



WORKING PAPER

**DANGEROUS GOODS PANEL (DGP)
WORKING GROUP MEETING (DGP-WG/24)**

Montreal, 21 to 25 October 2024

Agenda Item 1: Harmonizing ICAO dangerous goods provisions with UN Recommendations on the Transport of Dangerous Goods (REC-A-DGS-2027)

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 2027-2028 Edition

PROCEDURES FOR THE CLASSIFICATION OF EXPLOSIVES

(Presented by E. Gillett)

SUMMARY

This paper discusses perceived ambiguities within Part 2, Chapter 1 of the Technical Instructions concerning the responsibility for classifying explosives.

Action by the DGP-WG: Action by the DGP-WG is in paragraph 2.

1. INTRODUCTION

1.1 Part 5;1.1 of the Technical Instructions establishes that before a person offers dangerous goods for transport by air, that person must ensure that the goods are properly classified. Part 2;0.1 then explains (for all classes) that classification must be made by the appropriate national authority when so required or may otherwise be made by the shipper.

1.2 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 Part 2;1 of the Technical Instructions. It is suggested that this text is unclear on whether an explosives classification may be determined by the shipper, or must be performed by an appropriate national authority, for example:

a) Part 2;1.4.2.1 specifies:

1.4.2.1 Certain Division 1.4S explosives, identified by Special Provision A165 in Table 3-1, are subject to Test Series 6 (d) of Part I of the UN *Manual of Tests and Criteria* to demonstrate that any hazardous effects arising from functioning are confined within the package.

...

The **appropriate national authority** may wish to take into account the expected effect of the initiator when assessing the results of the test, if these are expected to be significant when compared to the articles being tested. If there are hazardous effects outside the package, then the product is excluded from Compatibility Group S.

It is unclear why the expected effect of the initiator is only relevant to the appropriate national authority unless classification by an appropriate national authority is mandatory. If the shipper is permitted to determine the classification, then surely they may also wish to take the expected effect of the initiator into account.

b) Part 2;1.5.1.4 specifies:

1.5.1.4 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.

This text uses the term ‘applicant for classification’ without any other text having described when an application should or must be made and to whom. It also introduces the concept of explosive substances in a new article having been properly tested and then approved, without specifically identifying the tests, what the approval is for or the entity that can or must grant it. This is presumably related to 2.1.5.3.4 which gives examples of the information that may be provided in an appropriate national authority classification document, including confirmation that the classification has been **approved**, made or agreed in accordance with the UN Model Regulations or the Technical Instructions, but the text should be explicit.

c) Part 2;1.5.2.1 specifies:

1.5.2.1 The **appropriate national authority** may exclude an article or substance from Class 1 by virtue of test results and the Class 1 definition.

It is unclear how an appropriate national authority could exclude an article or substance from Class 1 if they are not routinely involved in the classification procedure. Conversely, if the shipper is permitted to determine the classification, then surely they should also be permitted to exclude an article or substance from Class 1 by virtue of test results and the Class 1 definition.

d) Part 2;1.5.3.1 specifies:

1.5.3.1 An **appropriate national authority** assigning an article or substance into Class 1 should confirm with the applicant that classification in writing.

This text is then followed by paragraphs providing examples of the information which an appropriate national authority classification document may provide in the classification documents.

There is no explanation of the circumstances when classification is to be done by a competent national authority.

Furthermore, the content of the classification document should surely be the same, regardless of whether it is issued by an appropriate competent authority, shipper, or test laboratory. Experience from oversight shows that subsequent distributors of

explosive articles including airline technical stores typically receive articles in bulk and then redistribute them in smaller packages as a when required. So for example, the bulk items arrive in a UN specification 4G box tested to the Packing Group II requirements so it is believed that any other packaging of the same or higher specification, permitted by the Packing Instruction is presumed compliant. But as per Note 4 to Part 2, Chapter 1, Class 1 is unique in that the type of packaging frequently has a decisive effect on the hazard and therefore on the assignment to a particular division. Consequently, explosives cannot simply be packed in accordance with a packing instruction, they must be packed in the way that was used to determine the original classification. Classifications often specify the exact type of packaging by reference to the packaging manufacturer and packaging design identification references. It is therefore important that permitted packagings are readily identifiable to manufacturers and subsequent distributors regardless of who has made the classification.

1.3 The procedures for classification of explosives within the Technical Instructions are noted to be aligned with the UN Model Regulations. The other modal transport standards are also all aligned with the Model Regulations other than the IMDG Code, which specifies under 2.1.3.2 ‘Prior to transport, the classification of all explosive substances and articles, together with the compatibility group assignment and the proper shipping name under which the substance or article is to be transported, shall have been approved by the **competent authority of the country of manufacture**’.

1.4 The text of the Technical Instructions should clearly assign responsibility for all functions concerning the transport of dangerous goods by air including for the classification of explosives and it is suggested that the texts referenced above are ambiguous.

2. ACTION BY THE DGP-WG

2.1 The DGP-WG is invited to discuss the following:

- a) Considering the points raised in this paper, do the Technical Instructions clearly assign responsibility for the classification of explosives?
- b) Should it be mandatory for air transport that an explosives classification be approved, made or agreed by the competent authority of the country of manufacture?
- c) If not, should the provisions concerning the content of a classification document issued by an appropriate national authority be extended to a classification made by another entity, with additional provisions ensuring that the document is available to subsequent distributors?

2.2 Based on the above discussions, any further actions identified such as proposals for amendment to the Technical Instructions and/or the UN Model Regulations can be progressed between interested members of the DGP with any proposals to change the UN Model Regulations being made through the Secretariat.