



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-WG/20)**

Virtual, 19 to 23 October 2020

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 2023-2024 Edition

ADDITIONAL PACKING REQUIREMENTS FOR SOLIDS CONTAINING LIQUIDS, N.O.S.

(Presented by D. Brennan)

SUMMARY

This working paper proposes the addition of a leakproof liner where the outer packaging is not leakproof into the packing instructions for solids containing flammable, toxic or corrosive liquids, n.o.s.

Action by the DGP-WG: The DGP-WG is invited to consider the revisions to the packing instructions as shown in the appendix to this working paper.

1. INTRODUCTION

1.1 Earlier this year, the International Air Transport Association (IATA) was advised by one of our member airlines of a dangerous goods incident where leakage from packages was found during unloading of the aircraft. The packages were part of a large consignment of UN 3175 — **Solids containing flammable liquid, n.o.s.**

1.2 The consignment comprised fibreboard outer packagings containing plastic inner packagings of disinfectant wipes impregnated with ethanol. Many of the packages were found to have been loaded on their side and upside down, which over the duration of the flight damaged the lids of the inner packagings allowing liquid to leak into the outer packagings.

1.3 As the dangerous goods are “solids”, there was no requirement for the packages to bear orientation arrows specifying that the packages must be loaded upright during transport.

1.4 Reviewing Part 4;1 — General Packing Requirements there does not appear to be any specific failing by the shipper in how the packages were prepared.

1.5 In considering how to remove the potential for these and other solids containing liquids, n.o.s. (UN Nos. 3243 and 3244) to leak during transport, it was identified that there already exists an additional packing requirement in a number of packing instructions that requires where the outer packaging is not leakproof that a leakproof liner or equally effective means of intermediate containment must be provided.

1.6 It is therefore proposed that this condition be added into the packing instructions for UN 3175 — **Solids containing flammable liquid, n.o.s.**, UN 3243 — **Solids containing toxic liquid, n.o.s.** and UN 3244 — **Solids containing corrosive liquid, n.o.s.**

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

2.1 The DGP-WG is invited to consider the proposed amendments to the packing instructions as shown 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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Chapter 6

CLASS 4 — FLAMMABLE SOLIDS; SUBSTANCES
LIABLE TO SPONTANEOUS COMBUSTION;
SUBSTANCES WHICH, IN CONTACT WITH WATER,
EMIT FLAMMABLE GASES

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<p>Packing Instructions Y440 – Y443 Limited quantities Passenger and cargo aircraft</p>						
<p>General requirements</p> <p>...</p>						
COMBINATION PACKAGINGS						SINGLE PACKAGINGS
<i>Packing instruction</i>	<i>Packing group</i>	<i>Inner packaging (see 6;3.2)</i>	<i>Inner packaging quantity (per receptacle)</i>	<i>Total quantity per package</i>	<i>Total gross mass per package</i>	
...						
<p><u>ADDITIONAL PACKING REQUIREMENTS FOR COMBINATION PACKAGINGS</u></p> <p><u>For UN 3175</u></p> <p>— <u>If the outer packaging is not leakproof, a leakproof liner or equally effective means of intermediate containment must be provided.</u></p> <p>...</p>						

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Packing Instructions 445 – 446

Passenger aircraft

General requirements

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COMBINATION PACKAGINGS					SINGLE PACKAGINGS
<i>Packing instruction</i>	<i>Packing group</i>	<i>Inner packaging (see 6;3.2)</i>	<i>Inner packaging quantity (per receptacle)</i>	<i>Total quantity per package</i>	
...					

ADDITIONAL PACKING REQUIREMENTS FOR COMBINATION PACKAGINGS

For UN 3175

— If the outer packaging is not leakproof, a leakproof liner or equally effective means of intermediate containment must be provided.

Packing Group III

— Packagings must meet the Packing Group II performance requirements.

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Packing Instructions 448 – 449

Cargo aircraft only

General requirements

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COMBINATION PACKAGINGS					SINGLE PACKAGINGS
<i>Packing instruction</i>	<i>Packing group</i>	<i>Inner packaging (see 6;3.2)</i>	<i>Inner packaging quantity (per receptacle)</i>	<i>Total quantity per package</i>	
...					

