DANGEROUS GOODS PANEL (DGP)

TWENTY-THIRD MEETING

Montréal, 11 to 21 October 2011

Agenda Item 3: Development of recommendations for amendments to the Supplement to the Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284SU) for incorporation in the 2013-2014 Edition

DRAFT AMENDMENTS TO THE SUPPLEMENT TO THE TECHNICAL INSTRUCTIONS TO ALIGN WITH THE UN RECOMMENDATIONS

(Presented by the Secretary)

SUMMARY

This working paper contains draft amendments to the Supplement to the Technical Instructions to reflect the decisions taken by the UN Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals at its fifth session (Geneva, 10 December 2010). It also reflects amendments agreed by DGP-WG/10 (Abu Dhabi, United Arab Emirates, 7 to 11 November 2010) and DGP-WG/11 (Atlantic City, United States, 4 to 8 April 2011).

The DGP is invited to agree to the draft amendments in this working paper.

DGP/23-WP/3, paragraph 3.3.3:

Part S-1

GENERAL

(ADDITIONAL INFORMATION FOR PART 1 OF THE **TECHNICAL INSTRUCTIONS)**

Chapter 1

SCOPE AND APPLICABILITY

1.1 **DESIGNATION OF NATIONAL AUTHORITY**

1.1.2 In addition, contact information for other agencies responsible for specific classes (e.g. radioactive material, infectious substances) or for specific actions (e.g. issuance of approvals or exemptions) should be included.

Note. — For the separation of explosives, see Part 7;2.3.

Part S-3. DANGEROUS GOODS LIST AND LIMITED QUANTITIES EXCEPTIONS

- 3 -

(additional information for Part 3 of the Technical Instructions)

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Chapter 3

SPECIAL PROVISIONS

Table S-3-4. Special Provisions

| TIs | UN | | | |
|-------|-----------|----------|-----------|--|
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| DGP/2 | 3-WP/3, p | oaragrar | oh 3.2.26 | |

A202

For the purpose of providing life support for aquatic animals during transport, the appropriate authority of the States of Origin, of Destination and of the Operator may approve the carriage of—a cylinders containing oxygen compressed, UN 1072 and Air, compressed UN 1002, with the valve(s) open to supply a controlled quantity of oxygen_or air through a regulator into water containing the aquatic animals. The cylinder or cylinder valve must be fitted with a self-sealing device to prevent uncontrolled release of oxygen_or air should the regulator malfunction or be broken or damaged. The oxygen_or air cylinder must meet those parts of Packing Instruction 200 which apply, except for the need for valves to be closed. In addition, the following conditions apply as a minimum:

- a) the water container with the attached oxygen <u>and/or air</u> cylinder (transportation unit) must be engineered and constructed to withstand all anticipated loads. <u>No more than two cylinders of which a</u> <u>maximum is one cylinder of oxygen are permitted</u>;
- b) the water container must be tilt-tested at an angle of 45° in four directions from the upright for a 10minute minimum duration in each direction with the oxygen supply operating, without leakage of water;
- c) the oxygen or air cylinder and regulator must be restrained and protected within the equipment;
- d) the oxygen or air regulator used must have a maximum flow rate of not more than five litres per minute;
- e) the oxygen<u>or air</u> flow rate to the container must be limited to that sufficient to provide life support to the aquatic animals;
- f) the quantity of oxygen<u>or air</u> provided must not exceed 150 per cent of the oxygen<u>or air</u> required for the normal duration of air transport; and
- g) only one cylinder may be carried for each 15 cubic metres of gross cargo hold volume. In no circumstances may the rate of oxygen<u>or air</u> flow from the cylinder exceed one litre per minute per five cubic metres of gross cargo hold volume.

DGP/23-WP/3, paragraph 3.3.1:

A218

This substance must not be transported under the provisions of Division 4.1 unless specifically authorized by the appropriate national authority (see UN 0143 or UN 0150 as appropriate).

