



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-WG/23)**

Rio de Janeiro, Brazil, 15 to 19 May 2023

- Agenda Item 1: Harmonizing ICAO dangerous goods provisions with UN Recommendations on the Transport of Dangerous Goods (REC-A-DGS-2025)**
- 1.2: 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**

USE OF THE TERMS APPROPRIATE NATIONAL AUTHORITY AND COMPETENT AUTHORITY

(Presented by L. Cascardo)

SUMMARY

This working paper proposes a discussion about how the terms “appropriate national authority” and “competent authority” should be correctly used throughout the Technical Instructions.

Action by the DGP-WG is in paragraph 2.

1. INTRODUCTION

1.1 The Technical Instructions normally refer to civil aviation authorities as the “appropriate national authority”, normally because in some States, some aspects may also be under the responsibility of other government organizations. Appropriate national authority, according to Part 1;3.1.1 is defined as:

“Appropriate national authority. Any authority designated, or otherwise recognized, by a State to perform specific functions related to provisions contained in these Instructions.”

1.2 At the same time, for radioactive material another term is used: competent authority. According to Part 1;3.1.1 a competent authority is “*any body or authority designated or otherwise recognized as such for any purpose in connection with these Instructions*”. A note under that definition clarifies that the use of the term “competent authority” applies to radioactive material only. Notwithstanding that, the Technical Instructions present a few instances where the term “competent authority” is used as a reference to the appropriate national authority. This situation occurs when

intermodal compatibility is needed. Based on that, the note under the definition of “competent authority” do not fully reflect the use of the term in the Technical Instructions.

1.3 While adopting and translating the requirements of the Technical Instructions, we have noticed many situations where the terms “appropriate national authority” and “competent authority” may be used incorrectly according to their definition. Instances of “civil aviation authority”, “appropriate authority”, “appropriate competent authority” are found throughout the Technical Instructions. Besides that, we found the term “competent authority” at some instances where the term “appropriate national authority” was supposed to be used. This causes interpretation problems.

1.4 For that reason, we started to map all the requirements that could generate discussion at the Dangerous Goods Panel. These requirements are highlighted in the appendix to this working paper.

1.5 Our intention is to get feedback on Comments/Questions 1 to 16 so that a working paper can be presented at DGP/29, if the DGP-WG/23 understands this is a way forward. The same work still needs to be done in the Supplement as well.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to:

- a) discuss if the note under the definition of “competent authority” should be changed to reflect that the term is not only used for radioactive material; and
- b) review the appendix to this working paper and provide comments to the author.

APPENDIX

INSTANCES OF “CIVIL AVIATION AUTHORITY”, “APPROPRIATE AUTHORITY”, “APPROPRIATE COMPETENT AUTHORITY”, AND NATIONAL AUTHORITY IN THE TECHNICAL INSTRUCTIONS

Part 1

GENERAL

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Chapter 2

LIMITATION OF DANGEROUS GOODS ON AIRCRAFT

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2.3 TRANSPORT OF DANGEROUS GOODS BY POST

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2.3.3 The procedures of designated postal operators (DPOs) for controlling the introduction of dangerous goods in mail into air transport are subject to review and approval by the civil aviation authority of the State where the mail is accepted.

2.3.4 The DPO must have received specific approval from the civil aviation authority before the DPO can introduce the acceptance of lithium batteries as identified in 2.3.2 d) and e).

Note 1.— Designated postal operators may accept the dangerous goods identified in 2.3.2 a), b) and c) without receiving specific approval from the civil aviation authority.

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Chapter 4

DANGEROUS GOODS TRAINING

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4.7 DESIGNATED POSTAL OPERATORS

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4.7.2 Dangerous goods training programmes for designated postal operators must be subjected to review and approval by the **civil aviation authority** of the State where the mail was accepted by the designated postal operator.

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Comment/Question 1

Do we use “civil aviation authority” because of the UPU convention? Do we still want to use that terminology, or we should change it to “appropriate national authority”? Not all civil aviation authorities have the jurisdiction over their DPOs.

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Chapter 5

DANGEROUS GOODS SECURITY

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5.4 SECURITY PLANS

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*Note.— When **national authorities** issue exemptions, they should consider all of the provisions in this Chapter.*

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Comment/Question 2

We should change it to “appropriate national authorities”.

...

*Note.— Operators, shippers and others with responsibilities for the safe and secure transport of dangerous goods should cooperate with each other and with **appropriate authorities** to exchange threat information, apply appropriate security measures and respond to security incidents.*

Comment/Question 3

Do we need to change it to “appropriate national authorities”?

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Part 2**CLASSIFICATION OF DANGEROUS GOODS****Chapter 1****CLASS 1 — EXPLOSIVES**

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Note 1.— Class 1 is a restricted class, that is, only those explosive substances and articles that are listed in the Dangerous Goods List may be accepted for transport. However, the appropriate authorities of the States concerned retain the right by mutual agreement to approve transport of explosive substances and articles for special purposes under special conditions. Therefore, entries have been included in the Dangerous Goods List for “Substances, explosive, n.o.s.” and “Articles, explosive, n.o.s.”. It is intended that these entries be used only when no other method of operation is possible.

