



WORKING PAPER

DANGEROUS GOODS PANEL (DGP)

TWENTY-FIFTH MEETING

Montréal, 19 to 30 October 2015

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 2017-2018 Edition

CARGO AIRCRAFT ONLY PACKAGE LIMITS FOR UN0501 — PROPELLANT, SOLID 1.4C

(Presented by A. Stubblefield)

SUMMARY

This working paper invites the panel to consider a revision to the packaging instruction and maximum net quantity limits for UN 0501 consistent with other Division 1.4C entries in the Table 3-1 — Dangerous goods list and with the current guidance for the panel to aid in preparation of the Technical Instructions and supporting documents.

Action by the DGP: The DGP is invited to amend the Table 3-1 dangerous goods list entry for UN 0501, Propellant, solid by revising:

- a) Column 12 to refer to Packing Instruction 114; and
- b) Column 13 to specify a 75 kg maximum net quantity per package

as shown in Appendix B to this working paper.

1. INTRODUCTION

1.1 A recent review of the fourteen current Division 1.4C dangerous goods (see Appendix A to this paper for a complete list) revealed that only UN 0501 “Propellant, solid” is forbidden for transport on cargo aircraft, whilst the other Division 1.4C dangerous goods are allowed to be offered for transport on cargo aircraft with a net quantity up to 75 kg per package.¹

¹ DGP-WG/15-WP/13 proposed to amend Table 3-1 to include a new entry UN0510, Rocket Motors, 1.4C and a maximum 75 kg net quantity per package when transported aboard cargo aircraft. If this new entry is adopted by the DGP there will be a total of fourteen 1.4C entries.

1.2 Of the fourteen Division 1.4C dangerous goods list entries, two entries (UN 0501 “Propellant, solid”, and the more specific UN 0509 “Powder, smokeless” would be expected to exhibit the most substantially similar physical characteristics, yet have differing maximum quantity limits. Smokeless powder is a specific type of “Propellant, solid” containing nitrocellulose as an essential ingredient, and the Division 1.4C “Propellant, solid” and “Powder, smokeless” characteristics are substantially similar.

1.3 The United Nations Working Group on Explosives discussed the physical characteristics of UN 0501 during its most recent meeting (June 2015) to determine if there are differences between the risks in transport posed by UN 0501 and other division 1.4C entries including UN 0509. The working group could identify no differences between the risks in transport of UN 0501 and the other 1.4C entries. The working group invited ICAO to review the issue further and address it with an appropriate proposal.²

1.4 Based on the results of the UN technical review and a review of Table 1 “Maximum Net Quantities Per Package For Dangerous Goods With Only A Primary Hazard” and Section 4.8 of the “Guidance for the Panel to Aid in Preparation of the Technical Instructions and Supporting Documents”, it is proposed that the quantity and packaging authorizations for UN 0501 be aligned with those of other 1.4C materials.

2. ACTION BY THE DGP

2.1 The DGP is invited to amend the Table 3-1 dangerous goods list entry for UN 0501, Propellant, solid by revising:

- c) Column 12 to refer to Packing Instruction 114; and
- d) Column 13 to specify a 75 kg maximum net quantity per package

as shown in Appendix B to this working paper.

² UN/SCETDG/47/INF.53

APPENDIX AA

**EXTRACT FROM TABLE 3-1 —DIVISION 1.4C DANGEROUS GOODS ENTRIES AS THEY
APPEAR IN THE 2015-2016 EDITION OF THE TECHNICAL INSTRUCTIONS**

Table 3-1 Dangerous Goods List Entries of Division 1.4C

| Name | UN No. | Class or division | Passenger and cargo aircraft | Cargo aircraft only |
|--|--------|-------------------|-------------------------------|-------------------------------|
| | | | Max. net quantity per package | Max. net quantity per package |
| Articles, explosive, n.o.s. | 0351 | 1.4C | FORBIDDEN | 75 kg |
| Cartridges for weapons, blank or Cartridges, small arms, blank | 0338 | 1.4C | FORBIDDEN | 75 kg |
| Cartridges for weapons, inert projectile or Cartridges, small arms | 0339 | 1.4C | FORBIDDEN | 75 kg |
| Cartridges, oil well | 0278 | 1.4C | FORBIDDEN | 75 kg |
| Cartridges, power device | 0276 | 1.4C | FORBIDDEN | 75 kg |
| Cases, cartridges, empty with primer | 0379 | 1.4C | FORBIDDEN | 75 kg |
| Cases, combustible, empty without primer | 0446 | 1.4C | FORBIDDEN | 75 kg |
| Charges, propelling | 0491 | 1.4C | FORBIDDEN | 75 kg |
| 5-mercaptotetrazol-1-acetic acid | 0448 | 1.4C | FORBIDDEN | 75 kg |
| Powder, smokeless | 0509 | 1.4C | FORBIDDEN | 75 kg |
| Propellant, solid | 0501 | 1.4C | FORBIDDEN | FORBIDDEN |
| Rockets, with expelling charge | 0438 | 1.4C | FORBIDDEN | 75 kg |
| Substances, explosive | 0479 | 1.4C | FORBIDDEN | 75 kg |
| Tetrazol-1-acetic acid | 0407 | 1.4C | FORBIDDEN | 75 kg |

APPENDIX B

PROPOSED AMENDMENT TO THE TECHNICAL INSTRUCTIONS

Part 3

DANGEROUS GOODS LIST,
SPECIAL PROVISIONS AND
LIMITED AND EXCEPTED QUANTITIES

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Chapter 2

ARRANGEMENT OF THE
DANGEROUS GOODS LIST (TABLE 3-1)

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Table 3-1. Dangerous Goods List

| Name | UN No. | Class or division | Subsidiary Risk | Labels | State variations | Special provisions | UN packing group | Excepted quantity | Passenger aircraft | | Cargo aircraft | |
|-------------------|--------|-------------------|-----------------|--------|------------------|--------------------|------------------|-------------------|---------------------|-------------------------------|---------------------|-------------------------------|
| | | | | | | | | | Packing instruction | Max. net quantity per package | Packing instruction | Max. net quantity per package |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Propellant, solid | 0501 | 9 | 1.4C | | | | | | FORBIDDEN | | FORBIDDEN | |
| | | | | | | | | | | | 114 | 75 kg |
| ... | | | | | | | | | | | | |

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