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A225 (35

Nitroglycerin solution in alcohol with more than 1 per cent but not more than 5 per cent nitroglycerin may be classified in Class 3 and assigned to UN 3064 provided all the requirements of Packing Instruction 371 are complied with.

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Part S-4

PACKING INSTRUCTIONS

• • •

Chapter 3

CLASS 1 — EXPLOSIVES

| 110 PACKING INSTRUCTION 110 (UN packing method EP 10) | | | | | | | |
|--|---|---|--|--|--|--|--|
| a) Inner packagings | Intermediate packagings | Outer packagings | | | | | |
| Bags plastics textile, plastic-coated or lined rubber textile, rubberized textile Receptacles wood | Bags plastics textile, plastic-coated or lined rubber textile, rubberized Receptacles metal plastics wood | Drums other metal (1N1, 1N2) plastics, removable head (1H1, 1H2) steel, removable head (1A1, 1A2) | | | | | |

PARTICULAR PACKING REQUIREMENTS OR EXCEPTIONS:

- The intermediate packagings must be filled with water-saturated material such as an anti-freeze solution or wetted cushioning.
- Outer packagings must be filled with water-saturated material such as an anti-freeze solution or wetted cushioning.
 Outer packagings must be constructed and sealed to prevent evaporation of the wetting solution, except when UN 0224 is being carried dry.

Inner packagings Intermediate packagings Outer packagings Dividing partitions Bags Boxes plastics, conductive fibreboard natural wood, with sift-proof walls (4C2) rubber, conductive metal plywood (4D) Receptacles plastics reconstituted wood (4F) metal wood plastics, conductive rubber, conductive

PARTICULAR PACKING REQUIREMENTS OR EXCEPTIONS:

wood

For UN 0074, 0113, 0114, 0129, 0130, 0135 and 0224, the following conditions must be satisfied:

- a) inner packagings must not contain more than 50 g of explosive substance (quantity corresponding to dry substance);
- b) compartments between dividing partitions must not contain more than one inner packaging, firmly fitted; and
- c) the outer packaging must be partitioned into up to 25 compartments.

111 **PACKING INSTRUCTION 111** 111 (UN packing method EP 11) Inner packagings Intermediate packagings Outer packagings Not necessary **Boxes** Bags paper, waterproofed aluminium (4B) expanded plastics (4H1) plastics textile, rubberized fibreboard (4G) Receptacles natural wood, ordinary (4C1) natural wood, with sift-proof walls (4C2) wood Sheets other metal (4N) plastics plywood (4D) textile, rubberized reconstituted wood (4F) solid plastics (4H2) steel (4A) Drums aluminium, removable head (1B1, 1B2) fibreboard (1G) other metal (1N1, 1N2) plastics, removable head (1H1, 1H2) plywood (1D) steel, removable head (1A1, 1A2) PARTICULAR PACKING REQUIREMENTS OR EXCEPTIONS: Corrigendum to UN Model Regulations (Seventeenth revised Edition) ST/SG/AC.20/1/Rev.17/Corr.1: For UN 0159, inner packagings are not required when metal (1A1, 1A2, 1B1, or 1B2, 1N1 or 1N2) or plastics (1H1 or 1H2) drums are used as outer packagings.

DGP/23-WP/3, paragraph 3.3.1:

| 112 PACKING INSTRUCTION 112 (UN packing method EP 12) | | | | | | | | |
|---|--|---|--|--|--|--|--|--|
| a) solid wetted 1.1D | | | | | | | | |
| Inner packagings | Intermediate packagings | Outer packagings | | | | | | |
| Bags paper, multiwall, water- resistant plastics textile textile, rubberized woven plastics Receptacles metal plastics wood | Bags plastics textile, plastic-coated or lined Receptacles metal plastics wood | Boxes aluminium (4B) expanded plastics (4H1) fibreboard (4G) natural wood, ordinary (4C1) natural wood, with sift-proof walls (4C2) other metal (4N) plywood (4D) reconstituted wood (4F) solid plastics (4H2) steel (4A) Drums aluminium, remevable head (1B1, 1B2) fibre (1G) other metal (1N) plastics, remevable head (1H1, 1H2) steel, remevable head (1A1, 1A2) | | | | | | |