Comment/Question 4

Do we want to keep this as a standard?

- Use “appropriate national authority” when the expression is not accompanied by the words “of the State...”
- Use “appropriate authority” when it is accompanied by “of the State...”.

...

Chapter 4

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

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4.2 FLAMMABLE SOLIDS, SELF-REACTIVE SUBSTANCES, DESENSITIZED EXPLOSIVES AND POLYMERIZING SUBSTANCES

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4.2.3 Division 4.1 — Self-reactive substances

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4.2.3.2.5 Classification of self-reactive substances not listed in Table 2-6 and assignment to a generic entry must be made by the appropriate authority of the State in which the dangerous goods were manufactured on the basis of a test report. Principles applying to the classification of such substances are provided in 2.4.2.3.3 of the UN Recommendations. The applicable classification procedures, test methods and criteria, and an example of a suitable test report, are given in the current edition of the UN *Manual of Tests and Criteria*, Part II. The statement of approval must contain the classification and the relevant transport conditions.

See Comment/Question 4

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Chapter 5

CLASS 5 — OXIDIZING SUBSTANCES; ORGANIC PEROXIDES

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5.2 OXIDIZING SUBSTANCES (DIVISION 5.1)

5.2.1 Classification in Division 5.1

5.2.1.1 Oxidizing substances are classified in Division 5.1 in accordance with the test methods, procedures and criteria in 5.2.2, 5.2.3 and the UN *Manual of Tests and Criteria*, Part III, section 34. In the event of divergence between test results and known experience, the **appropriate authority** of the State in which the dangerous goods were manufactured must be consulted to establish the appropriate classification and packing group.

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See Comment/Question 4

5.3.2 Classification of organic peroxides

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5.3.2.4 *List of currently assigned organic peroxides in packagings*

Table 2-7 provides a list of currently assigned organic peroxides in packagings. Classification of organic peroxides not listed in Table 2-7 and assignment to a generic entry must be made by the **appropriate authority** of the State in which the dangerous goods were manufactured on the basis of a test report. Principles applying to the classification of such substances are provided in 2.5.3.3 of the UN Recommendations. The applicable classification procedures, test methods and criteria, and an example of a suitable test report, are given in the current edition of the UN *Manual of Tests and Criteria*, Part II. The statement of approval must contain the classification and the relevant transport conditions.

See Comment/Question 4

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5.3.4 Desensitization of organic peroxides

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5.3.4.4 Water may only be used for the desensitization of organic peroxides which are shown in Table 2-7 or in the statement of approval according to 5.3.2.4 with the approval of the **appropriate authority** of the State of Manufacture or when the organic peroxide formulation is specified as being with water or as a stable dispersion in water.

See Comment/Question 4

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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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Column 13 “Cargo aircraft only — Maximum net quantity per package” — this column provides information similar to that in column 11, but for articles or substances which may be transported on a cargo aircraft only. The maximum quantity per package may be further limited by the type of packaging used. The maximum net quantities indicated do not apply to transport in portable tanks, as permitted in the Supplement to these Instructions, Part S-4, Chapter 12, with the approval of the appropriate authority of the State of Origin and the State of the Operator. The maximum net quantities indicated may be exceeded only if specified in these Instructions or as permitted in the Supplement to these Instructions in S-3;2 with the approval of the appropriate national authority of the State of Origin and the State of the Operator.

See Comment/Question 4

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Chapter 3

SPECIAL PROVISIONS

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Table 3-2. Special provisions

<i>T/Is</i>	<i>UN</i>
A1	This article or substance may be transported on passenger aircraft only with the prior approval of the appropriate authority of the State of Origin and the State of the Operator under the written conditions established by those authorities. The conditions must include the quantity limitations and packing requirements and these must comply with S-3;1.2.2 of the Supplement. A copy of the document(s) of approval, showing the quantity limitations and packing requirements, must accompany the consignment. Transport in accordance with this special provision must be noted on the dangerous goods transport document. The article or substance may be carried on cargo aircraft in accordance with columns 12 and 13 of Table 3-1. ...
A2	This article or substance may be transported on cargo aircraft only with the prior approval of the appropriate authority of the State of Origin and the State of the Operator under the written conditions established by those authorities. ...

See Comment/Question 4

A17 (≈288) These substances must not be classified and transported unless authorized by the **appropriate authority** of the State in which the dangerous goods were manufactured on the basis of results from Series 2 tests and a Series 6(c) test of the UN Manual of Tests and Criteria on packages as prepared for transport.

See Comment/Question 4

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A49 (≈127) Other inert material or inert material mixture may be used at the discretion of the **appropriate authority** of the State in which the dangerous goods were manufactured, provided this inert material has identical phlegmatizing properties.

