International Civil Aviation Organization

DGP-WG/16-WP/42
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**WORKING PAPER**

# DANGEROUS GOODS PANEL (DGP) WORKING GROUP MEETING (DGP-WG/16)

**Montreal, 17 to 21 October 2016**

**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 2019-2020 Edition**
**2.2: Part 2 — Classification**

## ALIGNMENT WITH THE UN MODEL REGULATIONS — DIVISION 4.3 CLASSIFICATION

(Presented by B. Carrara)

**SUMMARY**

This working paper invites the DGP-WG to consider deleting Part 2;4.4.1.1 in order to align with the UN Model Regulations.

**Action by the DGP-WG**: The DGP-WG is invited to amend the Technical Instructions as shown in the appendix to this working paper.

## 1. INTRODUCTION

1.1 Part 2;4.4.1 of the Technical Instructions is broken down into two paragraphs, 4.4.4.1 and 4.4.4.2, as shown below:

> **"4.4 SUBSTANCES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES (DIVISION 4.3)**
>
> **4.4.1 Definitions and properties**
>
> 4.4.1.1 Division 4.3 — Substances which, in contact with water, emit flammable gases.
>
> 4.4.1.2 Certain substances in contact with water emit flammable gases which can form explosive mixtures with air. Such mixtures are easily ignited by all ordinary sources of ignition, for example, naked lights, sparking handtools or unprotected lamps. The resulting blast wave and flames may endanger people and the environment. The test method referred to in 4.4.2 must be used to determine whether the reaction of a substance with water leads to the development of a dangerous amount of gases which may be flammable. It must not be applied to pyrophoric substances."

1.2 It is noted that paragraph 4.4.1.1 is the same text as its heading in 4.4 and adds no information to what is shown in the heading.

1.3 The UN Model Regulations, in 2.4.4, does not have a paragraph equivalent to that in 2;4.4.1.1 of the Technical Instructions but only the one presented in 2;4.4.1.2 (paragraph 2.4.4.1 of the UN document), as shown below.

> **"2.4.4 Division 4.3 — Substances which in contact with water emit flammable gases**
>
> *2.4.4.1 Definitions and properties*
>
> *Certain substances in contact with water may emit flammable gases that can form explosive mixtures with air. Such mixtures are easily ignited by all ordinary sources of ignition, for example naked lights, sparking handtools or unprotected lamps. The resulting blast wave and flames may endanger people and the environment. The test method referred to in 2.4.4.2 is used to determine whether the reaction of a substance with water leads to the development of a dangerous amount of gases which may be flammable. This method shall not be applied to pyrophoric substances."*

1.4 In order to maintain the alignment between the Technical Instructions and the *UN Model Regulations*, this paper proposes the deletion of current paragraph 4.4.4.1 of Part 2 and consequential renumbering of 4.4.1.2.

## 2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to amend the Technical Instructions as shown in the appendix to this working paper.

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**APPENDIX**

**PROPOSED AMENDMENT TO PART 2 OF THE TECHNICAL INSTRUCTIONS**

# Part 2

# CLASSIFICATION OF DANGEROUS GOODS

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## Chapter 4

## CLASS 4 — FLAMMABLE SOLIDS; SUBSTANCES LIABLE TO SPONTANEOUS COMBUSTION; SUBSTANCES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES

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### 4.4 SUBSTANCES WHICH, IN CONTACT WITH WATER, EMIT FLAMMABLE GASES (DIVISION 4.3)

#### 4.4.1 Definitions and properties

~~4.4.1.1 Division 4.3 — Substances which, in contact with water, emit flammable gases.~~

~~4.4.1.2~~ Certain substances in contact with water emit flammable gases which can form explosive mixtures with air. Such mixtures are easily ignited by all ordinary sources of ignition, for example, naked lights, sparking handtools or unprotected lamps. The resulting blast wave and flames may endanger people and the environment. The test method referred to in 4.4.2 must be used to determine whether the reaction of a substance with water leads to the development of a dangerous amount of gases which may be flammable. It must not be applied to pyrophoric substances.

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