PARTICULAR PACKING REQUIREMENTS OR EXCEPTIONS:

- For UN 0004, 0076, 0078, 0154, 0219 and 0394, packagings must be lead-free.
- Intermediate packagings are not required if leakproof drums are used as the outer packaging. For UN 0072 and UN 0226, intermediate packagings are not required.

b) solid dry, other than powder 1.1D

Inner packagings

Intermediate packagings

Bags

paper, kraft paper, multiwall, waterresistant plastics

textile textile, rubberized woven plastics

Bags (for 0150 only) plastics

textile, plastic-coated or lined

Outer packagings

Bags

paper, multiwall, water-resistant (5M2) plastics, film (5H4)

textile, sift-proof (5L2) textile, water-resistant (5L3) woven plastics, sift-proof (5H2\(\triangle\)) woven plastics, water-resistant (5H3)

Boxes

aluminium (4B) expanded plastics (4H1)

fibreboard (4G)

natural wood, ordinary (4C1)

natural wood, with sift-proof walls (4C2)

other metal (4N) plywood (4D) reconstituted wood (4F) solid plastics (4H2) steel (4A)

Drums

aluminium, removable head (1B1, 1B2)

fibre (1G)

other metal (1N1, 1N2) plastics, removable head (1H2) steel, removable head (1A1, 1A2)

PARTICULAR PACKING REQUIREMENTS OR EXCEPTIONS:

- For UN 0004, 0076, 0078, 0154, 0216, 0219 and 0386, packagings must be lead-free.
- For UN 0209, bags, sift-proof (5H2) are recommended for flake or prilled TNT in the dry state and a maximum net mass of 30 kg.
- For UN 0222 and UN 0223, inner packagings are not required when the outer packaging is a bag.

c) for solid dry powder 1.1D Inner packagings Intermediate packagings Outer packagings Bags (for 1050 only) Bags Boxes paper, multiwall, waterpaper, multiwall, water-resistant fibreboard (4G) with inner lining resistant other metal (4N) plastics plastics natural wood, ordinary (4C1) woven plastics Receptacles natural wood, with sift-proof walls (4C2) Receptacles plywood (4D) metal fibreboard plastics reconstituted wood (4F) solid plastics (4H2) metal wood steel (4A) plastics wood Drums aluminium, removable head (1B1, 1B2) fibre (1G) other metal (1N1, 1N2) steel, removable head (1A1, 1A2)

PARTICULAR PACKING REQUIREMENTS OR EXCEPTIONS:

- For UN 0004, 0076, 0078, 0154, 0216, 0219 and 0386, packagings must be lead-free.
- For UN 0209, bags, sift-proof (5H2) are recommended for flake or prilled TNT in the dry state and a maximum net mass of 30 kg.
- Inner packagings are not required if drums are used as the outer packaging.
- These packages must be sift-proof.

113 **PACKING INSTRUCTION 113** 113 (UN packing method EP 13) Inner packagings Intermediate packagings Outer packagings Boxes Not necessary Bags paper aluminium (4B) plastics fibreboard (4G) natural wood, ordinary (4C1) textile, rubberized Receptacles natural wood, with sift-proof walls (4C2) fibreboard other metal (4N) metal plywood (4D) plastics reconstituted wood (4F) solid plastics (4H2) wood Sheets steel (4A) paper, kraft Drums paper, waxed aluminium, removable head (1B1, 1B2) fibre (1G) other metal (1N1, 1N2) steel, removable head (1A1, 1A2)

PARTICULAR PACKING REQUIREMENTS OR EXCEPTIONS:

- For UN 0094 and UN 0305, no more than 50 g of substance must be packed in an inner packaging.
- For UN 0027, inner packagings are not necessary when drums are used as the outer packaging.
- Packages must be sift-proof.
- Sheets may only be used for UN 0028.