See Comment/Question 4

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A62 (178) This designation may only be used when no other appropriate designation exists in the list and then only with the approval of the **appropriate authority** of the State in which the dangerous goods were manufactured.

See Comment/Question 4

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A73 (237) The membrane filters, including paper separators, coating, or backing materials, etc., that are present in transport, must not be liable to propagate a detonation as tested by one of the tests described in the UN *Manual of Tests and Criteria*, Part I, Test Series 1(a).

In addition, the **appropriate authority** may determine, on the basis of the results of suitable burning rate tests taking account of the standard tests in the UN *Manual of Tests and Criteria*, Part III, subsection 33.2.1, that nitrocellulose membrane filters in the form in which they are to be transported are not subject to the provisions of these Instructions applicable to flammable solids in Division 4.1.

Comment/Question 5

In this case, we should be using “appropriate national authority”.

A78 (≈172) ...

- c) For the purposes of documentation and package marking, the proper shipping name must be supplemented with the name of the constituents which most predominantly contribute to this subsidiary hazard(s) and which must be enclosed in parenthesis. However, where the constituent is listed by name in Table 3-1 and:
- i) “forbidden” is shown in columns 10 and 11, the dangerous goods transport document must indicate Cargo Aircraft Only and the package must bear cargo aircraft only labels, except that the substance may be shipped on a passenger aircraft with the prior approval of the appropriate authority of the State of Origin and the State of the Operator under the conditions established by those authorities. A copy of the document of approval, showing the quantity limitations and the packaging requirements, must accompany the consignment; and
 - ii) “forbidden” is shown in columns 12 and 13, the substance is forbidden for transport by air except that the substance may be shipped on a cargo aircraft with the prior approval of the appropriate authority of the State of Origin and the State of the Operator under the conditions established by those authorities. A copy of the document of approval, showing the quantity limitations and the packaging requirements, must accompany the consignment.

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 See Comment/Question 4

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- A88 Pre-production prototypes of lithium batteries or cells, when these prototypes are transported for testing, or low production runs (i.e. annual production runs consisting of not more than 100 lithium batteries or cells) of lithium batteries or cells that have not been tested to the requirements in Part III, subsection 38.3 of the UN *Manual of Tests and Criteria* may be transported aboard cargo aircraft if approved by the appropriate authority of the State of Origin and the State of the Operator and the requirements in Packing Instruction 910 of the Supplement are met.

 See Comment/Question 4

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- A99 Irrespective of the quantity limits for cargo aircraft specified in column 13 of Table 3-1, and in Section I of Packing Instructions 965, 966, 967, 968, 969 and 970, a lithium cell or battery (i.e. UN 3090 or UN 3480), including when packed with equipment or contained in equipment (i.e. UN 3091 or UN 3481) that meets the other requirements of Section I of the applicable packing instruction, may have a mass exceeding 35 kg, if approved by the appropriate authority of the State of Origin and the State of the Operator and the requirements in Packing Instruction 974 of the Supplement are met.

A copy of the document of approval must accompany the consignment. Transport in accordance with this special provision must be noted on the dangerous goods transport document.

 See Comment/Question 4

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- A106 This entry may only be used for samples of chemicals taken for analysis in connection with the implementation of the Chemical Weapons Convention.

They may be transported on a passenger or cargo aircraft providing prior approval has been granted by the appropriate authority of the State of Origin or the Director General of the Organization for the Prohibition of Chemical Weapons and providing the samples comply with the requirements shown against the entry for chemical samples in Table S-3-1 of the Supplement.

 See Comment/Question 4

A107 (≈301) 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 articles. It must not be used for articles for which a proper shipping name already exists in Table 3-1.

Where the quantity of dangerous goods contained as an integral element in articles exceeds the limits permitted by Packing Instruction 962, and the dangerous goods meet the provisions of Special Provision 301 of the UN Model Regulations, the articles may be transported only with the prior approval of the appropriate authority of the State of Origin and the State of the Operator under the written conditions established by those authorities.

See Comment/Question 4

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A133 (311) Substances must not be transported under this entry unless approved by the appropriate national authority on the basis of the results of appropriate tests according to Part I of the UN *Manual of Tests and Criteria*. Packaging must ensure that the percentage of diluent does not fall below that stated in the appropriate authority approval at any time during transport.

Comment/Question 6

In this case, we should be using “appropriate national authority”.

...

A201 In instances where other forms of transport (including cargo aircraft) are impracticable, lithium cells or batteries may be transported as Class 9 (UN 3480 or UN 3090) on passenger aircraft with the prior approval of the authority of the State of Origin, the State of the Operator and the State of Destination under the written conditions established by those authorities, provided that the quantities per package do not exceed:

Authorities issuing exemptions or approvals in accordance with this special provision must provide a copy to the Chief of the Cargo Safety Section within three months via email at CSS@icao.int, via facsimile at +1 514-954-6077 or via post to the following address:

...

