

# Significant Changes and Amendments of the 2023-2024 Edition of the

## ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (“TI”)

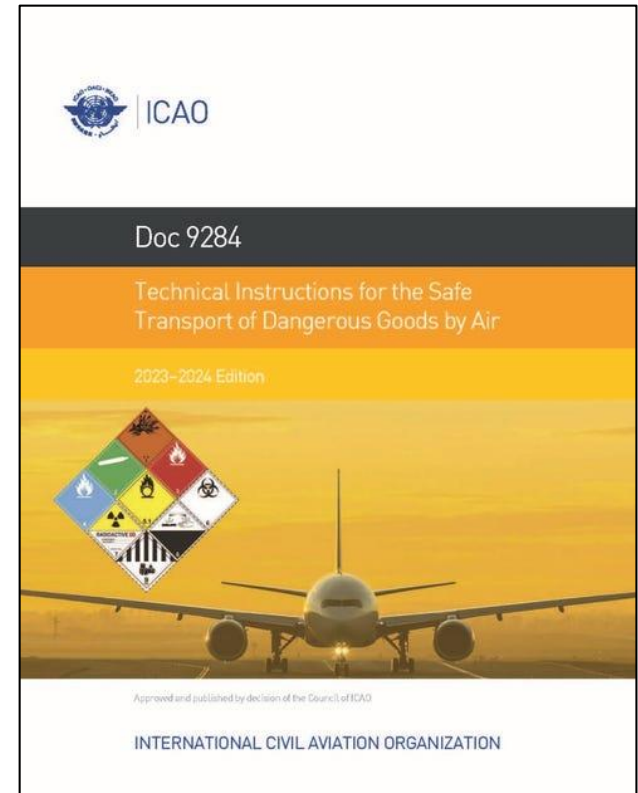


**Civil Aviation Department**  
**11 November 2022**

# Significant Changes and Amendments of the TI 2023-2024

**Effective on 1 January 2023, unless otherwise stated**

1. Revision to lithium battery provisions
2. Clarification on maximum net quantity per package
3. Classification of Divisions 4.1 and 5.2
4. Replacement of marks by operators
5. Implementation of competency-based approach to DG training and assessment (CBTA)



# 1. Revision to lithium battery provisions

## (i) Deletion of Section II of Packing Instructions (PI) 965 and 968

### UN 3480 Lithium ion batteries & UN 3090 Lithium metal batteries



Image credit: Dangerous Goods Advisory Council (DGAC)

- **Documentation**
  - ✓ Shipper's Declaration (DGD)
  - ✓ DG Acceptance Checklist
  - ✓ NOTOC
- **Training**
  - ✓ DG Regulations  
(Category 1, 3 & 6 personnel)
- **Marking & Labelling**
  - ✓ Lithium battery mark
  - ✓ 'Cargo aircraft only' label
  - ✓ Class 9 hazard label for lithium batteries

# 1. Revision to lithium battery provisions

## (ii) Addition of Stack Test in Section IB of PI965 and PI968

### UN 3480 Lithium ion batteries & UN 3090 Lithium metal batteries



Image credit: VistaCreate

*"Each package must be capable of withstanding, without damage to the cells or batteries contained therein and without any reduction of effectiveness, a force applied to the top surface equivalent to the total weight of identical packages **stacked to a height of 3 m** (including the test sample) **for a duration of 24 hours.**"*

# 1. Revision to lithium battery provisions

## (iii) Packaging Requirements for PI967 and PI970

*“Where multiple pieces of equipment are packed in the same outer packaging, **each piece of equipment** must be packed to **prevent contact** with other equipment.”*



**UN 3481 Lithium ion batteries contained in equipment &  
UN 3091 Lithium metal batteries contained in equipment**



# 1. Revision to lithium battery provisions

## (iv) Overpacks for Section II of PI966, PI967, PI969 and PI970

When packages are placed in an overpack:

- a) the packages must be **secured within the overpack**;
- b) the intended function of each package **must not be impaired by the overpack**; ...



