International Civil Aviation Organization

DGP/30-WP/11
10/7/25

WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

THIRTIETH MEETING

Montréal, 6 to 10 October 2025

Agenda Item 1: Harmonizing ICAO dangerous goods provisions with UN Recommendations on the Transport of Dangerous Goods (REC-A-DGS-2027)

1.2: 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 2027-2028 Edition

AMENDMENTS TO PART 1 OF THE TECHNICAL INSTRUCTIONS DEVELOPED BY DGP-WG/24 AND DGP-WG/25

(Presented by DGP-WG/UN Harmonization)

SUMMARY

This working paper contains consolidated draft amendments to Part 1 of the Technical Instructions developed by the Working Group of the DGP in 2024 (DGP-WG/2024) and 2025 (DGP-WG/2025). The amendments:

a) reflect the decisions taken by the UN Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals at its twelfth session to amend the 23rd revised edition of the UN Model Regulations (Geneva, 6 December 2024);

b) facilitate transport or state oversight; and

c) address issues related to energy storage devices.

The DGP Working Group on UN Harmonization (DGP-WG/UN Harmonization) conducted an extensive review of the amendments to Part 1 proposed for the sake of harmonization with UN Recommendations by DGP-WG/2025. It did not identify a need for any further amendments.

Action by the DGP: The DGP is invited to agree to the draft amendments in this working paper.

Part 1

GENERAL

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Chapter 1

SCOPE AND APPLICABILITY

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1.1.5 General exceptions

Amendments to facilitate transport or State oversight

Paragraph 4.3.4 of DGP-WG/24 report:

1.1.5.1 Except for 7;4.2, these Instructions do not apply to dangerous goods carried by an aircraft where the dangerous goods are:

a) to provide, during flight, medical aid to a patient or to preserve blood or blood components for the purpose of transfusion or tissues or organs intended for use in transplantation when those dangerous goods:

1) have been placed on board with the approval of the operator; or

2) form part of the permanent equipment of the aircraft when it has been adapted for specialized use;

providing that:

1) gas cylinders have been manufactured specifically for the purpose of containing and transporting that particular gas;

2) equipment containing wet cell batteries is kept and, when necessary, secured in an upright position to prevent spillage of the electrolyte;

3) lithium metal or lithium ion cells or batteries meet the provisions of 2;9.3 and spare lithium batteries are individually protected so as to prevent short circuits when not in use;

Note.— For dangerous goods that passengers are permitted to carry as medical aid, see 8;1.1.2.

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Amendments to energy storage device provisions

Paragraph 4.4.3 of DGP-WG/24 report:

i) data loggers and cargo-tracking devices with installed lithium or sodium ion batteries, attached to or placed in packages, overpacks or unit load devices, provided the following conditions are met:

1) the data loggers or cargo-tracking devices must be in use or intended for use during transport;

2) each cell or battery must meet the provisions of either Part 2;9.3 a), e), f) (if applicable) and g) or Part 2;9.4 a) and e);

3) for a lithium ion or sodium ion cell, the Watt-hour rating not exceeding 20 Wh;

4) for a lithium ion or sodium ion battery, the Watt-hour rating not exceeding 20 Wh;

5) for a lithium metal cell, the lithium content not exceeding 1 g;

6) for a lithium metal battery, the aggregate lithium content not exceeding 1 g;

7) the number of data loggers or cargo-tracking devices in or on any package or overpack must be no more than the number required to track or to collect data for the specific consignment;

UN harmonization amendments

Paragraph 4.1.2.1 of DGP-WG/25 report:

UN Model Regulations, Chapter 5.5, 5.5.4.1 c) (see ST/SG/AC.10/52/Add.1)

8) the data loggers or cargo-tracking devices must be capable of withstanding the shocks and loadings normally encountered during transport and must be safe for use in the dangerous environments to which they may be exposed;

9) the devices must not be capable of generating a dangerous evolution of heat; and

10) the devices must meet defined standards for electromagnetic radiation to ensure that the operation of the device does not interfere with aircraft systems.

Note.— This exception does not apply where the data loggers or cargo-tracking devices are offered for transport as a consignment in accordance with Packing Instruction 967 ~~or~~, 970 or 978.

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Chapter 3

GENERAL INFORMATION

UN harmonization amendments

Paragraph 4.1.2.1 of DGP-WG/25 report:

UN Model Regulations, Chapter 1.2, 1.2.1 (see ST/SG/AC.10/52/Add.1)

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Cylinder. A pressure receptacle of a water capacity not exceeding 150 litres with a test pressure volume product not exceeding 1.5 million bar litres.

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Amendments to manage aviation specific risks and address anomalies

Paragraph 4.2.2.7 of DGP-WG/25 report:

Explosive article. ~~An article containing one or more explosive substances.~~ For the definition, see 2;1.2.

Explosive substance. ~~A solid or liquid substance (or a mixture of substances) which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such a speed as to cause damage to the surroundings. Included are pyrotechnic substances even when they do not evolve gases. A substance which is not itself an explosive but which can form an explosive atmosphere of gas, vapour or dust is not included.~~ For the definition, see 2;1.2.