See Comment/Question 4

In instances where other forms of transport (including cargo aircraft) are impracticable and in the case of urgent medical need, one consignment of lithium batteries may be transported as Class 9 (UN 3480 or UN 3090) on a passenger aircraft with the prior approval of the authority of the State of Origin and with the approval of the operator under the following conditions:

Comment/Question 7

In this case, we should be using “appropriate national authority” or “appropriate authority” depending on the outcome of the discussion.

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A210 This substance is forbidden for transport by air. It may be transported on cargo aircraft only with the prior approval of the appropriate authority of the State of Origin and the State of the Operator under the written conditions established by those authorities.

See Comment/Question 4

Part 4**PACKING INSTRUCTIONS****INTRODUCTORY NOTES**

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Note 6.— Portable tanks

With the approval of the **appropriate authority** of the State of Origin and the State of the Operator, certain dangerous goods may also be carried on cargo aircraft in portable tanks in accordance with the provisions of Part S-4, Chapter 12 of the Supplement.

See Comment/Question 4

Note 7.— Carriage of oxygen and air with aquatic animals

With the approval of the **appropriate authority** of the State of Origin and the State of the Operator, for the purpose of providing life support to aquatic animals during transport, cylinders containing Oxygen compressed (UN 1072) or Air, compressed (UN 1002) may be carried to oxygenate the water in accordance with the provisions of Table S-3-1 and Special Provision A302 (which appear in the Supplement).

See Comment/Question 4

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Note 10.— Carriage of flames

With the approval of the **appropriate authority** of the State of Origin and the State of the Operator, lamps fuelled by UN 1223 — **Kerosene** or UN 3295 — **Hydrocarbons, liquid, n.o.s.**, carried by a passenger to transport a symbolic flame (e.g. Olympic flame, Peace flame) may be carried in accordance with the provisions of Special Provision A324 (which appears in the Supplement to this document).

See Comment/Question 4

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Note 12.— Large packagings

With the approval of the **appropriate authority** of the State of Origin and the State of the Operator, an article with a total net mass exceeding 400 kg may be packed in large packagings and carried on cargo aircraft in accordance with the provisions of Part S-4;13 of the Supplement.

See Comment/Question 4

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Chapter 1

GENERAL PACKING REQUIREMENTS

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1.1 GENERAL REQUIREMENTS APPLICABLE TO ALL CLASSES EXCEPT CLASS 7

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1.1.3.4 Shippers must ensure that all appropriate measures have been taken to ensure that the packagings used are compatible with the dangerous goods to be transported. Evidence of such measures or assessments must be made available to the competent authority upon request.

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Comment/Question 8

In this case, we should be using “appropriate national authority”. “Competent authority” should be exclusive to radioactive material and some specific instances related to multimodal transport.

Chapter 2

GENERAL

...

2.7.2 Every design type of cylinder must be approved by the competent authority of the country of manufacture or as indicated in 6;5.

Comment/Question 9

In this case, we should be using “appropriate national authority” or “appropriate authority” depending on the outcome of the discussion. “Competent authority” should be exclusive to radioactive material and some specific instances related to multimodal transport.

...

2.7.7 Unless otherwise indicated cylinders must be subjected to a periodic inspection and test every 5 years. The periodic inspection must include an external examination, an internal examination or alternative method as approved by the competent authority, a pressure test or equivalent effective non-destructive testing with the agreement of the competent authority including an inspection of all accessories (e.g. tightness of valves, emergency relief valves of fusible elements). Cylinders must not be filled after they become due for periodic inspection and test but may be transported after the expiry of the time limit. Cylinder repairs must meet the requirements of 4.1.1.11.

...

See Comment/Question 8

2.7.10 Marking of cylinders for liquids and solids according to 2.7 (not conforming to the requirements of 6;5) must be in accordance with the requirements of the competent authority of the country of manufacturing.

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See Comment/Question 8

2.8 The appropriate authority of the State of Origin may approve the use of a packaging alternative to those provided in a particular packing instruction indicated in Table 3-1 for listed dangerous goods provided:

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See Comment/Question 9

- d) the appropriate authority of the State of Origin determines that the alternative packaging achieves at least the same level of safety as if the substance were packed in accordance with a method specified in the particular packing instruction indicated in Table 3-1;

...

See Comment/Question 9

2.9 UNPACKAGED ARTICLES OTHER THAN CLASS 1 ARTICLES

The appropriate authority of the State of Origin and the State of the Operator may approve the transport of large and robust articles which cannot be packaged in accordance with the requirements of 6;1 to 6;4, where they have to be transported empty, uncleaned and unpackaged, providing they comply with the requirements in Part S-4, Chapter 3 of the Supplement.

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See Comment/Question 9

Chapter 4

CLASS 2 — GASES

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<p style="text-align: center;">Packing Instruction 216</p> <p style="text-align: center;">Passenger and cargo aircraft for UN 3478 and 3479 (contained in equipment) only</p> <p>...</p> <p>ADDITIONAL PACKING REQUIREMENTS</p> <p>...</p> <ul style="list-style-type: none">— On passenger aircraft, each fuel cell system and each fuel cell cartridge must conform to IEC 62282-6-100 Ed. 1, including Amendment 1, or a standard approved by the appropriate authority of the State of Origin. <p>...</p>

...

