



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
MEETING OF THE WORKING GROUP OF THE WHOLE**

Auckland, New Zealand, 4 to 8 May 2009

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 2011/2012 Edition

2.5: Part 5 — Shipper's Responsibilities

"NET QUANTITY" FOR CLASS 1 ARTICLES

(Presented by D. Brennan)

SUMMARY

This paper proposes an addition to the net quantity declared for Class 1 articles to facilitate multi-modal transport.

Action by the DGP-WG is in paragraph 2.

1. INTRODUCTION

1.1 During DGP-WG/08 a proposal was submitted to modify the definition of “net quantity” in Part 1 of the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) to address the existing difference between the Technical Instructions and the UN Model Regulations for what constitutes “net quantity” as shown on the dangerous goods transport document for explosive articles (DGP-WG/08-WP/26). The purpose of seeking the alignment of the Technical Instructions provisions with those of the UN Model Regulations is to facilitate the development of the multi-modal electronic standard for the dangerous goods transport document.

1.2 While there was some support for the proposals contained DGP-WG/08-WP/26, there was also concern about the impact that the changes would have on the net quantity limits per package set out in Table 3-1. It was suggested that for these to be amended explosive specialists should be consulted to ensure that any modification to the per package net quantity limits had a risk based justification.

1.3 Following DGP-WG/08 there was some discussion with industry explosive experts during which it was determined that moving to a complete alignment with the UN Model Regulations would be a significant undertaking that would require a complete review of almost all of the entries for Class 1 substances and articles in Table 3-1. On that basis it was decided to take a more conservative

approach and to consider the provision of the net explosive mass on the dangerous goods transport document, in addition to the net quantity (mass) as currently required by 5;4.1.5.1.

1.4 During the research of the provisions of the Technical Instructions and the UN Model Regulations to develop the proposals contained in this working paper, it was also identified that the Technical Instructions, in Part 5;2.4.3, contain a marking requirement for explosives that does not appear in the UN Model Regulations, or in the modal regulations (ADR, IMDG Code). Part 5;2.4.3 requires that each package containing explosives must be marked with the net quantity of explosive and the gross mass of the package. The paragraph also permits the proper shipping name marked on the package to be supplemented with the commercial or military name of the explosive.

1.5 The requirement for the net quantity of explosive and the gross mass of the package to be marked on packages containing explosives has been in the Technical Instructions since 1983. However, the value of this requirement is questioned, given that there is no such requirement in any other mode.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to:

- a) revise 5;4.1.5.1 to add a new subparagraph f) as follows:

4.1 DANGEROUS GOODS TRANSPORT INFORMATION

...

4.1.5 Information required in addition to the dangerous goods description

...

4.1.5.1 *Quantity of dangerous goods, number and type of packagings*

The number of packages, type of packaging (e.g. steel drum, fibreboard box, etc.) and net quantity of dangerous goods in each package (by volume or mass, as appropriate) must be indicated for each item of dangerous goods bearing a different proper shipping name, UN number or packing group. Abbreviations may be used to specify the unit of measurement for the quantity. For packages containing the same dangerous goods and quantity per package a multiple of the quantity may be used. For example:

UN 1263, Paint, 3, PG II, 5 fibreboard boxes x 5 L

Consignment comprising packages of different quantities of the same dangerous good must be clearly identified. For example:

UN 1263, Paint, 3, PG II, 5 fibreboard boxes x 5 L, 10 fibreboard boxes x 10 L

UN packaging codes may only be used to supplement the description of the kind of package (e.g. one fibreboard box (4G)). Where the letter "G" follows the quantity in column 11 or 13 of Table 3-1 the gross mass of each package must be indicated, rather than the net quantity; and:

- a) for empty uncleaned packagings as described by 4.1.4.3 b) only the number and type of packagings need be shown;
- b) for chemical kits and first aid kits, the total net mass of dangerous goods. Where the kits contain solids and/or liquids, the net mass of liquids within the kits is to be calculated on a 1 to 1 basis of their volume, i.e. 1 litre equal to 1 kilogram;
- c) for dangerous goods in machinery or apparatus, the individual total quantities of dangerous

goods in solid, liquid or gaseous state, contained in the article;

- d) for dangerous goods transported in salvage packagings, an estimate of the quantity of dangerous goods must be given;
- e) for items where "No Limit" is shown in column 11 or 13 the quantity must be the net mass or volume for substances (e.g. UN 2964, UN 3291). For articles (e.g. UN 2794, UN 2800, UN 2990, UN 3166) the quantity must be the gross mass, followed by the letter G;
- f) for explosive articles the net quantity indicated for each package must be supplemented with the net explosive mass of the articles contained in the package followed by the unit of measurement, enclosed in parenthesis (see Part 1;3.1.1 for the definition of net explosive mass). The initials "NEQ" or "NEW" may be included preceding the value for the net explosive mass.

- b) add a new definition into Part 1;3.1.1 as follows:

Net explosive mass. Also known as net explosive quantity (NEQ) or net explosive weight (NEW) for Class 1 articles is the total mass of the explosive substances contained in the article, without the packaging, casings, bullets, etc.

- c) revise 5;2.4.3 as follows:

2.4.3 Special marking requirements for explosives

~~Each package must be marked with the net quantity of explosive and the gross mass of the package.~~The proper shipping name required by 2.4.1 may be supplemented by additional descriptive text to indicate commercial or military names.

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