| PACKING INSTRUCTION 115 (UN packing method EP 15) | | | | | | | | |
|---|---|---|--|--|--|--|--|--|
| Inner packagings | Intermediate packagings | Outer packagings | | | | | | |
| Receptacles metal plastics <u>wood</u> | Bags plastics in metal receptacles Drums metal Receptacles wood | Boxes fibreboard (4G) natural wood, ordinary (4C1) natural wood, with sift-proof walls (4C2) other metal (4N) plywood (4D) reconstituted wood (4F) Drums aluminium, removable head (1B1, 1B2) fibre (1G) other metal (1N1, 1N2) plywood (1D) steel_removable head (1A1, 1A2) | | | | | | |

PARTICULAR PACKING REQUIREMENTS OR EXCEPTIONS:

- For UN 0075, 0143, 0495 and 0497 when boxes are used as the outer packaging, inner packagings must have taped screw cap closures and be not more than 5 litres capacity each. Inner packagings must be surrounded with non-combustible absorbent cushioning materials. The amount of absorbent cushioning material must be sufficient to absorb the liquid contents. Metal receptacles must be cushioned from each other. Net mass of propellant is limited to 30 kg for each package when outer packagings are boxes.
- For UN 0075, 0143, 0495 and 0497 when drums are used as the outer packaging and when intermediate packagings are drums, they must be surrounded with non-combustible cushioning material in a quantity sufficient to absorb the liquid contents. A composite packaging consisting of a plastic receptacle in a metal drum may be used instead of the inner and intermediate packagings. The net volume of propellant in each package must not exceed 120 litres.
- For UN 0144, absorbent cushioning material must be inserted.
- Metal receptacles as inner packagings must only be used for UN 0144.
- For UN 0075, 0143, 0495 and 0497, bags are to be used as intermediate packagings when boxes are used as outer packagings.
- For UN 0075, 0143, 0495 and 0497, drums are to be used as intermediate packagings when drums are used as outer packagings.
- For UN 0144, intermediate packagings are not necessary.
- Fibreboard boxes (4G) should only be used for UN 0144.
- For UN 0144, aluminium drums, removable head (1B1 and 1B2) and metal, other than steel or aluminium, drums (1N1 and 1N2), are not allowed permitted.

116 PACKING INSTRUCTION 116 116 (UN packing method EP 16) Inner packagings Intermediate packagings Outer packagings Bags Not necessary Bags paper, water and oil resistant paper, multiwall, water-resistant (5M2) plastics, film (5H4) plastics textile, plastic-coated or lined textile, sift-proof (5L2) textile, water-resistant (5L3) woven plastics, sift-proof woven plastics (5H1/2/3) Receptacles fibreboard, water-resistant **Boxes** aluminium (4B) metal plastics fibreboard (4G) natural wood, ordinary (4C1) wood, sift-proof natural wood, with sift-proof walls (4C2) Sheets paper, water-resistant other metal (4N) paper, waxed plywood (4D) plastics reconstituted wood (4F) solid plastics (4H2) steel (4A) Drums aluminium, removable head (1B1, 1B2) fibre (1G) other metal (1N1, 1N2) plastics, removable head (<u>1H1, 1H2</u>) steel, removable head (<u>1A1, 1</u>A2) Jerricans plastics, removable head (3H1, 3H2) steel, removable head (3A1, 3A2)

PARTICULAR PACKING REQUIREMENTS OR EXCEPTIONS:

- For UN 0082, 0241, 0331 and 0332, inner packagings are not necessary if leakproof, removable head drums are used as the outer packaging.
- For UN 0082, 0241, 0331 and 0332, inner packagings are not required when the explosive is contained in a material impervious to liquid.
- For UN 0081, inner packagings are not required when contained in rigid plastic which is impervious to nitric esters.
- UN 0331, inner packagings are not required when bags (5H2), (5H3) or (5H4) are used as outer packagings.
- Bags (5H2 or 5H3) should be used only for UN 0082, 0241, 0331 and 0332.
- For UN 0081, bags must not be used as outer packagings.

