipments account for the largest volume of dangerous goods shipments and it is essential that a framework for harmonization be provided through the UN requirements so as not to disrupt international trade of these commodities.

2. The current limited quantity and consumer commodity requirements that exist in the UN Model Regulations, IMDG Code and ICAO TI are extremely important to transporters of dangerous goods and are considered to provide a high level of safety. Experience using the exceptions afforded to limited quantities and consumer commodities has proven that the exceptions are practical, useful, and do not pose an unreasonable risk to safety in transport. It is important to note that hundreds of millions of packages of consumer goods that meet the conditions of paragraph 3.4.7 of the current IMDG Code and the applicable requirements of the ICAO TI are offered for international transport annually. We are not aware of any incident reports or anecdotal information indicating that a problem exists with these requirements or that there is reason to question the safety of transporting these dangerous goods according to the currently established exceptions.

3. While multimodal harmonization is clearly the goal, additional requirements applicable to air and sea transport currently apply to limited quantity and consumer commodity shipments and it is anticipated that these additional requirements will continue to be necessary to ensure an appropriate level of safety. For instance, the ICAO TI restricts the substances that are permitted to be transported as consumer commodities (see ICAO TI special provision 112) and the packing instruction includes detailed packaging conditions that must be met (see ICAO TI packing instruction 910).

4. The expert from the United States of America sees no benefit in an informal transport document. This will only lead to additional confusion and will likely reduce the effectiveness of conveying hazard information through the documentation. The objective of the Model Regulations should be to establish a framework of requirements that provide an adequate level of safety for land transport while acknowledging that the modal agencies will need to impose additional requirements commensurate with the safety needs for the particular mode. This framework is for the most part in place.

5. The expert from the United States of America is opposed to changing the wording of Chapter 3.4 and departing from use of the words “limited quantity”. The wording "dangerous goods packed in small quantities" is not appropriate as a proper shipping name or package marking and can have many meanings to many different people. It will also be more difficult to translate into many languages and it is questionable whether it will fit or be comprehensible when printed on packages. The current terminology is well understood and has been incorporated into numerous training programs. To avoid unnecessary changes that will result in requiring retraining of consignors and emergency responders, it would be preferable to maintain the current terminology which is used and well understood worldwide. Maintaining the current framework with only minimal amendments will preclude unnecessary and burdensome amendments to requirements such as those in the IMDG Code particularly with respect to package and transport unit markings and those in the ICAO TI where “Consumer Commodity” is used as a proper shipping name which will necessitate extensive retraining of individuals.

6. The expert from the United States of America is opposed to the proposal that would impose a transport unit mark on the basis of an arbitrary total load threshold (i.e. a figure between 3 to 10 tons). Establishing a marking requirement on the basis of a weight restriction per container could possibly cause improper declarations, undeclared cargoes or other difficulties. We are content with the current requirement in the IMDG Code for the marking in the IMDG Code that requires the words "Limited Quantities" or "LTD QTY" to be marked on transport units. This approach appears to work well as evidenced by the fact that is applied on a mandatory basis worldwide and more than 130 countries approved its adoption into the IMDG Code. Changes to the transport unit marking requirement will lead to significant costs for the industry without apparent safety benefits.

7. The expert from the United States of America is aware of the concerns of other experts regarding the definition of consumer commodities. We agree that the term "consumer commodity" should be better defined. In this paper a definition for "consumer commodities" is proposed for incorporation in 1.2.1 of the Model Regulations.

8. Requirements for excepted quantities have proven useful for transport by air according to the ICAO TI and by all modes according to U.S. Regulations. The expert from the United States of America supports either including provisions for excepted quantities into the Model Regulations or authorizing shipments prepared in accordance with the ICAO TI, particularly when they are transported by air as part of the transport from origin to destination for transport by land. A new paragraph is proposed at the end of Chapter 3.4 to accomplish this as follows:

> "3.4.X Dangerous goods that meet the excepted quantities requirements of the ICAO Technical Instructions (see ICAO TI 1; 2.4) are acceptable for transport by road, rail and sea."

9. While the expert from the United States of America prefers option 1 over option 2 because it maintains the concept of consumer commodities, we are not entirely in favor of either option in ST/SG/AC.10/C.3/2004/44. On this basis, a third option is provided in Annex 1 of this paper for consideration by the Sub-Committee.

