



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-WG/21)**

Virtual Meeting, 24 to 28 May 2021

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

REVISION TO PACKING INSTRUCTION 870

(Presented by D. Brennan)

SUMMARY

This working paper proposes that the reference in Packing Instruction 870 to packing of batteries installed in equipment be deleted as the provisions conflict with classification of equipment with installed batteries as UN 3171 — **Battery-powered equipment**.

Action by the DGP-WG is in paragraph 2.

1. INTRODUCTION

1.1 Packing Instruction 870 applies to UN 2794 — **Batteries, wet, filled with acid** and UN 2795 — **Batteries, wet, filled with alkali**.

1.2 Within Packing Instruction 870, in addition to the packing requirements that apply to the batteries, there is text that sets out provisions for batteries installed in equipment. However, equipment with an installed wet cell battery is no longer classified as UN 2794 or UN 2795, as applicable, but rather the equipment should now be assigned to UN 3171 — **Battery-powered equipment**.

1.3 To address this conflict, it is proposed to modify Packing Instruction 870 to remove reference to batteries installed in equipment.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to consider the revision to Packing Instruction 870 as shown in 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 870

Passenger and cargo aircraft for UN 2794 and 2795 only

General requirements

Part 4, Chapter 1 requirements must be met, including:

1) **Compatibility requirements**

- Substances must be compatible with their packagings as required by 4;1.1.3.
- Metal packagings must be corrosion resistant or be protected against corrosion.

2) **Closure requirements**

- Closures must meet the requirements of 4;1.1.4.

<i>UN number and proper shipping name</i>	<i>Packing conditions</i>	<i>Total quantity per package — passenger</i>	<i>Total quantity per package — cargo</i>
UN 2794 Batteries, wet, filled with acid UN 2795 Batteries, wet, filled with alkali	Batteries must be placed in an acid/alkali-proof liner of sufficient strength and adequately sealed to positively preclude leakage in the event of spillage. The batteries must be packed so that the fill openings and vents, if any, are upward; they must be incapable of short-circuiting and be securely cushioned in the packagings. The upright position of the package must be indicated on it by "Package orientation" labels (Figure 5-29) as required by 5;3. The words "This side up" or "This end up" may also be displayed on the top of the package.	30 kg	No limit
	<i>Batteries installed in equipment</i> If batteries are shipped as an integral component of assembled equipment, they must be securely installed and fastened in an upright position and protected against contact with other articles so as to prevent short circuits. Batteries must be removed and packed according to this packing instruction if the assembled equipment is likely to be carried in other than an upright position.		

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