132 **PACKING INSTRUCTION 132** 132 (UN packing method EP 32) a) Articles consisting of closed metal, plastic or fibreboard casings that contain a detonating explosive, or consisting of plastic-bonded detonating explosives Inner packagings Outer packagings Intermediate packagings Not necessary **Boxes** Not necessary aluminium (4B) fibreboard (4G) natural wood, ordinary (4C1) natural wood, with sift-proof walls (4C2) other metal (4 plywood (4D) reconstituted wood (4F) solid plastics (4H2) steel (4A)

b) Articles without closed casings Inner packagings Intermediate packagings Outer packagings Receptacles Not necessary **Boxes** fibreboard aluminium (4B) fibreboard (4G) metal natural wood, ordinary (4C1) plastics natural wood, with sift-proof walls (4C2) wood Sheets other metal (4N) paper plywood (4D) reconstituted wood (4F) plastics solid plastics (4H2) steel (4A)

PACKING INSTRUCTION 144 144 144 (UN packing method EP 44) Outer packagings Inner packagings Intermediate packagings Receptacles Not necessary Boxes fibreboard aluminium (4B) metal expanded plastics (4H1) natural wood, ordinary (4C1) with metal wood plastics liner Dividing partitions in the outer other metal (4N) packings plywood (4D) with metal liner reconstituted wood (4F) with metal liner steel (4A)

PARTICULAR PACKING REQUIREMENTS OR EXCEPTIONS:

 For UN 0248 and UN 0249, packagings must be protected against the ingress of water. When CONTRIVANCES, WATER ACTIVATED are transported unpackaged, they must be provided with at least two independent protective features which prevent the ingress of water.

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Chapter 5

CLASS 3 — FLAMMABLE LIQUIDS

| 306 | 306 | | | | | | | | | |
|--|--|---|--|--|--|--|--|--|--|--|
| The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met. | | | | | | | | | | |
| Single packagings are not permitted. | | | | | | | | | | |
| COMBINATION PACKAGINGS | COMBINATION PACKAGINGS: | | | | | | | | | |
| | | | | | | | | | | |
| OUTER: | | | | | | | | | | |
| Boxes | Drums | Jerricans | | | | | | | | |
| fibreboard (4G) other metal (4N) plywood (4D) reconstituted wood (4F) solid plastics (4H2) wooden (4C1, 4C2) | aluminium (<u>1B1,</u> 1B2) fibre (1G) plastics (1H2) plywood (1D) steel (<u>1A1,</u> 1A2) | plastics (<u>3H1,</u> 3H2) steel (<u>3A1,</u> 3A2) | | | | | | | | |
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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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| 416 PACKING INSTRUCTION 416 | | | | | | | | | | |
|--|---|---|--|--|--|--|--|--|--|--|
| The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met. Single packagings are not permitted. | | | | | | | | | | |
| COMBINATION PACKAGINGS: | | | | | | | | | | |
| ••• | | | | | | | | | | |
| OUTER: | | | | | | | | | | |
| Boxes | Drums | Jerricans | | | | | | | | |
| fibreboard (4G) other metal (4N) plywood (4D) reconstituted wood (4F) solid plastics (4H2) wooden (4C1, 4C2) | aluminium (1B1, 1B2) fibre (1G) plastics (1H1, 1H2) plywood (1D) steel (1A1, 1A2) | plastics (<u>3H1,</u> 3H2) steel (<u>3A1,</u> 3A2) | | | | | | | | |
| ••• | | | | | | | | | | |

418 **PACKING INSTRUCTION 418** 418 The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met. Single packagings are not permitted. **COMBINATION PACKAGINGS:** . . . OUTER: Jerricans **Boxes** Drums fibreboard (4G) aluminium (1B1, 1B2) plastics (3H1, 3H2) fibre (1G) plastics (<u>1H1</u>, 1H2) plywood (1D) plywood (4D) steel (<u>3A1,</u> 3A2) other metal (4N) reconstituted wood (4F) solid plastics (4H2) steel (1A2) wooden (4C1, 4C2)

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421 PACKING INSTRUCTION 421 421

The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met.