See Comment/Question 4

Packing Instruction 218

General requirements

The general requirements of 4;4.1 applicable to cylinders must be met. Cylinders, constructed as specified in 6;5 are authorized for the transport of UN 3500, UN 3501, UN 3502, UN 3503, UN 3504 and UN 3505. Cylinders other than UN marked and certified cylinders may be used if the design, construction, testing, approval and marks conform to the requirements of the appropriate national authority of the State in which they are approved and filled. The substances contained must be permitted in cylinders and permitted for air transport according to these Instructions. Cylinders for which prescribed periodic tests have become due must not be charged and offered for transport until such retests have been successfully completed.

...

Comment/Question 10

In this case, we should be using “appropriate national authority” or “appropriate authority” depending on the outcome of the discussion.

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Packing Instruction 220

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Batteries

All batteries must be installed and securely fastened in the battery holder of the machine or equipment and must be protected in such a manner so as to prevent damage and short circuits. In addition:

...

2) If lithium batteries are installed:

...

- ii) lithium batteries must meet the provisions of Part 2;9.3, except that pre-production prototypes of lithium batteries or cells, when these prototypes are transported for testing, or low production runs of lithium batteries or cells that have not been tested to the requirements in Part III, subsection 38.3 of the UN Manual of Tests and Criteria may be transported aboard cargo aircraft if approved by the appropriate authority of the State of Origin and the State of the Operator. A copy of the document of approval must accompany the consignment.

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See Comment/Question 4

Chapter 5**CLASS 3 — FLAMMABLE LIQUIDS**

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Packing Instruction 375

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ADDITIONAL PACKING REQUIREMENTS

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- On passenger aircraft, each fuel cell system and each fuel cell cartridge must conform to IEC 62282-6-100 Ed. 1, including Amendment 1, or a standard approved by the appropriate authority of the State of Origin.

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See Comment/Question 4

Packing Instruction 378

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ADDITIONAL PACKING REQUIREMENTS

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Batteries

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- 2) If lithium batteries are installed:

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- ii) lithium batteries must meet the provisions of Part 2;9.3, except that pre-production prototypes of lithium batteries or cells, when these prototypes are transported for testing, or low production runs of lithium batteries or cells that have not been tested to the requirements in Part III, subsection 38.3 of the UN *Manual of Tests and Criteria* may be transported aboard cargo aircraft if approved by the appropriate authority of the State of Origin and the State of the Operator. A copy of the document of approval must accompany the consignment.

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See Comment/Question 4

Chapter 6

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

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Packing Instruction 496

Passenger and cargo aircraft for UN 3476 (contained in equipment) only

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ADDITIONAL PACKING REQUIREMENTS

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- On passenger aircraft, each fuel cell system and each fuel cell cartridge must conform to IEC 62282-6-100 Ed. 1, including Amendment 1, or a standard approved by the appropriate authority of the State of Origin.

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See Comment/Question 4

Chapter 8

CLASS 6 — TOXIC AND INFECTIOUS SUBSTANCES

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Packing Instruction 620

3.

This packing instruction applies to UN 2814 and UN 2900.

The following packagings are authorized provided the special packing provisions are met.

Packagings meeting the requirements of 6;6 and approved accordingly consisting of:

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Additional requirements:

...

- g) Alternative packagings for the transport of animal material may be authorized by the competent authority in accordance with the provisions of 4;2.8.

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See Comment/Question 8

Packing Instruction 650

This packing instruction applies to UN 3373.

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Additional requirements:

- 1) Alternative packagings for the transport of animal material may be authorized by the **competent authority** in accordance with the provisions of 4;2.8.

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See Comment/Question 8

Chapter 10**CLASS 8 — CORROSIVE SUBSTANCES**

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Packing Instruction 874

Passenger and cargo aircraft for UN 3477 (contained in equipment) only

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ADDITIONAL PACKING REQUIREMENTS

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- On passenger aircraft, each fuel cell system and each fuel cell cartridge must conform to IEC 62282-6-100 Ed. 1, including Amendment 1, or a standard approved by the **appropriate authority** of the State of Origin.

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See Comment/Question 4

Chapter 11

CLASS 9 — MISCELLANEOUS DANGEROUS GOODS

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Packing Instruction 950

Passenger and cargo aircraft for UN 3166 only

(See Packing Instruction 220 for flammable gas-powered engines and machinery, Packing Instruction 378 for flammable liquid-powered engines and machinery, Packing Instruction 951 for flammable gas-powered vehicles, Packing Instruction 952 for battery-powered equipment and vehicles or Packing Instruction 972 for engines or machinery containing only environmentally hazardous fuels)

...

