



**WORKING PAPER**

**DANGEROUS GOODS PANEL (DGP)  
WORKING GROUP MEETING (DGP-WG/18)**

**Montréal, 1 to 5 October 2018**

**Agenda Item 2: Managing air-specific safety risks and identifying anomalies**

**2.2: Develop proposals, if necessary, for amendments to the *Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284)* for incorporation in the 2021-2022 Edition**

**Agenda Item 8: Coordination with other panels**

**8.4 Remotely Piloted Aircraft Systems Panel (RPASP)**

**UNMANNED AIRCRAFT SYSTEMS (DRONES)**

(Presented by H. Brockhaus)

This working paper proposes that a definition be added for unmanned aircraft systems (drones) in Part 1;3 of the Technical Instructions to allow for regulation in the future.

It is also proposed to prohibit the transport of dangerous goods by air on drones at this stage.

**Action by the DGP-WG:** The DGP-WG is invited to consider adding a definition for unmanned aircraft systems (drones) in Part 1;3 of the Technical Instructions as shown in the appendix to this working paper.

**1. INTRODUCTION**

1.1 Unmanned aircraft systems (drones) are increasingly being used by industry to transport packages or other cargo in a door-to-door service. There is no definition in the Technical Instructions at this time, so they cannot be regulated for transporting dangerous goods by air.

1.2 The issue here is that industry wants to transport dangerous goods by drones, so there should be a definition in Part 1;3 of the Technical Instructions and maybe in the future some text in Part 5 (shipper's responsibilities) or Part 7 (operator's responsibilities).

1.3 Today the main problems are the packagings (4G under a drone with a Class 3 label in heavy rain or thunderstorm, not regulated as we did for helicopter in Part 7:7.1.2. “When loading dangerous goods for open external carriage by a helicopter, consideration should also be given to the type of packaging used and to the protection of those packagings, where necessary, from the effects of airflow and weather”) or UN 3373 together with UN 1845.

1.4 A definition for unmanned aircraft systems in the Technical Instructions is necessary in order to consider introducing provisions for transporting dangerous goods on them, regardless of whether or not the provisions would permit or prohibit transporting dangerous goods on them.

## 2. **ACTION BY THE DGP-WG**

2.1 The DGP-WG is invited to consider adding a definition for unmanned aircraft systems (drones) in Part 1;3 of the Technical Instructions as shown in the appendix to this working paper.

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APPENDIX

PROPOSED AMENDMENT TO PART 1 OF THE TECHNICAL INSTRUCTIONS

Part 1

GENERAL

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Chapter 3

GENERAL INFORMATION

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**Proposal 1:**

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*Unmanned aircraft systems (drones).* An aircraft without a human pilot aboard. It includes a ground-based controller and a system of communications between the two. They are not allowed to carry dangerous goods by air, except for dropping in connection with agricultural, horticultural, forestry, avalanche control, ice jam control and landslide clearance or pollution control activities.

**UN number.** The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods to identify a substance or a particular group of substances.

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**Proposal 2:**

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*Unmanned aircraft systems (drones).* Not permitted for dangerous goods transport: An aircraft without a human pilot aboard. It includes a ground-based controller and a system of communications between the two.

**UN number.** The four-digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods to identify a substance or a particular group of substances.

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