International Civil Aviation Organization

DGP-WG/12-WP/47
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WORKING PAPER

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

Montréal, 15 to 19 October 2012

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 2015-2016 Edition
2.2: Part 2 — Classification

USE OF THE TERM "NET MASS"

(Presented by A. Tušek)

SUMMARY

This paper proposes an amendment to Part 2; Introductory Chapter 5.3 d). The term “net mass” is used for a sample transported in a combination package. It needs to be clarified if this is meant to be applied using the definition of “maximum net mass” or “net quantity”.

Action by the DGP-WG is in paragraph 2.

1. INTRODUCTION

1.1 Part 2; Introductory Chapter 5.3 relates to the transport of Samples. 5.3 d) is currently read as follows:

> “d) the sample is transported in a combination packaging with a net mass per package not exceeding 2.5 kg; and”

1.2 A combination packaging is required and a “net mass per package” is stated. However, it is unclear if the net mass should be interpreted as a “Maximum net mass” or “Net quantity” as defined in Part 1;3.1.

1.3 The definition of “Net quantity” is the mass or volume of the dangerous goods only and does not include the mass of the packaging material.

1.4 The definition of “Maximum net mass” when applied to a combination packaging is the “combined mass of inner packagings and the contents thereof expressed in kilograms”.

1.5 The transport of samples can apply to liquids as well as solids but since the “net mass” is only expressed in kilograms it is likely that the more restrictive approach of “Maximum net mass” applies so that the quantity of dangerous goods transported is reduced by the packaging used.

1.6 An example of this approach is found in Part 4 of Packing Instruction 200 which states as highlighted below:

Packing Instruction 200

. . .

Gas specific provisions:

l) UN 1040 **Ethylene oxide** may also be packed in hermetically sealed glass ampoules or metal inner packagings suitably cushioned in fibreboard, wooden or metal boxes meeting the Packing Group I performance level. The maximum quantity permitted in any glass inner packaging is 30 g, and the maximum quantity permitted in any metal inner packaging is 200 g. After filling, each inner packaging must be determined to be leak-tight by placing the inner packaging in a hot water bath at a temperature, and for a period of time, sufficient to ensure that an internal pressure equal to the vapour pressure of ethylene oxide at 55°C is achieved. The maximum net mass in any outer packaging must not exceed 2.5 kg. When cylinders are used, they must be of the seamless or welded steel types that are equipped with suitable pressure relief devices. Each cylinder must be tested for leakage with an inert gas before each refilling and must be insulated with three coats of heat retardant paint or in any equally efficient manner. The maximum net quantity per cylinder must not exceed 25 kg.

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2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to consider amending the wording of Part 2; Introductory Chapter 5.3 d) to clarify the mass limit as shown in the appendix to this working paper.

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APPENDIX

PROPOSED AMENDMENT TO THE TECHNICAL INSTRUCTIONS

Part 2

CLASSIFICATION OF DANGEROUS GOODS

INTRODUCTORY CHAPTER

Parts of this Chapter are affected by State Variations DE 5, NL 4, RO 1; see Table A-1

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5. TRANSPORT OF SAMPLES

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5.3 Samples of the substance must be transported in accordance with the requirements applicable to the tentative assigned proper shipping name provided:

a) the substance is not considered to be a substance forbidden for transport by 1;2.1;

b) the substance is not considered to meet the criteria for Class 1 or considered to be an infectious substance or a radioactive material;

c) the substance is in compliance with 4.2.3.2.6 or 5.3.2.6, if it is a self-reactive substance or an organic peroxide, respectively;

d) the sample is transported in a combination packaging ~~with a~~ and the maximum net mass per outer package ~~not exceeding~~ must not exceed 2.5 kg; and

e) the sample is not packed together with other goods.

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