ADDITIONAL PACKING REQUIREMENTS

Batteries

All batteries must be installed and securely fastened in the battery holder of the vehicle and must be protected in such a manner so as to prevent damage and short circuits. In addition:

...

2) If lithium batteries are installed:

...

- ii) lithium batteries must meet the provisions of Part 2;9.3, except that pre-production prototypes of lithium batteries or cells, when these prototypes are transported for testing, or low production runs of lithium batteries or cells that have not been tested to the requirements in Part III, subsection 38.3 of the UN *Manual of Tests and Criteria* may be transported aboard cargo aircraft if approved by the appropriate authority of the State of Origin and the State of the Operator. A copy of the document of approval must accompany the consignment.

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See Comment/Question 4

Packing Instruction 951

Cargo aircraft only for UN 3166 only

(See Packing Instruction 220 for flammable gas-powered engines and machinery, Packing Instruction 378 for flammable liquid-powered engines and machinery, Packing Instruction 950 for flammable liquid-powered vehicles, Packing Instruction 952 for battery-powered equipment and vehicles or Packing Instruction 972 for engines or machinery containing only environmentally hazardous fuels)

...

ADDITIONAL PACKING REQUIREMENTS

Batteries

All batteries must be installed and securely fastened in the battery holder of the vehicle and must be protected in such a manner so as to prevent damage and short circuits. In addition:

...

2) If lithium batteries are installed:

...

- ii) lithium batteries must meet the provisions of Part 2;9.3, except that pre-production prototypes of lithium batteries or cells, when these prototypes are transported for testing, or low production runs of lithium

batteries or cells that have not been tested to the requirements in Part III, subsection 38.3 of the UN *Manual of Tests and Criteria* may be transported aboard cargo aircraft if approved by the **appropriate authority** of the State of Origin and the State of the Operator. A copy of the document of approval must accompany the consignment.

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See Comment/Question 4

Packing Instruction 952

Passenger and cargo aircraft for UN 3171 only

(See Packing Instruction 220 for flammable gas-powered engines and machinery, Packing Instruction 378 for flammable liquid-powered engines and machinery, Packing Instruction 950 for flammable liquid-powered vehicles, Packing Instruction 951 for flammable gas-powered vehicles or Packing Instruction 972 for engines or machinery containing only environmentally hazardous fuels)

ADDITIONAL PACKING REQUIREMENTS

Batteries

All batteries must be installed and securely fastened in the battery holder of the vehicle, machine or equipment and must be protected in such a manner so as to prevent damage and short circuits. In addition:

...

2) If lithium batteries are installed:

...

ii) lithium batteries must meet the provisions of Part 2:9.3, unless otherwise approved by the **appropriate authority** of the State of Origin, except that pre-production prototypes of lithium batteries or cells, when these prototypes are transported for testing, or low production runs of lithium batteries or cells that have not been tested to the requirements in Part III, subsection 38.3 of the UN *Manual of Tests and Criteria* may be transported aboard cargo aircraft if approved by the **appropriate authority** of the State of Origin and the State of the Operator. A copy of the document of approval must accompany the consignment.

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See Comment/Question 4

Packing Instruction 953

Passenger and cargo aircraft for UN 2807 only

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Magnetized material with a field strength sufficient to cause a compass deflection of more than 2 degrees at a distance of 4.6 m may only be transported with the prior approval of the appropriate authority of the State of Origin and the State of the Operator.

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See Comment/Question 4

Packing Instruction 965

Cargo aircraft only for UN 3480

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IA.2 Additional requirements

- A lithium ion cell or battery with a mass of 12 kg or greater and having a strong, impact-resistant outer casing may be transported when packed in strong outer packagings or protective enclosures (e.g. in fully enclosed or wooden slatted crates) not subject to the requirements of Part 6 of these Instructions, if approved by the appropriate authority of the State of Origin. A copy of the document of approval must accompany the consignment.

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See Comment/Question 4

Packing Instruction 968
Cargo aircraft only for UN 3090

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2. Lithium batteries forbidden from transport

...

Waste lithium batteries and lithium batteries being shipped for recycling or disposal are forbidden from air transport unless approved by the appropriate national authority of the State of Origin and the State of the Operator.

Comment/Question 11

In this case, we should be using “appropriate national authority” or “appropriate authority” depending on the outcome of the discussion.

...

IA.2 Additional requirements

...

- A lithium metal cell or battery with a mass of 12 kg or greater and having a strong, impact-resistant outer casing may be transported when packed in strong outer packagings or protective enclosures (e.g. in fully enclosed or wooden slatted crates) not subject to the requirements of Part 6 of these Instructions, if approved by the appropriate authority of the State of Origin. A copy of the document of approval must accompany the consignment.

See Comment/Question 4

Packing Instruction 972

Passenger or cargo aircraft for UN 3530 only

(See Packing Instruction 220 for flammable gas-powered engines and machinery, Packing Instruction 378 for flammable liquid-powered engines and machinery, Packing Instruction 950 for flammable liquid-powered vehicles, Packing Instruction 951 for flammable gas-powered vehicles or Packing Instruction 952 for battery-powered equipment and vehicles)

...

