



**WORKING PAPER**

**DANGEROUS GOODS PANEL (DGP)**

**TWENTY-SEVENTH MEETING**

**Montréal, 16 to 20 September 2019**

**Agenda Item 2: Managing air-specific safety risks and identifying anomalies**

**2.1: Develop proposals, if necessary, for amendments to Annex 18 — *The Safe Transport of Dangerous Goods by Air***

**PACKING INSTRUCTION 623**

(Presented by T. Muller)

**SUMMARY**

The working paper proposes a revision to Packing Instruction 623 to allow the use of additional packing systems with an equivalent safety level and to align with the structure of the Packing Instructions in the Technical Instructions.

**Action by the DGP:** The DGP is invited to:

- a) consider and adopt an amendment to Packing Instruction 623 as shown in the appendix to this working paper; and
- b) discuss if the requirement to perform a thermal test as specified in paragraph “e)” of this amendment should remain. The requirement to perform a thermal test is not required for any other substance of Division 6.1, Packing Group I but is only required for Type B(U), Type B(M) and Type C packages containing high activity radioactive substances.

**1. INTRODUCTION**

1.1 Packing Instruction 623 published in the Supplement to the Technical Instructions is applicable to UN 3315 — **Chemical sample, toxic**. This UN number is only transported by the Organisation for the Prohibition of Chemical Weapons (OPCW). The current packing instruction was developed approximately twenty years ago. The text as well as the detailed instruction should be adjusted to allow for alternative packing systems which reflect technological changes and to align more to the structure of the current packing instructions as published in the Technical instructions.

1.2 Transport containers currently in use by OPCW for the transport of UN 3315 materials were designed twenty years ago. The weight of these containers exceeds 42 kg which makes it impossible to transport the empty containers to the destination as baggage. The transport of the empty container as cargo has a negative impact on the response time of OPCW missions as the use of these containers requires specific processes to be observed by OPCW personnel in the field. The current Packing Instruction 623 was developed specifically for the use of these containers but does not allow for alternative packing systems with an equivalent safety level.

1.3 With the evolution of technology and packing materials, more efficient and safer technical solutions are available on the market. However, to allow the use of alternative packing systems requires amendments to current Packing Instruction 623.

1.4 The proposed text aims to enable the use of more advanced and standardized packaging systems, at least fulfilling the safety levels already in place for the transport of this UN number.

## 2. ACTION BY THE DGP

2.1 The DGP is invited to:

- a) consider and adopt an amendment to Packing Instruction 623 as shown in the appendix to this working paper; and
  - b) discuss if the requirement to perform a thermal test as specified in paragraph “e)” of this amendment should remain. The requirement to perform a thermal test is not required for any other substance of Division 6.1, Packing Group I but is only required for Type B(U), Type B(M) and Type C packages containing high activity radioactive substances.
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APPENDIX

PROPOSED AMENDMENT TO PART S-4 OF THE SUPPLEMENT  
TO THE TECHNICAL INSTRUCTIONS

Part S-4

PACKING INSTRUCTIONS

(ADDITIONAL INFORMATION  
FOR PART 4 OF THE  
TECHNICAL INSTRUCTIONS)

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Chapter 8

CLASS 6 — TOXIC AND  
INFECTIOUS SUBSTANCES

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*Replace* Packing Instruction 623 with the  
following:

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**Packing Instruction 623**

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

Consignments of chemical samples, toxic, liquid or solid must be prepared in such a manner that they arrive at their destination in good condition and present no hazard to persons during transport. They must be packed according to this packing instruction and the construction of the packaging and its testing must be approved by the appropriate authority of the State of Manufacturer.

Packagings must meet the requirements of Part 6;2, 6;3 and 6;4 of the Technical Instructions and must meet Packing Group I performance standards.

The packaging must include:

- a) Inner packagings comprising:
  - 1) leakproof primary receptacle(s) which must not contain more than 1.25 mL or 1.25 g;
  - 2) leakproof rigid secondary packaging(s);

- 3) If multiple primary receptacles are placed in a single secondary packaging, they must be either individually wrapped or separated so as to prevent contact between them. Cushioning material or, for liquids absorbent material, must be placed between the primary receptacle(s) and the secondary packaging. The absorbent material must be in sufficient quantity to absorb the entire contents of all primary receptacles.

- b) Rigid outer packaging.

The outer packaging must not contain more than 25 mL or 25 g.

#### **Additional requirements**

- a) Primary receptacles may be vials of glass, metal or plastics or vapour absorptions devices. Positive means of ensuring a leakproof seal must be provided.
- b) The secondary packaging must be capable, as demonstrated by testing, to withstand a hydraulic pressure test of 250 kPa.
- c) The design type of the package must be tested to demonstrate that it can withstand the free drop test and penetration test in Part 6;7.16.2 a) and b). [The complete package must also be capable of withstanding the thermal test in Part 6;7.16.3.] There must be no external release of the contents as a result of the tests.
- d) When the package is placed in an overpack, all the applicable requirements of the Technical Instructions must be met.
- e) The package or overpack must incorporate features such as security seals, coatings or wraps to provide an indication of tampering.

#### **OUTER PACKAGINGS OF COMBINATION PACKAGINGS (see 6;3.1)**

##### *Boxes*

Aluminium (4B)  
Other metal (4N)  
Steel (4A)

##### *Drums*

Aluminium (1B2)  
Other metal (1N2)  
Steel (1A2)

##### *Jerricans*

Aluminium (3B2)  
Steel (3A2)

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