10. The Sub-Committee should be extremely cautious in deciding on any option taking account of the importance of these requirements to transport safety and world trade. If the Sub-Committee can not agree on a consensus based decision, the expert from the United States of America would prefer if the Sub-Committee would extend the work on this issue to the next biennium to ensure consensus with all affected parties as opposed to adopting requirements that will result in a lack of harmony in national, regional or modal regulations or that may be subject to further proposals and amendments in the near future.

ANNEX I

OPTION 3

Amendment to Chapter 1.2

It is proposed that a definition for "consumer commodities" be added in alphabetical sequence in 1.2.1 as follows:

Consumer commodities are dangerous goods that:

(a) are packaged in small quantities in accordance with the requirements of Chapter 3.4;

(b) are commonly available to consumers for household or personal use through retail sale and are in a form and concentration intended or suitable for such sale or are drugs, medicines and other items administered or sold to or for humans or animals by doctors, medical administrations, veterinary practitioners, pharmacies or retail sales distributors; and

(c) have consumer use warnings indicated on the packages.

Note: *Examples of consumer commodities include aerosols (such as hair spray, deodorant, food stuffs or lubricants), perfumes, cleaning products, paints, adhesives, garden care products, consumer pesticides, pool supplies, hobby and recreational products, health care products and toiletries. Substances that are transported in their pure form that are not suitable for consumer use and those that are transported as raw material for purposes of being used in a manufacturing process are not considered consumer commodities. Consumer commodities are those that meet the applicable consumer protection regulations including hazard warning markings.*

Amendments to chapter 3.4

CHAPTER 3.4

No amendments are proposed for paragraphs 3.4.1 through 3.4.7 although we can agree to changing the words "vehicle or freight container" to "***transport unit"*** in 3.4.6 as proposed in –C.3/2004/44.

3.4.8 **Dangerous goods packed in accordance with the requirements of this chapter 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 that has a 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 package and conform to the provisions of paragraphs 5.2.1.2(a) to (d).**

3.4.9 Dangerous goods that meet the definition of consumer commodities (see 1.2.1) may be transported using the description "CONSUMER COMMODITY – AIR", UN 8000 or CONSUMER COMMODITY", UN 8001, as appropriate.

3.4.9.1 Except for air and sea transport, a dangerous goods transport document is not required for consignments of consumer commodities.

3.4.9.2 As an alternative to the marking in 3.4.8, packages containing consumer commodities may be marked with the UN number 8000 or 8001, as appropriate, preceded by the letters "UN" and the proper shipping name "CONSUMER COMMODITY" or "CONSUMER COMMODITY-AIR", as appropriate. The markings shall be at least 6 mm high and shall be clearly visible. The marks shall be displayed on at least one side or end of the outer packaging.

2. Consequential amendments

1. Add the following entries in the Dangerous Goods List

UN No. (1)	Name and Description (2)	Class or Div. (3)	Sub-risk (4)	UN packing group (5)	Special prov-isions (6)	Limited quantities (7)	Packagings and IBCs	
							Packing Instruction (8)	Special Provisions (9)
8000	CONSUMER COMMODITY–AIR	9			XXX	See chapter 3.4 and paragraph 3.4.9. See ICAO TI Packing Instruction 910		
8001	CONSUMER COMMODITY	See chapter 3.4 and paragraph 3.4.9.			XXX	See chapter 3.4 and paragraph 3.4.9.		

In Chapter 3.3 add the following new special provision:

> "XXX Consumer commodities are defined in section 1.2.1. The entry UN 8000 shall be used for consumer commodities that are transported by air, and for land or sea transport associated with such air transport. Dangerous goods transported under this entry shall only be those that are permitted to be transported as consumer commodities in the ICAO Technical Instructions and that conform with the applicable requirements of the Technical Instructions. The entry UN 8001 may only be used for consumer commodities transported by road, rail or sea."

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United Kingdom UN/SCETDG/25/INF.75

1. The expert from the United Kingdom has reviewed document ST/SG/AC.10.C.3/2004/44 presented by France and Canada and notes the comments made by Belgium (2004/50), the Netherlands (INF.17) and ICAO (INF.6). The United Kingdom regrets that better progress towards a truly multimodal solution to the issue of 'Limited Quantities' of dangerous goods has not been possible.

2. Since the last meeting of the Sub-Committee, the expert from the United Kingdom has consulted industry (carriers of all modes and consignors) widely to try to establish a common UK position and a measure of agreement has been achieved. Having reviewed the document from France and Canada, the comments from IMO, ICAO and Belgium and the Netherlands; as well as the work of the Paris and Ottawa working groups, the expert from the United Kingdom submits the following comments and proposal as an alternative approach in order that further progress can be made.