ADDITIONAL PACKING REQUIREMENTS

...

Batteries

All batteries must be installed and securely fastened in the battery holder of the machine or equipment and must be protected in such a manner so as to prevent damage and short circuits. In addition:

...

- 2) If lithium batteries are installed:

...

- ii) they must meet the provisions of Part 2;9.3, except that pre-production prototypes of lithium batteries or cells, when these prototypes are transported for testing, or low production runs of lithium batteries or cells that have not been tested to the requirements in Part III, subsection 38.3 of the UN *Manual of Tests and Criteria* may be transported aboard cargo aircraft if approved by the appropriate authority of the State of Origin and the State of the Operator. A copy of the document of approval must accompany the consignment.

...

See Comment/Question 4

Part 6

PACKAGING NOMENCLATURE, MARKING, REQUIREMENTS AND TESTS

Chapter 1

APPLICABILITY, NOMENCLATURE AND CODES

...

1.1.2 The requirements for packagings in Chapter 3 are based on packagings currently used. In order to take into account progress in science and technology, there is no objection to the use of packagings having specifications different from those in Chapter 3, provided they are equally effective, acceptable to the appropriate authority and able to successfully fulfil the requirements described in 4;1.1.18 and Chapter 4. Methods of testing other than those described in these Instructions are acceptable, provided they are equivalent.

...

Comment/Question 12

In this case, we should be using “appropriate national authority”.

Chapter 2

MARKING OF PACKAGINGS OTHER THAN INNER PACKAGINGS

Introductory Notes

...

Note 2.— The marks are intended to be of assistance to packaging manufacturers, reconditioners, packaging users, operators and appropriate authorities. In relation to the use of a new packaging, the original marks are a means for its manufacturer(s) to identify the type and to indicate those performance test regulations that have been met.

...

Comment/Question 13

In this case, we should be using “appropriate national authority”.

Chapter 5

REQUIREMENTS FOR THE CONSTRUCTION AND TESTING OF CYLINDERS AND CLOSED CRYOGENIC RECEPTACLES, AEROSOL DISPENSERS AND SMALL RECEPTACLES CONTAINING GAS (GAS CARTRIDGES) AND FUEL CELL CARTRIDGES CONTAINING LIQUEFIED FLAMMABLE GAS

...

5.1.5 Initial inspection and testing

...

5.1.5.2 Closed cryogenic receptacles must be subjected to testing and inspection during and after manufacture in accordance with the applicable design standards or recognized technical codes, including the following:

For all inner vessels:

- f) a hydraulic pressure test. The inner vessel must meet the acceptance criteria specified in the design and construction technical standard or technical code;

*Note.— With the agreement of the **competent authority**, the hydraulic pressure test may be replaced by a test using a gas, where such an operation does not entail any danger.*

...

See Comment/Question 8

5.1.7 Requirements for manufacturers

5.1.7.2 A proficiency test of the manufacturers of cylinder shells and the inner vessels of closed cryogenic receptacle must in all instances be carried out by an inspection body approved by the **competent authority of the country of approval**.

See Comment/Question 9

Proficiency testing of manufacturers of closures must be carried out if the **competent authority** requires it. This test must be carried out either during design type approval or during production inspection and certification.

...

See Comment/Question 8

5.2 REQUIREMENTS FOR UN CYLINDERS AND CLOSED CRYOGENIC RECEPTACLES

...

5.2.5 Conformity assessment system and approval for manufacture of cylinders and closed cryogenic receptacles

...

5.2.5.1.2 The requirements of 5.2.5 must be used for the conformity assessments of cylinders and closed cryogenic receptacles. Paragraph 5.1.4.4 gives details of which parts of cylinders and closed cryogenic receptacles may be conformity assessed separately. However, the requirements of 5.2.5 may be replaced by requirements specified by the **competent authority** in the following cases:

...

See Comment/Question 8

CHAPTER 6

PACKAGINGS FOR INFECTIOUS SUBSTANCES OF CATEGORY A (UN 2814 AND UN 2900)

...

6.2 REQUIREMENTS FOR PACKAGINGS

6.2.1 The requirements for packagings in this section are based on packagings, as specified in Chapter 2, currently used. In order to take into account progress in science and technology, there is no objection to the use of packagings having specifications different from those in this chapter provided that they are equally effective, acceptable to the **competent authority** and able to successfully fulfil the requirements described in 6.5. Methods of testing other than those described in these Instructions are acceptable provided they are equivalent.

6.2.2 Packagings must be manufactured and tested under a quality assurance programme which satisfies the **competent authority** in order to ensure that each packaging meets the requirements of this chapter.

See Comment/Question 8

...

6.4 MARKING

...

*Note 2.— The marks are intended to be of assistance to packaging manufacturers, reconditioners, packaging users, operators and **appropriate authorities**.*

See Comment/Question 4

...

