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Volume 1



INTERNATIONAL CIVIL AVIATION ORGANIZATION

DANGEROUS GOODS TRAINING MANUAL

VOLUME 1

USING THE TECHNICAL INSTRUCTIONS FOR THE SAFE TRANSPORT OF DANGEROUS GOODS

*Approved by the Secretary General
and published under his authority*

FOURTH EDITION — 2010



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AMENDMENTS

Amendments are announced in the supplements to the *Catalogue of ICAO Publications*; the Catalogue and its supplements are available on the ICAO website at www.icao.int. The space below is provided to keep a record of such amendments.

RECORD OF AMENDMENTS AND CORRIGENDA

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FOREWORD

Introduction

Many thousands of dangerous goods shipments are carried every day of the year aboard aircraft. The majority of these dangerous goods are correctly prepared for transport and arrive safely at their destination.

Unfortunately, incidents and accidents involving dangerous goods do happen. Such incidents and accidents may result in the contamination or destruction of cargo, the contamination of aircraft cargo holds, or they may even threaten the aircraft itself and the lives of those on board. Often when such accidents have occurred, investigation has shown that the dangerous goods involved did not meet the current legal requirements.

What are the legal requirements?

It is reassuring to note that the legal requirements governing the safe transport of dangerous goods by air are essentially consistent throughout the world. This consistency is achieved through the adoption into the laws of each State of a document produced by the International Civil Aviation Organization (ICAO) called the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (the “Instructions”).

The ICAO Dangerous Goods Panel, made up of technical experts from ICAO member States, is responsible for developing and maintaining the technical accuracy of this document.

Note.— For more information about the work of the Dangerous Goods Panel refer to this website: <http://www.icao.int/anb/FLS/DangerousGoods/>.

It is important that those who prepare dangerous goods for air transport, those who transport them and the government organizations who oversee such activities, have a comprehensive working knowledge of the requirements laid out in these Instructions.

This self-study training manual may be used together with the Instructions to facilitate the understanding and use of that text.

Note.— This training manual is based on the 2009–2010 edition of the Instructions and its Addenda and Corrigenda.

Goal of this self-study training manual

The *Dangerous Goods Training Manual* has been designed to address the training needs of State employees who will be or are involved in the administration of ICAO’s Technical Instructions. In progressing through each unit, you will be able to relate the requirements to practical situations by following examples and going through exercises.

After careful study of this training manual you should be able to determine when a consignment of dangerous goods has been prepared, handled, stored and transported in accordance with the Instructions.

Although each unit relates mainly to a particular aspect of the Instructions, reference is made, when necessary, to other units and other parts of the Instructions. This enables you to appreciate the linkages within the training manual and within the Instructions.

Training manual structure

There are thirteen (13) units to this training manual. The following is a listing of these units and includes each of their individual goals:

Unit	Title	Goal
Unit 1	General philosophy, organization and contents of the International Civil Aviation Organization Technical Instructions	State the philosophy of the Instructions. Navigate through the Instructions. Evaluate whether the provisions concerning training, limitations of dangerous goods in aircraft, transport of dangerous goods by post, and dangerous goods security of the Instructions, have been correctly applied.
Unit 2	Hazard class definitions and classification procedures	Explain the characteristics of the nine classes of dangerous goods and the components of a dangerous goods description.
Unit 3	Use of the Dangerous Goods List—Table 3-1	Evaluate whether relevant information concerning an item of dangerous goods has been correctly extracted from Part 3 of the Instructions.
Unit 4	Packing requirements	Evaluate whether dangerous goods have been packed in accordance with the provisions of Part 4 and Part 6 of the Instructions.
Unit 5	Package marking and labelling	Evaluate whether the labelling and marking requirements of Part 5 of the Instructions have been correctly applied.
Unit 6	Dangerous goods transport document and other relevant documentation	Evaluate whether the documentation provisions of Part 5 of the Instructions have been correctly applied.
Unit 7	Operators and cargo acceptance	Evaluate whether the operator responsibilities identified in Part 7 of the Instructions have been correctly applied.
Unit 8	Infectious substances	Evaluate whether an infectious substance has been correctly classified, prepared for transport and transported in accordance with the Instructions.
Unit 9	Radioactive material	Evaluate whether a radioactive material has been correctly classified, prepared for transport and transported in accordance with the Instructions.
Unit 10	Dangerous goods in limited quantities and dangerous goods in excepted quantities	Evaluate whether the limited quantities and excepted quantities provisions of Part 3 of the Instructions have been correctly applied.
Unit 11	Provisions for passengers and crew	Evaluate whether the carry-on or checked baggage provisions in Part 8 of the Instructions have been correctly applied.

Unit 12	Emergency procedures	Evaluate if the emergency response measures in Part 7 of the Instructions are in place and are correctly applied. Evaluate whether appropriate emergency response information can be correctly extracted from the <i>Emergency Response Guidance for Aircraft Incidents Involving Dangerous Goods</i> (ICAO Doc 9481).
Unit 13	Answers to exercises	

At the beginning of each of these units you will find the following statement:

Note.— This unit is not a substitute for the Instructions, but may be used together with the Instructions to facilitate understanding of that text.

It is placed there to emphasize that this self-study training manual is to be used solely for guidance in locating information in the Instructions. If there is a discrepancy between what is found in the self-study training manual and what is found in the Instructions, the text of the Instructions prevails.

Each unit contains the following:

- Unit title
- Table of contents
- Training subject matter and category of personnel
- Goal
- Introduction
- Guidance material and exercises based on the elements of the Instruction under study
(Note.— Individual headings will be assigned based on the topic.)
- Summary

Within the text of each unit you will also find boxes which include:

- Excerpts from the Instructions in italics, preceded by the Instruction reference number, for example,

5;1 Note.— It is the shipper's responsibility to ensure that all of the applicable air transport requirements are met.

- Checklists, such as,

	Acceptance Procedures Checklist (To be used only by trained acceptance staff.)	Yes	No	Reference in the Instructions
1.	Document . Are there two copies of the document?			7;1.2.1 a)

- Summary of Instruction requirements, for example,

Type of aircraft	Explosives permitted on board aircraft	Segregation requirements
Passenger aircraft	Only — Division 1.4 S	Not Applicable

Notes are also included to draw your attention to certain provisions:

Example:

Note.— For ease of reference a numerical list of UN numbers with their proper shipping name is provided in Attachment 1; Chapter 1.

Before starting this self-study training manual

Before starting this self-study training manual be sure you have:

- a copy of the 2009–2010 edition of the Instructions and its Addenda and Corrigenda;
- a highlighting pencil so you can highlight important points;
- a pen or pencil for answering questions; and
- blank paper for notes.

IMPORTANT NOTE

When answering Exercise and Unit Test questions **be sure to indicate with your answer the reference number in the Instructions** that led you to your answer.

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