All of the following packagings must meet Packing Group II performance requirements.

COMBINATION PACKAGINGS:

. . .

OUTER:

Drums Jerricans **Boxes** expanded plastics (4H1) aluminium (1B1, 1B2) plastics (3H1, 3H2) fibreboard (4G) fibre (1G) steel (3A1, 3A2) plastics (1H1, 1H2) plywood (1D) other metal (4N) plywood (4D) reconstituted wood (4F) steel (1A1, 1A2) solid plastics (4H2) wooden (4C1, 4C2)

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422 PACKING INSTRUCTION 422 422

The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met.

All of the following packagings must meet Packing Group II performance requirements.

Single packagings are not permitted.

COMBINATION PACKAGINGS:

• • •

OUTER:

Boxes Drums Jerricans

fibreboard (4G) aluminium (1B1, 1B2) steel (3A1, 3A2)

other metal fibre (1G) plywood (4D) plywood (1D)

steel (1A1, 1A2)

solid plastics (4H2) wooden (4C1, 4C2)

reconstituted wood (4F)

Chapter 7

CLASS 5 — OXIDIZING SUBSTANCES; ORGANIC PEROXIDES

| 501 PACKING INSTRUCTION 501 5 | | | | | | | | | | |
|--|--|---|--|--|--|--|--|--|--|--|
| The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met. | | | | | | | | | | |
| Single packagings are not permitte | ed. | | | | | | | | | |
| COMBINATION PACKAGINGS: | | | | | | | | | | |
| ••• | | | | | | | | | | |
| OUTER: | | | | | | | | | | |
| Boxes | Drums | Jerricans | | | | | | | | |
| fibreboard (4G) plywood (4D) other metal (4N) reconstituted wood (4F) solid plastics (4H2) wooden (4C1, 4C2) | aluminium (<u>1B1</u> , 1B2) fibre (1G) plastics (<u>1H1</u> , 1H2) plywood (1D) steel (<u>1A1</u> , 1A2) | plastics (3H1, 3H2) steel (3A1, 3A2) | | | | | | | | |

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The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met.

Single packagings are not permitted.

OUTER:

Boxes

Drums

Jerricans

fibreboard (4G)
other metal (4N)
plywood (4D)
reconstituted wood (4F)
solid plastics (4H2)
wooden (4C1, 4C2)

The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met.

Jerricans

plastics (3H1, 3H2)
steel (3A1, 3A2)

plastics (3H1, 3H2)
steel (3A1, 3A2)
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509 PACKING INSTRUCTION 509 509

The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met.

Single packagings are not permitted.

COMBINATION PACKAGINGS:

. . .

OUTER:

Boxes Drums Jerricans

fibreboard (4G) aluminium (<u>1B1,</u> 1B2)
other metal (4N)
plywood (4D) fibre (1G)
plastics (<u>1H1,</u> 1H2)
plywood (1D)
solid plastics (4H2) steel (<u>1A1,</u> 1A2)

plastics (<u>3H1,</u> 3H2) steel (<u>3A1,</u> 3A2)

522

PACKING INSTRUCTION 522

522

The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met.

Single packagings are not permitted.

COMBINATION PACKAGINGS:

wooden (4C1, 4C2)

• • •

OUTER:

Boxes Drums Jerricans

fibreboard (4G) aluminium (<u>1B1,</u> 1B2) other metal (4N) fibre (1G) plywood (4D) plastics (<u>1H1,</u> 1H2) plywood (1D) solid plastics (4H2) wooden (4C1, 4C2) steel (<u>1A1,</u> 1A2)

plastics (<u>3H1,</u> 3H2) steel (<u>3A1,</u> 3A2)