6.4.2 A packaging that meets the requirements of this section and of 6.5 shall be marked with:

...

f) the name of the manufacturer or other identification of the packaging specified by the **competent authority**; and

See Comment/Question 8

6.4.3 Marks must be applied in the sequence of the sub-paragraphs in 6.4.2; each mark required in these sub-paragraphs must be clearly separated, e.g. by a slash or space, so as to be easily identified. For an example see 6.4.4. Any additional markings authorized by a **competent authority** must still enable the marks required in 6.4.1 to be correctly identified.

See Comment/Question 8

...

6.5 TEST REQUIREMENTS FOR PACKAGINGS

6.5.1 Performance and frequency of tests

6.5.1.1 The design type of each packaging must be tested as provided for in this chapter in accordance with procedures established by the **competent authority**.

See Comment/Question 8

...

6.5.1.3 Tests must be repeated on production samples at intervals established by the **competent authority**.

...

6.5.1.5 The **competent authority** may permit the selective testing of packagings that differ only in minor respects from a tested type, e.g. smaller sizes or lower net mass of primary receptacles; and packagings such as drums and boxes which are produced with small reductions in external dimension(s).

See Comment/Question 8

6.5.1.7 The **competent authority** may at any time require proof, by tests in accordance with this chapter, that serially produced packagings meet the requirements of the design type tests.

6.5.1.8 Provided the validity of the test results is not affected, and with the approval of the **competent authority**, several tests may be made on one sample.

See Comment/Question 8

...

Part 7

OPERATOR'S RESPONSIBILITIES

Chapter 1

ACCEPTANCE PROCEDURES

...

1.6 UNDELIVERABLE CONSIGNMENTS OF RADIOACTIVE MATERIAL

Where a consignment is undeliverable, the consignment must be placed in a safe location and the **appropriate competent authority** must be informed as soon as possible and a request made for instructions on further action.

Comment/Question 14

In this case, we should be using "competent authority". "Appropriate competent authority" is not used in the Technical Instructions.

...

Chapter 2

STORAGE AND LOADING

...

2.5 DAMAGED PACKAGES OF DANGEROUS GOODS

Where any package of dangerous goods loaded on an aircraft appears to be damaged or leaking, the operator must remove such package from the aircraft, or arrange for its removal by an appropriate authority or organization, and thereafter arrange for its safe disposal. In the case of a package which appears to be leaking, the operator must ensure the remainder of the consignment is in a proper condition for transport by air and that no other package, baggage or cargo has been contaminated. See 3.1 and 3.2 of this Part concerning action to be taken in the event of damage to packages containing infectious substances in Class 6 and radioactive materials in Class 7.

Comment/Question 15

This requirement is different. We are talking about another authority. Do we need any changes to this text?

...

Chapter 4

PROVISION OF INFORMATION

...

4.4 REPORTING OF DANGEROUS GOODS ACCIDENTS AND INCIDENTS

An operator must report dangerous goods accidents and incidents to the appropriate authorities of the State of the Operator and the State in which the accident or incident occurred in accordance with the reporting requirements of those appropriate authorities.

Comment/Question 16

The first one should follow the discussion under comment 4. The second one could be changed either to “appropriate national authorities” or just “those authorities”.

...

4.5 REPORTING OF UNDECLARED OR MISDECLARED DANGEROUS GOODS

An operator must report any occasion when undeclared or misdeclared dangerous goods are discovered in cargo or mail. Such a report must be made to the appropriate authorities of the State of the Operator and the State in which this occurred. An operator must also report any occasion when dangerous goods not permitted under 8;1.1.1 are discovered by the operator, or the operator is advised by the entity that discovers the dangerous goods, either in the baggage or on the person, of passengers or crew members. Such a report must be made to the appropriate authority of the State in which this occurred.

See Comment/Question 4

...

4.6 REPORTING OF DANGEROUS GOODS OCCURRENCES

An operator must report to the appropriate authority of the State of the Operator any occasion when:

See Comment/Question 4

...

**4.7 INFORMATION BY THE OPERATOR IN CASE
OF AN AIRCRAFT ACCIDENT OR INCIDENT**

4.7.1 In the event of:

- a) an aircraft accident; or
- b) a serious incident where dangerous goods carried as cargo may be involved,

the operator of the aircraft carrying dangerous goods as cargo must, without delay, provide to emergency services responding to the accident or serious incident, information about the dangerous goods on board, as shown on the copy of the information provided to the pilot-in-command. As soon as possible, the operator must also provide this information to the appropriate authorities of the State of the Operator and the State in which the accident or serious incident occurred.

4.7.2 In the event of an aircraft incident, if requested to do so, the operator of an aircraft carrying dangerous goods as cargo must, without delay, provide to emergency services responding to the incident and to the appropriate authority of the State in which the incident occurred, information about the dangerous goods on board, as shown on the copy of the information provided to the pilot-in-command.

See Comment/Question 4

...

— END —