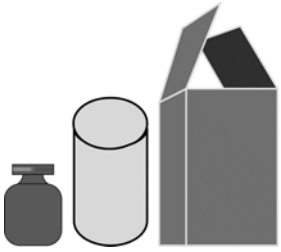
Excepted quantities

3. Given the success of application in air transport, it is proposed that the text from the ICAO *Technical Instructions* be included in the *Model Regulations* for all modes of transport to adopt. This subject arose during the Paris working group where there was much discussion as to its value outside the air mode. The following comments address some of the points made then:

- Excepted quantities are not solely an air mode issue. Recently the competent authority in the United Kingdom has been asked for concessions to move by road tiny quantities of chemicals, some of which cannot be transported under 'Limited Quantities' provisions, i.e. they are in Packing Group I. The current ICAO provisions would have met the requirement.

- There is some concern expressed regarding full container loads of such goods, but this is likely to be the exception rather than the rule. However it must be remembered that the level of packaging prescribed for excepted quantities is far higher than that normally required for most of the substances so permitted. A receptacle must be placed in absorbent/cushioning material inside an intermediate packaging that must be placed in an outer packaging. The volume of packing material will always exceed the quantity of chemical.

Goods packed in excepted quantities





- 'Excepted quantities' is a well-established and well-used concept in the air mode, but there are no statistics of any kind of incident in the air mode to give rise to any concerns, and this probably results from the severe packaging requirements. They are permitted on board passenger aircraft and are not subject to acceptance checks.

- Finally, the fact that this concept exists in air transport means that goods moving from or to an airport with no marking could be in contravention of surface mode regulations. This is particularly so under 'ADR' in Europe, because the substances approved for carriage as excepted quantities extend to PG I and the limited quantities provisions, by and large, do not.

- A simple reference to the ICAO *Technical Instructions* would not be helpful when a consignor wanted to use land transport only. They would have to have access to a set of air regulations to identify the requirements for excepted quantities.

Limited quantities

4. Because there has been so little progress towards a new multimodal approach, the expert from the United Kingdom believes that the term "Limited Quantities" should be retained, Although this term may be felt by many to be confusing, changing to "Small Quantities" without significant differences elsewhere in the Model Regulations, agreed on a multimodal basis, would be equally confusing. Therefore, it is proposed to keep the existing term "Limited Quantities" to which people are accustomed.

5. However, the expert from the United Kingdom does believe that a single entry UN substance identification number might prove a simplification to the system and would be happy to see UN 8000 assigned to limited quantities of dangerous goods in transport in all circumstances.

6. Some will argue that an all-encompassing identifier such as UN 8000 may not provide sufficient information to emergency responders or to those needing to segregate loads. As an alternate approach, the Sub-Committee could consider a different identifier. Rather than use the number UN 8000 everywhere, the relevant individual 4-digit numbers could be retained but instead of marking, for example, “UN1263” the requirement could be to use “LQ1263”. This would be a positive statement that the consignor is complying with the limited quantity concession, whilst giving some indication of the substance transported.

Consumer Commodities and 'Goods packaged for retail sale'

7. The concept of 'Consumer Commodities' is easily misinterpreted. As defined in the ICAO TIs, and given the identifier ID 8000, it appears to be most widely used in the United States, as such goods are recognised for onward land transport disassociated from an international journey involving an air leg. This also solves a documentation problem for 'pick and pack' products in the domestic road transport mode. There is also benefit from using ICAO TI Consumer Commodities to address difficulties in the application of a 25kg hold limit on other dangerous goods in aircraft holds imposed through USG 13D. These problems do not arise in Europe, since ADR does not require transport documentation for goods packed in limited quantities and because there has not been an identified air transport need for a hold limitation on passenger aircraft.

8. Whilst ICAO TI ‘Consumer Commodities’ have been common in air transport for many years, they have never been allocated a UN number nor have they been recognized in sea or land transport. They also require a different level of packaging integrity (see ICAO Packing Instruction 910) than goods packed in limited quantities. The packaging may include a variety of dangerous and non-dangerous goods and attract a Class 9 label. They are permitted simplified documentation requirements in air transport. Thus consignors and operators are faced with difficulties for onward transport of such goods beyond the point of delivery for a trans-Atlantic international journey. In some ways, the concept of consumer commodities are recognised in IMDG (3.4.7 - 'LQs intended or suitable for sale through retail agencies'), RID/ADR (1.1.3.1 (a) goods packaged for retail sale intended for personal or domestic use) and the UN Model Regulations (1.1.1.2 (b) - goods 'packaged for retail sale, that are carried for individuals own use') by reference to goods 'for household use', 'retail sale' etc but these are exemptions which are not harmonised and that are not readily and clearly defined. But such products should not be described as 'dangerous goods in limited quantities'.

