



WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTY-NINTH MEETING

Montréal, 13 to 17 November 2023

Agenda Item 2: Managing air-specific safety risks and identifying anomalies (REC-A-DGS-2025)

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 2025-2026 Edition

LIMITS FOR NON-REFILLABLE CYLINDERS CONTAINING FLAMMABLE GAS

(Presented by D. Brennan)

SUMMARY

This working paper proposes a revision to Part 4;1.1.9 to include a 1.25 L limit for non-refillable cylinders containing flammable gas to align to the provisions in the UN Model Regulations.

Action by the DGP is in paragraph 2.

1. INTRODUCTION

1.1 It has been identified that a limitation on the capacity of non-refillable pressure receptacles (cylinders and cryogenic receptacles) set out in paragraph 4.1.6.1.9 (b) in the UN Model Regulations has not been included into the applicable paragraph of the Technical Instructions.

1.2 The paragraph in the UN Model Regulations reads:

4.1.6.1.9 Non-refillable pressure receptacles shall:

- (a) Be transported in an outer packaging, such as a box, or crate, or in shrink-wrapped trays or stretch-wrapped trays;
- (b) Be of a water capacity less than or equal to 1.25 litres when filled with flammable or toxic gas;
- (c) Not be used for toxic gases with an LC50 less than or equal to 200 ml/m³; and
- (d) Not be repaired after being put into service.

1.3 The equivalent paragraph, Part 4;4.1.1.9, in the Technical Instructions reads as follows:

4.1.1.9 Non-refillable cylinders and closed cryogenic receptacles must:

- a) be transported in an outer packaging, such as a box, or crate, or in shrink-wrapped trays or stretch-wrapped trays;
- b) not be repaired after being put into service.

1.4 The omission of subparagraph c) from the Model Regulations is appropriate given the prohibition in air transport of toxic gases, but it is believed that subparagraph b), for flammable gas only, should be included into the Technical Instructions as the restriction is applicable to air transport.

2. **ACTION BY THE DGP**

2.1 The DGP is invited to revise Part 4;4.1.1.9 as shown in the appendix to this working paper.

APPENDIX

PROPOSED AMENDMENT TO PART 4 OF THE TECHNICAL INSTRUCTIONS

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Part 4

PACKING INSTRUCTIONS

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Chapter 4

CLASS 2 — GASES

4.1 SPECIAL PACKING PROVISIONS
FOR DANGEROUS GOODS OF CLASS 2

4.1.1 General requirements

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4.1.1.9 Non-refillable cylinders and closed cryogenic receptacles must:

- a) be transported in an outer packaging, such as a box, or crate, or in shrink-wrapped trays or stretch-wrapped trays; |
- b) be of a water capacity less than or equal to 1.25 litres when filled with flammable gas; |
- b_c) not be repaired after being put into service. |

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