香港特別行政區政府  
民航處

Civil Aviation Department  
The Government of the Hong Kong Special Administrative Region

### Dangerous Goods Advisory Circular DGAC 2/2021

#### Recommendations to enhance packaging for cargo with lithium ion or metal batteries contained in equipment

This Department ("the CAD") noted that the packaging of certain air shipments declared to be lithium ion or metal batteries in compliance with Section II of PI967 or PI970 under the International Civil Aviation Organisation's Technical Instructions for the Safe Transport of Dangerous Goods by Air ("ICAO TIs") may not be able to provide adequate protection to the equipment contained therein (e.g. use of soft-padded envelopes), while it is difficult for cargo acceptance staff to determine if the equipment can afford equivalent protection to the built in



A.



B.



C.



D.

# 1. Revision to lithium battery provisions

## (v) Lithium Battery Mark

Section IB of PI965 & 968

Section II of PI966, 967, 969 & 970

To align with UN Model Regulations:

→ **Remove** “Telephone number for additional information”

*Note – The mark in the 2021-2022 Edition may continue to be applied until 31 December 2026.*



\* Place for UN number(s)

\*\* Place for telephone number for additional information

# 1. Revision to lithium battery provisions

## (vi) Extension of Special Provision A154 to Certain DGs

UN 3480 Lithium ion batteries

UN 3481 Lithium ion batteries contained in or packed with equipment

UN 3090 Lithium metal batteries

UN 3091 Lithium metal batteries contained in or packed with equipment

**Damaged** and **defective** batteries are **forbidden** for transport



These batteries may include, but are not limited to:

- cells or batteries being **returned to the manufacturer** for safety reasons;
- cells or batteries that have **leaked or vented**;
- cells or batteries that **cannot be diagnosed prior to transport**; or
- cells or batteries that have **sustained physical or mechanical damage**.



# 1. Revision to lithium battery provisions

## (vi) Extension of Special Provision A154 to Certain DGs (cont'd)

Apart from lithium ion/metal cells and batteries assigned to UN 3480, UN 3481, UN 3090 or UN 3091, **SP A154** is also assigned to the entries for:

- a) **Engines and machinery** (UN 3528, UN 3529 and UN 3530);
- b) **Vehicles** (UN 3166 and UN 3171); and
- c) **Life-saving appliances** (UN 2990 and UN 3072)

that can potentially be installed with lithium battery(ies)

**Prohibition** added to associated PI 220, 378, 950, 951, 952, 955 & 972

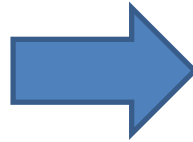
**Damaged** and **defective** batteries are **forbidden** for transport



## 2. Clarification on maximum net quantity per package

**Maximum net quantity per package for Cargo Aircraft Only:**

~~No limit~~



**400 kg**

**UN 2794 Batteries, wet, filled with acid**, electric storage

**UN 2795 Batteries, wet, filled with alkali**, electric storage

**UN 3292 Cells, containing sodium**

To align with maximum net mass of

**UN specification packaging**

→ 400 kg



*Image credit: Industry Plaza (left); IndiaMART (right)*

### 3. Classification of Divisions 4.1 and 5.2

**Self-reactive substances of Division 4.1** (ICAO TI Table 2-6 / IATA DGR App. C.1)

**Organic peroxides of Division 5.2** (ICAO TI Table 2-7 / IATA DGR App. C.2)

<p><i>Note.— Self-reactive substances to be transported must fulfil the classification and the control and emergency temperatures (derived from the self-accelerating decomposition temperature (SADT)) as listed.</i></p>									
Self-reactive substance	Concentration (per cent)	Diluent type A (per cent)	Diluent type B (per cent) (Note 1)	Inert solid (per cent)	Water (per cent)	Control temperature (°C)	Emergency temperature (°C)	UN generic entry	Subsidiary hazards and notes
Acetone-pyrogallol copolymer 2-diazo-1-naphthol-5-sulfonyl azide	≤42	≥48			≥8			3105	2
Azodicarbonamide formulation type B, temperature controlled	≤32 as a paste							3106	20
Azodicarbonamide formulation type C									

<p><i>Note.— Peroxides to be transported must fulfil the classification and the control and emergency temperatures (derived from the self-accelerating decomposition temperature (SADT)) as listed.</i></p>									
Organic peroxide	Concentration (per cent)	Diluent type A (per cent)	Diluent type B (per cent) (Note 1)	Inert solid (per cent)	Water (per cent)	Control temperature (°C)	Emergency temperature (°C)	UN generic entry	Subsidiary hazards and notes
Acetyl acetone peroxide	≤42	≥48			≥8			3105	2
Acetyl acetone peroxide	≤32 as a paste							3106	20

