



## WORKING PAPER

### DANGEROUS GOODS PANEL (DGP) WORKING GROUP MEETING (DGP-WG/19)

Montréal, 1 to 5 April 2019

**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 2021-2022 Edition**

#### CLARIFICATION ON THE APPLICATION OF MARKS ON PACKAGES

(Presented by D. Brennan)

##### SUMMARY

This working paper proposes the adoption of language that would clearly identify that marks, such as those required for environmentally hazardous substances and limited quantities, must be applied to one side of the package and cannot be folded or wrapped around multiple sides of the package.

**Action by the DGP-WG:** The DGP-WG is invited to consider the revisions to Part 3;4, Part 3;5, Packing Instruction 650, Packing Instruction 959 and Part 5;2.2 of the Technical Instructions as shown in the appendix to this working paper to address the correct application of marks on packages.

## 1. INTRODUCTION

1.1 The Technical Instructions have clear requirements in Part 5;3.2.9 that all labels, hazard and handling, must be applied on the package and must not be folded, i.e. on a box or jerrican the label(s) must be applied on one side of the package. This requirement was introduced so that these labels would be as clearly visible as possible to aid in the communication of the hazard(s) contained in the package.

1.2 Historically the Technical Instructions used the term “label” to apply to both hazard and handling labels, such as the Cargo Aircraft Only label and the cryogenic liquid label and the term “mark” was used for the application of information on the package such as the UN number and proper shipping name.

1.3 The UN Model Regulations, though only uses the term “label” to apply to hazard labels. All other information applied to packages are described as “marks”. This includes information that is

widely applied to a package by way of a label such as for environmentally hazardous substances, limited quantities and lithium batteries.

1.4 The UN Model Regulations usage of “marks” has been applied to the provisions for the Technical Instructions starting with UN 3373 inside a diamond, the “dead fish and tree” mark for environmentally hazardous substances, the limited quantity “Y” mark, excepted quantities, UN 3245 inside a diamond and now the new lithium battery mark effective 1 January 2019.

1.5 While many of these marks are, or can be, pre-printed onto packagings many, particularly those for lithium batteries and limited quantities are applied by way of a self-adhesive label. There is though nothing in the Technical Instructions that requires that the application of these marks on the package is subject to the same requirements as applies to labels in that they must not be folded.

1.6 With the lack of specification on the application of these marks, and with shippers looking to keep the size of a package to the minimum possible operators are being faced with marks applied around two sides of a package, which increases the risk that the message that the marks is meant to convey will be missed.

1.7 To address this, it is proposed that provisions be introduced into the appropriate places in the Technical Instructions requiring that marks must not be folded.

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

2.1 The DGP-WG is invited to consider the revisions proposed to Part 3;4, Part 3;5, Packing Instruction 650, Packing Instruction 959 and Part 5;2.2 of the Technical Instructions as shown in the appendix to this working paper to address the correct application of marks on packages.

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## APPENDIX

### PROPOSED AMENDMENT TO PART 3 OF THE TECHNICAL INSTRUCTIONS

#### Part 3

### DANGEROUS GOODS LIST, SPECIAL PROVISIONS AND LIMITED AND EXCEPTED QUANTITIES

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#### Chapter 4

### DANGEROUS GOODS IN LIMITED QUANTITIES

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#### 4.5 PACKAGE MARKING

4.5.1 Packages containing limited quantities of dangerous goods must be marked as required by the applicable paragraphs of 5;2, except that 5;2.4.4.1 does not apply.

4.5.2 Packages containing limited quantities of dangerous goods and prepared in accordance with this chapter must bear the mark shown in Figure 3-1 below. The mark must be readily visible, legible and able to withstand open weather exposure without a substantial reduction in effectiveness. The mark must be in the form of a square set at an angle of 45°(diamond shaped). The top and bottom portions and the surrounding line must be black. The centre area must be white or a suitable contrasting background. The minimum dimension must be 100 mm x 100 mm and the minimum width of the line forming the diamond must be 2 mm. The symbol "Y" must be placed in the centre of the mark and must be clearly visible. Where dimensions are not specified, all features must be in approximate proportion to those shown.

4.5.2.1 If the size of the package so requires, the minimum outer dimensions shown in Figure 3-1 may be reduced to be not less than 50 mm x 50 mm provided the mark remains clearly visible. The minimum width of the line forming the diamond may be reduced to a minimum of 1 mm. The symbol "Y" must remain in approximate proportion to that shown in Figure 3-1.

