International Civil Aviation Organization

DGP-WG/25-WP/2
3/3/25

WORKING PAPER

DANGEROUS GOODS PANEL (DGP) WORKING GROUP MEETING (DGP-WG/25)

Delhi, India, 21 to 25 April 2025

Agenda Item 2: Managing air-specific safety risks and identifying anomalies (REC-A-DGS-2027)
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 2027-2028 Edition

PROCEDURES FOR THE CLASSIFICATION OF EXPLOSIVES

(Presented by E. Gillett)

SUMMARY

This paper seeks to clarify the roles of producers and appropriate national authorities for the classification of explosives and help shippers adhere to the packaging conditions upon which a classification has been made.

Action by the DGP-WG is in paragraph 2.

1. INTRODUCTION

1.1 Potential ambiguities in the procedures for classifying explosives contained in Part 2;1 of the Technical Instructions were discussed at the 2024 DGP Working Group Meeting (Montreal, 21 to 25 October 2024) (DGP-WG/24) (see paragraph 4.1.2.3 of the DGP-WG/24 Report) in relation to:–

a) whether classification was to be determined by the shipper or an appropriate national authority;

b) who needed to provide information concerning classification; and

c) to whom the information needed to be provided.

1.2 Regarding whom determined classification, several provisions in the classification criteria implied that classification needed to be approved, made or agreed by an appropriate national authority, but there were no explicit requirements on this contained in the Technical Instructions or the UN Model Regulations.

1.3 Discussions at DGP/WG24 indicated that the involvement of an appropriate national authority in the explosives classification process was necessary for air transport and was the intent of the UN Model Regulations and Technical Instructions.

1.4 The regulations of at least one State require a classification by their national authority for explosives travelling to, from or within their territory. Other States allow classifications that have been approved, made or agreed by the national authority of another State. It is reasonable for States to determine which model is appropriate based on their capabilities and assessment of the risks involved.

1.5 Proposal #1 in the appendix to this working paper suggests adding a requirement within the Technical Instructions that "Prior to transport, the explosive classification shall have been approved, made or agreed by an appropriate national authority". This clarifies that an appropriate national authority must be involved in the explosives classification process, whilst providing flexibility for States concerning implementation based on whether they desire or are capable of direct involvement with the classification process.

1.6 DGP/WG24 also discussed concerns that without access to the information used to reach an explosives classification, subsequent distributors may offer explosives for air transport when packed in a manner that had not been considered during the classification process. This was a particular concern, given that the type of packaging frequently has a decisive effect on the hazard and therefore on the assignment to a particular division. Consequently, explosives must be packed in accordance with both the applicable packing instruction and in the manner that was used to determine the classification.

1.7 Experience from oversight shows that shippers of explosive articles often previously receive them from the producer or wholesaler in bulk and then redistribute them in smaller packages as and when they are required. For example, an airline's engineering store may receive 40 engine fire bottle squibs within one UN specification 4G box. The squibs are then added to the stores inventory, removed from the outer 4G packaging and placed into a steel cupboard for storage. Later, small quantities of the squibs may be needed remotely from the stores facility. By this stage, the outer packaging that the 40 squibs were delivered in may no longer be available. The shipper knows the UN number, proper shipping name and division from the information held on the stores inventory and they remember that the goods arrived in a fibreboard box. When checking the packing instruction they see that 4G is a permitted outer packaging so choose a 4G which is of suitable size for the items being shipped. However, without referring to the classification, they cannot know whether this was made on the basis that any 4G outer packaging may be used, or whether it prescribed a specific packaging by its approval reference, so it is possible that the explosives no longer comply with the classification made.

1.8 To help ensure that shippers are aware of and comply with explosive classifications, Proposal #2 in the appendix to this paper suggests adding text to the Technical Instructions stating that 'Manufacturers and subsequent distributors of explosive substances and articles should make the classification available', together with a note explaining what the term 'make available' means. The proposal is a recommendation (should rather than must) and provides flexibility as it does not prescribe the form or method by which the classification is to be made available.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to consider the amendments to Part 2;1 of the Technical Instructions within Proposals #1 and #2 in the appendix to this working paper.

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APPENDIX

PROPOSED AMENDMENT TO PART 2 OF THE TECHNICAL INSTRUCTIONS

Part 2

CLASSIFICATION OF DANGEROUS GOODS

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Chapter 1

CLASS 1 – EXPLOSIVES

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1.5 CLASSIFICATION OF EXPLOSIVES

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Proposal No.1

1.5.1.3 Except for substances that are listed by their proper shipping name in the Dangerous Goods List (Table 3-1), goods must not be offered for transport as Class 1 until they have been subjected to the classification procedure prescribed in this Chapter. In addition, the classification procedure must be undertaken before a new product is offered for transport. In this context, a new product is one which, in the opinion of the appropriate national authority, involves any of the following:

a) a new explosive substance or a combination or a mixture of explosive substances which is considered to be significantly different from other combinations or mixtures already classified;

b) a new design of article or an article containing a new explosive substance or a new combination or mixture of explosive substances;

c) a new design of package for an explosive substance or article including a new type of inner packaging.

Note.— The importance of this can be overlooked unless it is realized that a relatively minor change in an inner or outer packaging can be critical and can convert a lesser hazard into a mass explosion hazard.

1.5.1.4 Prior to transport, the explosive classification must have been approved, made or agreed by an appropriate national authority.

1.5.1.45 The producer or other applicant for classification of the product must provide adequate information concerning the names and characteristics of all explosive substances in the product and must furnish the results of all relevant tests which have been done. It is assumed that all the explosive substances in a new article have been properly tested and then approved.

Proposal No.2

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1.5.3.5 Manufacturers and subsequent distributors of explosive substances and articles should make available the classification that was approved, made or agreed by an appropriate national authority.

Note.— The term "make available" means that manufacturers and subsequent distributors ensure that the classification is accessible so that the shipper or other persons in the supply chain can confirm compliance.

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