ADDITIONAL PACKING REQUIREMENTS FOR COMBINATION PACKAGINGS

For UN 3175

- If the outer packaging is not leakproof, a leakproof liner or equally effective means of intermediate containment must be provided.

Packing Group III

- Packagings must meet the Packing Group II performance requirements.

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Chapter 8

CLASS 6 — TOXIC AND INFECTIOUS SUBSTANCES

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COMBINATION PACKAGINGS						SINGLE PACKAGINGS
<i>Packing instruction</i>	<i>Packing group</i>	<i>Inner packaging (see 6;3.2)</i>	<i>Inner packaging quantity (per receptacle)</i>	<i>Total quantity per package</i>	<i>Total gross mass per package</i>	
...						
<u>ADDITIONAL PACKING REQUIREMENTS FOR COMBINATION PACKAGINGS</u>						
<i>For UN 3243</i>						
<u>— If the outer packaging is not leakproof, a leakproof liner or equally effective means of intermediate containment must be provided.</u>						
...						

Packing Instructions 665 – 670

Passenger aircraft

General requirements

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COMBINATION PACKAGINGS					SINGLE PACKAGINGS
<i>Packing instruction</i>	<i>Packing group</i>	<i>Inner packaging (see 6;3.2)</i>	<i>Inner packaging quantity (per receptacle)</i>	<i>Total quantity per package</i>	
...					

ADDITIONAL PACKING REQUIREMENTS FOR COMBINATION PACKAGINGS

For UN 3243

— If the outer packaging is not leakproof, a leakproof liner or equally effective means of intermediate containment must be provided.

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Packing Instructions 672 – 677

Cargo aircraft only

General requirements

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COMBINATION PACKAGINGS					SINGLE PACKAGINGS
<i>Packing instruction</i>	<i>Packing group</i>	<i>Inner packaging (see 6;3.2)</i>	<i>Inner packaging quantity (per receptacle)</i>	<i>Total quantity per package</i>	
...					

ADDITIONAL PACKING REQUIREMENTS FOR COMBINATION PACKAGINGS

For UN 3243

— If the outer packaging is not leakproof, a leakproof liner or equally effective means of intermediate containment must be provided.

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Chapter 10

CLASS 8 — CORROSIVE SUBSTANCES

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Packing Instructions Y843 – Y845

Limited quantities
Passenger and cargo aircraft

General requirements

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COMBINATION PACKAGINGS						SINGLE PACKAGINGS
<i>Packing instruction</i>	<i>Packing group</i>	<i>Inner packaging (see 6;3.2)</i>	<i>Inner packaging quantity (per receptacle)</i>	<i>Total quantity per package</i>	<i>Total gross mass per package</i>	
...						

ADDITIONAL PACKING REQUIREMENTS FOR COMBINATION PACKAGINGS

For UN 3244

— If the outer packaging is not leakproof, a leakproof liner or equally effective means of intermediate containment must be provided.

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Packing Instructions 858 – 860

Passenger aircraft

General requirements

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COMBINATION PACKAGINGS					SINGLE PACKAGINGS
<i>Packing instruction</i>	<i>Packing group</i>	<i>Inner packaging (see 6;3.2)</i>	<i>Inner packaging quantity (per receptacle)</i>	<i>Total quantity per package</i>	
...					

ADDITIONAL PACKING REQUIREMENTS FOR COMBINATION PACKAGINGS

For UN 3244

— If the outer packaging is not leakproof, a leakproof liner or equally effective means of intermediate containment must be provided.

Packing Group III

— Packagings must meet the Packing Group II performance requirements.

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Packing Instructions 862 – 864

Cargo aircraft only

General requirements

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COMBINATION PACKAGINGS					SINGLE PACKAGINGS
<i>Packing instruction</i>	<i>Packing group</i>	<i>Inner packaging (see 6;3.2)</i>	<i>Inner packaging quantity (per receptacle)</i>	<i>Total quantity per package</i>	
...					

ADDITIONAL PACKING REQUIREMENTS FOR COMBINATION PACKAGINGS

For UN 3244

— If the outer packaging is not leakproof, a leakproof liner or equally effective means of intermediate containment must be provided.

Packing Group III

— Packagings must meet the Packing Group II performance requirements.

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