9. The United Kingdom would still favour, therefore, a comprehensive 'Limited Quantities' regime that would preclude the need for a separate concept of 'Consumer Commodities' or other 'exemptions' based on use rather than hazard, thereby simplifying international multimodal transport considerably.

The United Kingdom proposal

10. The United Kingdom proposal set out below also offers two approaches for text to be adopted into the Model Regulations for limited quantities (3.4.3). The principal issues of conflict have been the requirement or otherwise for documentation, the type of marking required and the need or otherwise for placarding transport units. Broadly, the UK does not believe that there is a need for full dangerous goods transport documentation. On marking two alternates are offered. It is recognised that a symbol might be better than letters to overcome language difficulties - perhaps the Canadian red and white diamond with the word 'Danger' (meaning the same in both English and French) would be better? The UK remains unconvinced of the need to placard transport units, but recognising the desires of some; text has been included in the proposal below for possible consideration.

11. For ease of reading the whole text of the new Chapter 3.4 is reproduced below.

"Replace the existing Chapter 3.4 with the following:

CHAPTER 3.4

DANGEROUS GOODS PACKED IN EXCEPTED, CONSUMER AND LIMITED QUANTITY PACKAGES

3.4.1. The provisions of this Chapter apply to the transport of certain dangerous goods in excepted quantity packages and to goods packed in limited quantities. All provisions and requirements of these Regulations apply to the transport of these categories of dangerous goods except as specifically provided for in this Chapter.

Excepted Quantity Packages

3.4.2 Excepted quantity packages of dangerous goods may only be carried in accordance with the limitations and provisions contained in this section.

3.4.2.1. The table below shows quantities that may be excepted from the regulations when carried in accordance with the provisions in 3.4.2.2 to 3.4.2.7.

Class or Division	**PG**	**Qty per inner**
Division 2.2 (without subsidiary risk)		30mL
Class 3	I	30mL
	II	30mL
	III	30mL
Class 4 (excluding all self-reactive substances)	II	30mL/30g
	III	30mL/30g
Division 5.1	II	30mL/30g
	III	30mL/30g
Division 5.2 (only when contained in a chemical kit or first-aid kit)		30ml/30g
Division 6.1 (all substances other than those having an inhalation toxicity at the Packing Group I level)	I	1mL/1g
	II	1mL/1g
	III	30mL/30g
Class 8 (excluding UN2803 and UN2809)	II	30mL/30g
	III	30mL/30g
Class 9		30mL/30kg

8The total net quantity of dangerous goods contained in each outer packaging shall be not more than:

- for other than Divisions 2.2 and 5.2:
  PG I - 300 g or 300 ml
  PG II - 500 g or 500 ml
  PG III - 1 kg or 1 L;
- for Division 2.2 - 1 L;
- for Division 5.2 - 500 g or 250 ml.

3.4.2.2 Packagings, including their closures, used for the transport of dangerous goods in excepted quantities shall be of good quality. Packaging materials that 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 plastics [having a minimum thickness of not less than 0.2 mm or of] glass, earthenware or metal. The materials of inner packagings shall not contain substances that may react dangerously with the contents, form hazardous products or significantly weaken the packagings. The closure of each inner packaging with a removable closure shall be held securely in place with [wire], tape or other positive means. Any receptacle having a neck with moulded screw threads shall have a leakproof threaded type cap completely resistant to the contents. Except for temperature sensing devices, inner packagings shall not completely fill with liquid at a temperature of 55 C;

(b) Inner packagings 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], [plastics] fibreboard or other equally strong material);

(d) the complete package shall be capable of withstanding the tests specified under 3.4.2.4;

(e) dangerous goods in excepted quantities shall not be packed together in the same outer packaging or overpack, if they react dangerously with each other and cause:

1) combustion and/or evolution of considerable heat;

2) evolution of flammable, toxic or asphyxiant gases;

3) the formation of corrosive substances; or

4) the formation of unstable substances;

3.4.2.3 Packages prepared as for transport shall be [capable of being] tested. Inner packagings shall be filled to not less than 95 per cent of their capacity for solids or 98 per cent for liquids. The substances to be transported in the packagings may be replaced by other substances except where this would invalidate the results of the tests. For solids, when another substance is used, it shall have the same physical characteristics (mass, grain size, etc.) as the substance to be carried. In the drop tests for liquids, when another substance is used, its relative density (specific gravity) and viscosity should be similar to those of the substance to be transported.