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UN harmonization amendments

Paragraph 4.1.2.1 of DGP-WG/25 report:

UN Model Regulations, Chapter 1.2, 1.2.1 (see ST/SG/AC.10/52/Add.1)

Filling ratio. The ratio of the mass of gas to the mass of water at 15°C that would fill completely ~~a pressure receptacle~~ the means of containment fitted ready for use.

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UN harmonization amendments

Paragraph 4.1.2.1.2.1 a) of DGP-WG/25 report:

GHS. The ~~tenth~~ eleventh revised edition of the *Globally Harmonized System of Classification and Labelling of Chemicals*, published by the United Nations as document ST/SG/AC.10/30/Rev.~~10~~11.

UN harmonization amendments

Paragraph 4.1.2.1 of DGP-WG/25 report:

UN Model Regulations, Chapter 1.2, 1.2.1 (see ST/SG/AC.10/52/Add.1)

Large packaging. A packaging consisting of an outer packaging which contains articles or inner packagings and which:

a) is designed for mechanical handling; and

b) exceeds 400 kg net mass or 450 litres capacity but has ~~a volume~~ an internal volume of not more than 3 m³;

Note.— Large packagings are only permitted as provided for in Part 4, Introductory Note 12 and S-4;13 of the Supplement.

Large salvage packaging. (Not permitted for air transport.) A special packaging which:

a) is designed for mechanical handling; and

b) exceeds 400 kg net mass or 450 litres capacity but has ~~a volume~~ an internal volume of not more than 3 m³;

into which damaged, defective, leaking or non-conforming dangerous goods packages, or dangerous goods that have spilled or leaked are placed for purposes of transport for recovery or disposal.

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UN harmonization amendments

Paragraph 4.1.2.1.2.1 a) of DGP-WG/25 report:

Manual of Tests and Criteria. The eighth revised edition of the United Nations publication bearing this title (ST/SG/AC.10/11/Rev.8 and Amend.1).

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Model Regulations. The twenty-~~third~~ fourth revised edition of the United Nations publication entitled *Recommendations on the Transport of Dangerous Goods: Model Regulations* (ST/SG/AC.10/1/Rev.~~23~~24).

UN harmonization amendments

Paragraph 4.1.2.1 of DGP-WG/25 report:

UN Model Regulations, Chapter 1.2, 1.2.1 (see ST/SG/AC.10/52/Add.1)

Net explosive mass (NEM). The total mass of the explosive substances, without the packagings, casings, etc. (net explosive quantity (NEQ)~~,~~ or net explosive contents (NEC)~~, or net explosive weight (NEW)~~ are often used to convey the same meaning).

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Pressure volume product (pV-product). The value resulting from multiplying the (usable) water capacity of a containment with its relevant maximum pressure during filling and usage (e.g. test pressure or charging pressure) as referenced for the relevant kind of containment. It is expressed in bar litres.

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Amendments to manage aviation specific risks and address anomalies

Paragraph 4.2.2.7 of DGP-WG/25 report:

Pyrotechnic substance. ~~A mixture or compound designed to produce an effect by heat, light, sound, gas or smoke or a combination of these as the result of non-detonative, self-sustaining, exothermic, chemical reactions.~~ For the definition, see 2;1.2.

UN harmonization amendments

Paragraph 4.1.2.1 of DGP-WG/25 report:

UN Model Regulations, Chapter 1.2, 1.2.1 (see ST/SG/AC.10/52/Add.1)

Salvage pressure receptacle. (Not permitted for air transport.) A pressure receptacle ~~with a water capacity not exceeding 3 000 litres~~ into which are placed damaged, defective, leaking or non-conforming pressure receptacle(s) having a total test pressure volume product not exceeding 1.5 million bar litres for the purpose of transport, such as for recovery or disposal.

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Tube. (Not permitted for air transport.) A pressure receptacle of seamless or composite construction having a water capacity exceeding 150 litres but not more than 3 000 litres with a test pressure volume product not exceeding 1.5 million bar litres.

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Amendments to manage aviation specific risks and address anomalies

Paragraph 4.2.2.6 of DGP-WG/25 report:

Chapter 4

DANGEROUS GOODS TRAINING

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4.1 ESTABLISHMENT OF DANGEROUS GOODS TRAINING PROGRAMMES

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4.1.2 All operators must establish a dangerous goods training programme regardless of whether or not they ~~are approved~~ [have] a specific approval to transport dangerous goods as cargo.

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Chapter 6

GENERAL PROVISIONS CONCERNING RADIOACTIVE MATERIAL

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6.1 SCOPE AND APPLICATION

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UN harmonization amendments

Paragraph 4.1.2.1 of DGP-WG/25 report:

UN Model Regulations, Chapter 1.5, 1.5.1.3 (see ST/SG/AC.10/50/Add.1)

6.1.3 These Instructions apply to the transport of radioactive material by air, including transport that is incidental to the use of the radioactive material. Transport comprises all operations and conditions associated with and involved in the movement of radioactive material; these include the design, manufacture, maintenance and repair of packaging, and the preparation, consigning, loading, carriage including in-transit storage, shipment after storage, unloading and receipt at the final destination of the radioactive material and packages. A graded approach is applied to the performance standards in these Instructions that are characterized by three general severity levels:

a) routine conditions of transport (incident free);

b) normal conditions of transport (minor mishaps); and

c) accident conditions of transport.

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