



DANGEROUS GOODS PANEL (DGP)

TWENTY-EIGHTH MEETING

Virtual, 15 to 19 November 2021

Agenda Item 3: Facilitating safe transport of dangerous goods by air (Ref: REC-A-DGS-2023)

REVISION TO PACKING INSTRUCTION 962

(Presented by T. Muller)

SUMMARY

This working paper proposes to increase in Packing Instruction 962, applicable to UN 3363 — **Dangerous goods in apparatus** or **Dangerous goods in machinery** or **Dangerous goods in articles**, the maximum allowed net quantity for environmentally hazardous substances in order to remove the gap between the quantities allowed for environmentally hazardous substances contained in articles assigned to UN 3363 and articles assigned to UN 3548 and to align closer with the UN Model Regulations.

Action by the DGP: The DGP is invited to discuss and agree to the amendment proposed in the appendix to this working paper.

1. INTRODUCTION

1.1 Packing Instruction 962, applicable to UN 3363 — **Dangerous goods in apparatus** or **Dangerous goods in machinery** or **Dangerous goods in articles**, limits the total net quantity of liquid dangerous goods in one package to 0.5 L and solid dangerous goods to 1 kg. The UN Model Regulations, however, limit the quantity of each item of dangerous goods in the article to the quantity specified in Column 7a (Limited quantities) of the Dangerous List of Chapter 3.2 of the UN Model Regulations.

1.2 This means that according to the UN Model Regulations, UN 3363 may contain 5 kg of UN 3077 — **Environmentally hazardous substance, solid, n.o.s.** or 5 L of UN 3082 — **Environmentally hazardous substance, liquid, n.o.s.** If these quantities are exceeded, UN 3363 can no longer be used but instead UN 3548 — **Articles containing miscellaneous dangerous goods, n.o.s.** must be used.

1.3 At the DGP Working Group Meeting in 2021 (DGP-WG/21, 24 to 28 May 2021), a proposal was accepted (see paragraph 3.2.2.22 of the DGP-WG/21 Report) which allows the transport of UN 3548 — **Articles containing miscellaneous dangerous goods, n.o.s.** for articles containing more than 5 kg or 5 L of environmentally hazardous substances. Since environmentally hazardous substances do not

pose a significant safety issue in air transport, the working group agreed to align with the UN Model Regulations.

1.4 Because of this decision, articles containing a maximum 0.5 kg/1 L of environmentally hazardous substances and articles containing more than 5 kg or 5 L of environmentally hazardous substances can be transported by air on both passenger and cargo aircraft. However, articles containing more than 0.5 L/1 kg but not exceeding a maximum 5 kg/5 L of environmentally hazardous substances can only be transported in accordance with Special Provision A107, which means that prior approval of the appropriate authority of the State of Origin and the State of the Operator is required.

1.5 It is believed that this inconsistency should be removed.

2. **ACTION BY THE DGP**

2.1 The DGP is invited to discuss and agree to the amendment proposed in the appendix to this working paper.

APPENDIX

PROPOSED AMENDMENT TO PART 4 OF THE TECHNICAL INSTRUCTIONS

Part 4

PACKING INSTRUCTIONS

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Packing Instruction 962

Passenger and cargo aircraft for UN 3363 only

General requirements

Part 4, Chapter 1 requirements must be met (except that the requirements of 4;1.1.2, 1.1.9, 1.1.13 and 1.1.16 do not apply), including:

1) **Compatibility requirements**

- Substances must be compatible with their packagings as required by 4;1.1.3.

2) **Closure requirements**

- Closures must meet the requirements of 4;1.1.4.

This entry only applies to articles, such as machinery, apparatus or devices containing dangerous goods as a residue or as an integral element of the article. It must not be used for an article for which a proper shipping name exists in Table 3-1. For other than fuel system components, articles may only contain one or more of the following: dangerous goods permitted under 3;4.1.2 or UN 2807 or gases of Division 2.2 without subsidiary hazard but excluding refrigerated liquefied gases.

<i>UN number and proper shipping name</i>	<i>State</i>	<i>Total net quantity of dangerous goods in one package (excluding magnetic material)*</i>
UN 3363 Dangerous goods in apparatus or Dangerous goods in machinery or Dangerous goods in articles	Liquid	0.5 L
	Solid	1 kg
	Gas (Division 2.2 only)	0.5 kg

* Notwithstanding the net quantity limits in the table, a package may contain in addition a maximum of 5 kg of UN 3077 — Environmentally hazardous substance, solid, n.o.s. or 5 L of UN 3082 — Environmentally hazardous substance, liquid, n.o.s.

ADDITIONAL PACKING REQUIREMENTS

- If the article contains more than one item of dangerous goods, the individual dangerous goods must be enclosed to prevent them reacting dangerously with one another during transport (see 4;1.1.3).
- Receptacles containing dangerous goods must be so secured or cushioned so as to prevent their breakage or leakage and so as to control their movement within the article during normal conditions of transport. Cushioning material must not react dangerously with the contents of the receptacles. Any leakage of the contents must not substantially impair the protective properties of the cushioning material.
- “Package orientation” labels (Figure 5-29), or preprinted orientation labels meeting the same specification as either Figure 5-29 or ISO Standard 780-1997 must be affixed on at least two opposite vertical sides with the arrows pointing in the correct direction only when required to ensure liquid dangerous goods remain in their intended orientation.
- Irrespective of 5;3.2.10, articles containing magnetized material meeting the requirements of Packing Instruction 953 must also bear the “Magnetized material” label (Figure 5-27).

- For Division 2.2 gases, cylinders for gases, their contents and filling ratios must conform to the requirements of Packing Instruction 200.
- Dangerous goods in articles must be packed in strong outer packagings unless the receptacles containing the dangerous goods are afforded adequate protection by the construction of the articles.

Fuel system components

- Fuel system components must be emptied of fuel as far as practicable and all openings must be sealed securely. They must be packed:
 - 1) in sufficient absorbent material to absorb the maximum amount of liquid which may possibly remain after emptying. Where the outer packaging is not liquid tight, a means of containing the liquid in the event of leakage must be provided in the form of a leakproof liner, plastic bag or other equally efficient means of containment; and
 - 2) in strong outer packagings.

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