3.4.2.4 The complete package, as demonstrated by testing, shall be capable of withstanding, without breakage or leakage of any inner packaging and without
significant reduction in effectiveness:

(a) the following free drops onto a rigid, non-resilient flat and horizontal surface from a height of 1.8 m:

1) for a packaging with six sides (i.e. a box shape):

— one drop flat on the bottom;
— one drop flat on the top;
— one drop flat on the long side;
— one drop flat on the short side; and
— one drop on a corner at the junction of three intersecting edges;

2) for a cylindrical packaging (i.e. a drum shape):

— one drop diagonally on the chime or on a circumferential seam or an edge; and
— one drop on the weakest part not tested by the first drop, e.g. a closure.

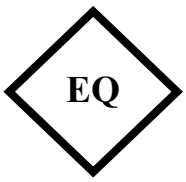
Note.— Each of the above tests may be performed on different but identical packages.

(b) a force applied to the top surface for a duration of 24 hours, equivalent to the total weight of identical packages if stacked to a height of 3 m (including the test sample).

3.4.2.5 Excepted quantity packages transported in accordance with this Chapter need not be labelled and transport units containing excepted quantity packages need not be placarded. Any segregation provisions for dangerous goods need not apply within a vehicle or freight container.

3.4.2.6 Dangerous goods transport documentation is not required.

3.4.2.7 Excepted quantity packages need not be marked with the proper shipping name of the contents, but shall be marked with:



the letters “EQ” placed within a diamond with minimum dimensions of 100x 100mm. If the size of the package so requires, the dimensions may be reduced, provided the markings remain

clearly visible. The width of line forming the diamond shall be at least 2 mm; the letters shall be at least 6 mm high.

3.4.3 The provisions of this Chapter apply to the transport of certain dangerous goods packed in limited quantities.

3.4.3.1 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 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 dangerous goods packed in limited quantities except as specifically provided in this Chapter.

3.4.3.2 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.

3.4.3.3 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.

3.4.3.4 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.

3.4.3.5 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.

3.4.3.6 Packages of dangerous goods transported in accordance with this Chapter need not be labelled. Any segregation provisions for dangerous goods need not apply within a transport unit.

3.4.3.7 For the transport of dangerous goods packed in limited quantities, information mentioned in 5.4.1.4 and 5.4.1.5 is not required in the transport document. However, **[the document shall indicate:**

- ***the words “UN 8000 DANGEROUS GOODS PACKED IN LIMITED QUANTITIES”***
- ***the class (including subsidiary risk)***
- ***the total mass of goods]***

3.4.3.8 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 number “UN 8000” at least 6 mm high placed within a diamond that has a minimum dimension of 100x100 mm (if the size of the package so requires, the dimensions may be reduced, provided the marking remains clearly visible). The width of line forming the diamond shall be at least 2 mm. 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).

3.4.3.9 Transport units where the total load of dangerous goods packed in limited quantities exceeds [in excess of 15 tons – *UK does not believe a threshold is necessary as there is no evidence that there is a problem]* ***gross mass shall be a marked with ["UN 8000"in black digits not less than 65 mm high placed within a white diamond with minimum dimension 250X250 mm with a black line running 12,5 mm inside the edge and parallel with it.] This marking shall be displayed:***

on each of the two external lateral walls in the case of a rail vehicle;
on each of the two external lateral walls and the rear wall in the case of road vehicle;
on each of the two external lateral walls and on both end for other [cargo] transport units

Consequential amendments

1. Add the following entry in the dangerous goods list

UN No.	Name and Description	Class or division	Subsid-iary risk	UN packing group	Special provisions	Limited quantities	Packagings and IBCs	
							Packing Instruction	Special Provisions
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
8000	DANGEROUS GOODS PACKED IN LIMITED QUANTITIES	See chapter 3.4						

2. Delete 5.4.1.5.2 and renumber the following paragraphs accordingly

OPTION USING "LQ" INSTEAD OF UN 8000

3.4.3 The provisions of this Chapter apply to the transport of certain dangerous goods packed in limited quantities.

3.4.3.1 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 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 dangerous goods packed in limited quantities except as specifically provided in this Chapter.

3.4.3.2 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.

3.4.3.3 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.