Chapter 8

CLASS 6 — TOXIC AND INFECTIOUS SUBSTANCES

| 610 PACKING INSTRUCTION 610 | | | | | | | | | | |
|--|---|---|--|--|--|--|--|--|--|--|
| The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met. | | | | | | | | | | |
| Single packagings are not permitted. | | | | | | | | | | |
| COMBINATION PACKAGINGS | : | | | | | | | | | |
| ••• | | | | | | | | | | |
| | | | | | | | | | | |
| OUTER: | | | | | | | | | | |
| Boxes | Drums | Jerricans | | | | | | | | |
| fibreboard (4G) other metal (4N) plywood (4D) reconstituted wood (4F) solid plastics (4H2) wooden (4C1, 4C2) | aluminium (<u>1B1,</u> 1B2) fibre (1G) plastics (<u>1H1,</u> 1H2) plywood (1D) steel (<u>1A1,</u> 1A2) | plastics (<u>3H1, 3</u> H2) steel (<u>3A1, 3</u> A2) | | | | | | | | |
| | | | | | | | | | | |

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612
                                            PACKING INSTRUCTION 612
                                                                                                                         612
The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met.
COMBINATION PACKAGINGS:
    OUTER:
      Boxes
                                     Drums
                                                                    Jerricans
      fibreboard (4G)
other metal (4N)
                                     aluminium (1B1, 1B2)
                                                                   plastics (3H1, 3H2)
                                     fibre (1G)
plastics (<u>1H1</u>, 1H2)
                                                                   steel (3A1, 3A2)
      plywood (4D)
                                     plywood (1D)
steel (<u>1A1,</u> 1A2)
      reconstituted wood (4F)
      solid plastics (4H2)
      wooden (4C1, 4C2)
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614 PACKING INSTRUCTION 614 614

The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met.

Single packagings are not permitted.

COMBINATION PACKAGINGS:

. . .

OUTER:

Boxes Drums Jerricans

fibreboard (4G)
other metal (4N)
plywood (4D)
reconstituted wood (4F)
solid plastics (4H2)
wooden (4C1, 4C2)

aluminium (<u>1B1,</u> 1B2) fibre (1G) plywood (1D) steel (<u>1A1,</u> 1A2) steel (3A1, 3A2)

Chapter 10

CLASS 8 — CORROSIVES

Corrigendum to UN Model Regulations (Seventeenth revised Edition) ST/SG/AC.20/1/Rev.17/Corr.1:

| PACKING INSTRUCTION 807 | | | | | | | | |
|--|---|---|--|--|--|--|--|--|
| The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met. Single packagings are not permitted. | | | | | | | | |
| ••• | | | | | | | | |
| OUTER: | | | | | | | | |
| Boxes | Drums | Jerricans | | | | | | |
| fibreboard (4G) other metal (4N) plywood (4D) reconstituted wood (4F) solid plastics (4H2) wooden (4C1, 4C2) | aluminium (<u>1B1,</u> 1B2) fibre (1G) plastics (<u>1H1,</u> 1H2) plywood (1D) steel (<u>1A1,</u> 1A2) | plastics (3H1, 3H2) steel (3A1, 3A2) | | | | | | |
| ••• | | | | | | | | |

DGP/23-WP/3, paragraph 3.3.1:

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809
                                                     PACKING INSTRUCTION 809
                                                                                                                                                 809
The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met.
Single packagings are not permitted.
COMBINATION PACKAGINGS:
     OUTER:
        Boxes
                                            Drums
                                                                                 Jerricans
                                                                                 plastics (<u>3H1,</u> 3H2)
steel (<u>3A1,</u> 3A2)
        fibreboard (4G)
                                            aluminium (1B1, 1B2)
                                            fibre (1G) plastics (1H1, 1H2) plywood (1D) steel (1A1, 1A2)
       other metal (4N)
plywood (4D)
       reconstituted wood (4F)
solid plastics (4H2)
wooden (4C1, 4C2)
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813 **PACKING INSTRUCTION 813** 813 The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met. **COMBINATION PACKAGINGS:** OUTER: Boxes Drums Jerricans plastics (<u>3H1,</u> 3H2) steel (<u>3A1,</u> 3A2) fibreboard (4G) aluminium (1B1, 1B2) other metal (4N) plywood (4D) fibre (1G) plastics (1H1, 1H2) plywood (1D) steel (1A1, 1A2) reconstituted wood (4F) solid plastics (4H2) wooden (4C1, 4C2)

815 PACKING INSTRUCTION 815

815

The general packing requirements of Part 4, Chapter 1 of the Technical Instructions must be met. Single packagings are not permitted.