4.5.2.2 The mark must be applied on one face of the package. Where the mark is applied by way of a label, the label must not be folded or affixed in such a manner that parts of the same mark appear on different faces of the package.

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#### Chapter 5

### DANGEROUS GOODS PACKED IN EXCEPTED QUANTITIES

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#### 5.4 MARKING OF PACKAGES

5.4.1 Packages containing excepted quantities of dangerous goods prepared in accordance with this chapter must be durably and legibly marked with the mark shown in Figure 3-2. The primary hazard class or, when assigned, the division of each of the dangerous goods contained in the package must be shown in the mark. Where the name of the shipper or consignee is not shown elsewhere on the package, this information must be included within the mark.

5.4.2 The mark must be in the form of a square. The hatching and symbol must be of the same colour, black or red, on white or suitable contrasting background. The dimensions of the mark must be a minimum of 100 mm × 100 mm. Where dimensions are not specified, all features must be in approximate proportion to those shown.

5.4.3 The mark must be applied on one face of the package. Where the mark is applied by way of a label, the label must not be folded or affixed in such a manner that parts of the same mark appear on different faces of the package.

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## Part 4

### PACKING INSTRUCTIONS

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#### Chapter 8

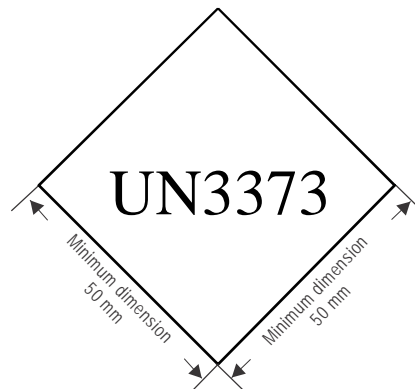
### CLASS 6 — TOXIC AND INFECTIOUS SUBSTANCES

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#### Packing Instruction 650

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- 4) For transport, the mark illustrated below must be displayed on the external surface of the outer packaging on a background of a contrasting colour and must be clearly visible and legible. The mark must be in the form of a square set at an angle of 45° (diamond-shaped) with each side having a length of at least 50 mm, the width of the line must be at least 2 mm, and the letters and numbers must be at least 6 mm high. The mark must be applied on one face of the package. Where the mark is applied by way of a label, the label must not be folded or affixed in such a manner that parts of the same mark appear on different faces of the package. The proper shipping name "Biological substance, Category B" in letters at least 6 mm high must be marked on the outer packaging adjacent to the diamond-shaped mark.



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## Chapter 11

## CLASS 9 — MISCELLANEOUS DANGEROUS GOODS

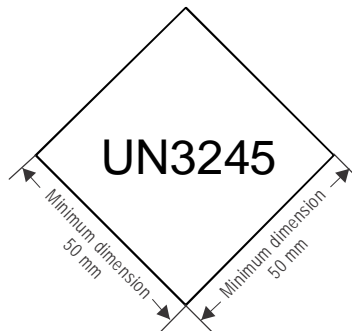
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## Packing Instruction 959

Passenger and cargo aircraft for UN 3245 only

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For transport, the mark illustrated below must be displayed on the external surface of the outer packaging on a background of a contrasting colour and must be clearly visible and legible. The mark must be in the form of a square set at an angle of 45° (diamond-shaped) with each side having a length of at least 50 mm; the width of the line must be at least 2 mm and the letters and numbers must be at least 6 mm high. The mark must be applied on one face of the package. Where the mark is applied by way of a label, the label must not be folded or affixed in such a manner that parts of the same mark appear on different faces of the package.



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## Part 5

# SHIPPER'S RESPONSIBILITIES

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## Chapter 2

## MARKING

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### 2.2 APPLICATION OF MARKS

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2.2.2 All package marks required by 2.1:

- a) must be durable and printed or otherwise marked on, or affixed to, the external surface of the package;
- b) must be readily visible and legible;
- c) must be able to withstand open weather exposure without a substantial reduction in effectiveness;
- d) must be displayed on a background of contrasting colour; and
- e) must not be located with other package marks that could substantially reduce their effectiveness.

2.2.3 The marks required by 2.4.9 (Figure 5-2) and 2.4.16 (Figure 5-3) must be applied on one face of the package. Where marks are applied by means of a label, the label must not be folded or affixed in such a manner that parts of the same mark appear on different faces of the package.

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