3.4.3.4 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.

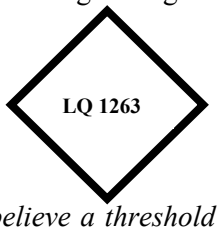
3.4.3.5 Different dangerous goods packed in limited quantities may be placed in the same outer packaging provided they will not interact dangerously in the event of leakage.

3.4.3.6 Packages of dangerous goods transported in accordance with this Chapter need not be labelled. Any segregation provisions for dangerous goods need not apply within a transport unit.

3.4.3.7 For the transport of dangerous goods packed in limited quantities, information mentioned in 5.4.1.4 and 5.4.1.5 is not required in the transport document. However, [the document shall indicate:

- the words “LQ XXXX”(being the UN number preceded by the letters "LQ" instead of “UN”
- the class (including subsidiary risk)
- the total mass of goods].
-

3.4.3.8 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 substance identification number preceded by the letters "LQ" at least 6 mm high placed within a diamond that has a minimum dimension of 100x100 mm (if the size of the package so requires, the dimensions may be reduced, provided the marking remains clearly visible). The width of line forming the diamond shall be at least 2 mm. 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).
E.g.



3.4.3.9 Transport units where the total load of dangerous goods packed in limited quantities exceeds [in excess of 15 tons – *UK does not believe a threshold is necessary as there is no evidence that there is a problem*] gross mass shall be a marked with [e.g. “LQ1263”in black digits not less than 65 mm high placed within a white diamond with minimum dimension 250X250 mm with a black line running 12,5 mm inside the edge and parallel with it.] This marking shall be displayed:
on each of the two external lateral walls in the case of a rail vehicle;
on each of the two external lateral walls and the rear wall in the case of road vehicle;
on each of the two external lateral walls and on both end for other cargo transport units."

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The International Association of Soap, Detergent and Maintenance Products (AISE),
The Consumer Specialty Products Association (CSPA),
The European Aerosol Federation (FEA),
The International Federation of Freight Forwarders Associations (FIATA),
The International Express Carriers Conference (IECC)
UN/SCETDG/25/INF.83

1. The industries represented by the organisations listed above have an essential interest in the transport of dangerous goods in Limited Quantities. They comprise both consignors of goods in limited quantities and those who are responsible for carrying them. Harmonised Limited Quantities provisions is a key issue for industry.

2. They recognise and appreciate the hard work and effort which all the members of the working group have made. They also recognise the large scale of the work undertaken and the fact that this cannot be accomplished in one biennium. It is not their intention to delay any decisions.

3. However, whilst they welcome some of the proposals made, the options presented in ST/SG/AC.10/C.3/2004/44 do not yet address all the needs of industry. Those needs remain, as the world is changing: international movements of goods are increasing rapidly. Intermodal movements of goods are now the norm and the complications of unharmonised Limited Quantities provisions lead to high costs and the potential for poor compliance, which can then impact on safety.

4. In their view the working group cannot be expected to complete the mammoth task it set itself in just one biennium. This issue has been raised several times in the past and it would be a great shame if the work were now stopped because it must extend beyond a single biennium.

Proposal

5. To implement the concept of Excepted Quantities into the UN Model Regulations and to make it available for all transport modes.

6. That the UN sub committee agrees that the working group, comprising regulators, consignors and carriers, should continue its work into the next biennium.

7. Because of the enormity of the task it is proposed to continue it on a simpler basis, allowing realistic expectations and a collaborative approach between regulators at UN and modal level, consignors and carriers. Such is industry's commitment to completing this important task, it is willing to provide a joint chairman to help progress the work in the next biennium. The work could be tackled in steps. For example:

8. Proposed Steps:

   - Collect the different existing modal and regional regulations for Limited Quantities (e.g. IMDG vs. ADR vs. ICAO vs. CFR49 vs. Australian Dangerous Goods Code vs. others (Japan, China, etc.) with a translation if necessary;
   - Analyse the difference between them against the existing UN Model Regulations;
   - Examine the reasons for each difference objectively;

- Collect the new or additional needs from both regulators and industry;
- Assess the implication for regulators/regulations/industry;
- If possible quantify possible impacts;
- Try to get a common position or clear options to vote on;
- Agree on one possible level across all modes/regions;
- Where differences are essential, agree exceptions for regions and/or mode.

9. If the UN sub committee agrees that this type of approach is attractive, then a more detailed proposal and work plan, written jointly by regulators and industry, could be submitted for approval in December.

— END —