COMBINATION PACKAGINGS:

• • •

OUTER:

Boxes Drums Jerricans

fibreboard (4G)
other metal (4N)
plywood (4D)
reconstituted wood (4F)
solid plastics (4H2)
wooden (4C1, 4C2)
aluminium (1B1, 1B2)
fibre (1G)
plastics (1H1, 1H2)
plywood (1D)
steel (1A1, 1A2)

plastics (<u>3H1,</u> 3H2) steel (<u>3A1</u>3A2)

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Part S-7

STATE'S RESPONSIBILITIES

Chapter 2

STORAGE AND LOADING

DGP/23-WP/3, paragraph 3.3.3:

2.3 Separation of explosive substances and articles

Note.— The safety of explosive substances and articles would be enhanced by transporting each kind separately, but consideration of practicability and economics preclude such an ideal. In practice, a proper balance of the interest of safety against the other relevant factors necessitates a degree of mixing in the transport of explosive substances and articles of several kinds.

- 2.3.1 The extent to which explosives of Class 1 may be loaded together in transport is determined by the "compatibility" of the explosives. Explosives of Class 1 are considered to be compatible if they can be transported together without significantly increasing either the probability of an accident or, for a given quantity, the magnitude of the effects of such an accident.
- 2.3.2 Explosives in Compatibility Groups A to K and N may be transported in accordance with the following provisions:
 - a) packages bearing the same Compatibility Group letter may be stowed together regardless of the division number;
 - b) packages bearing different Compatibility Group letters must not in general be stowed together (regardless of the division number) except in the case of Compatibility Group letters C, D, E and S as explained in 2.3.3 and 2.3.4 below.
- 2.3.3 Explosives in Compatibility Groups C, D, E may be stowed together.
- 2.3.4 Explosives in Compatibility Group S may be stowed with explosives in all compatibility groups other than A and L.
- 2.3.5 Explosives in Compatibility Group L must not be transported with explosives in other compatibility groups. Furthermore, explosives in Compatibility Group L may only be transported with the same type of explosives within Compatibility Group L.
- 2.3.6 Table S-7-1 provides guidance for the separation of packages containing explosives with different compatibility groups. An "X" at the intersection of a row and column indicates that explosives of these compatibility groups must be separated. The method of separation (e.g. the minimum distance between incompatible explosives and/or separation of incompatible explosives with other cargo) must be approved by the competent authority, taking into account the danger of transmission of detonation between the different explosives.

Table S-7-1. Separation of explosive substances and articles

| Compatibility group | Α | В | С | D | Е | F | G | Н | J | K | L | N | S |
|---------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|----------|----------|
| <u>A</u> | | X | X | X | <u>x</u> | X | X | <u>x</u> | <u>x</u> | X | <u>x</u> | X | X |
| <u>B</u> | <u>X</u> | | <u>X</u> | <u>X</u> | |
| <u>C</u> | <u>X</u> | <u>X</u> | | | | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | |
| <u>D</u> | <u>X</u> | <u>X</u> | | | | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | |
| <u>E</u> | <u>X</u> | <u>X</u> | | | | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | |
| <u></u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | |
| <u>G</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | |
| <u>H</u> | <u>X</u> | | <u>X</u> | <u>X</u> | <u>X</u> | <u>X</u> | |
| <u>J</u> | <u>X</u> | | <u>X</u> | <u>X</u> | <u>X</u> | |
| <u>K</u> | <u>X</u> | | <u>X</u> | <u>X</u> | |
| <u>L</u> | <u>X</u> | <u>1)</u> | <u>X</u> | <u>X</u> |
| <u>N</u> | <u>X</u> | | |
| <u>S</u> | <u>X</u> | | | | | | | | | | <u>X</u> | | |

1) see 2.3.5 above.

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