**Classified into 7 types according to the degree of danger they present:**

- Type A – Forbidden in any mode of transport
- Types B to F – Directly related to maximum quantity allowed in one packaging
- Type G – Not subject to the provisions of the respective Divisions

Editorial revision to align with UN Model Regulations

→ **No impact** on existing requirements

## 4. Replacement of marks by operators

When an operator discovers that any of the following marks for packages of dangerous goods have become **lost, detached or illegible** :



Limited Quantities



Excepted Quantities



Lithium Battery



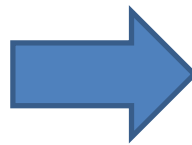
Environmentally  
Hazardous  
Substance

→ Operator must **replace** them with appropriate marks in accordance with the information provided on the DGD or AWB

## 5. Competency-based approach to training and assessment (CBTA)

In ICAO TI (2021-2022 edition), **DG training and assessment** requirements for employees of shippers, freight forwarders, aircraft operators and handling agents have been **revised**:

Categorization  
approach



Competency-  
based approach

Previous training provisions may be used until 31 December 2022 while CBTA shall become **mandatory from 1 January 2023**.

The legal requirement for shippers and staff of freight forwarders, etc. to **complete DG training** remains **unchanged**.

## 5. Competency-based approach to training and assessment (CBTA)

### Transitional arrangement:

DG training and assessment completed and certificates issued before 1 January 2023 with a validity period beyond 1 January 2023 will **continue to be valid** until they expire.

### Examples

	Previous training	Certificate expiry	Recurrent training
a)	14-18 Dec 2020	31 Dec 2022	√ Categorization approach; or √ Competency-based approach between Oct and Dec 2022
b)	16 Jun 2022	30 Jun 2024	√ Competency-based approach between Apr and Jun 2024



## 5. Competency-based approach to training and assessment (CBTA)

**For employees with a valid DG training certificate / employees enrolling in recurrent training:**

Categorization approach	Competency-based approach <small>NEW</small>
1 – Shippers and persons undertaking the responsibilities of shippers	a – Personnel responsible for preparation of DG consignments (H.6.1)
3 – Staff of freight forwarders involved in processing DG	c – Personnel responsible for processing or accepting DG consignments (H.6.3)
4 – Staff of freight forwarders involved in processing cargo or mail (other than DG)	b – Personnel responsible for processing or accepting goods presented as general cargo (H.6.2)
5 – Staff of freight forwarders involved in the handling, storage and loading of cargo or mail	d – Personnel responsible for handling cargo in a warehouse and loading and unloading unit load devices (H.6.4)

## 5. Competency-based approach to training and assessment (CBTA)

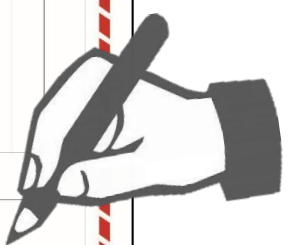
**For new recruits / employees with new job function(s):**

- Step 1) Select the **most appropriate role(s)** for each employee based on the task list → see [Training Needs Analysis Template](#)
- Step 2) Enrol in **CAD-approved** DG training programme for the required role(s) → see [List of Approved DG Training Courses](#)
- Step 3) Maintain training and assessment **record** for a minimum period of **36 months** → see [Training & Assessment Record Template](#)
- Step 4) Arrange **recurrent training** and assessment for employees within **24 months** of the previous training cycle

## 5. Competency-based approach to training and assessment (CBTA)

**Example 1: Staff of freight forwarder responsible for –**

- (i) preparing DG consignments for and on behalf of shipper client (e.g. signing DGD) (Role a); and**
- (ii) processing or accepting DG consignments (Role c)**



**SHIPPER'S DECLARATION FOR DANGEROUS GOODS**

Shipper: \_\_\_\_\_ Air Waybill No. \_\_\_\_\_  
 Page \_\_\_\_\_ of \_\_\_\_\_ Pages  
 Shipper's Reference No. (optional): \_\_\_\_\_

Consignee: \_\_\_\_\_

Two identical copies must accompany the consignment.

**TRANSPORT DETAILS**  
 The consignee must comply with the applicable Dangerous Goods Regulations in all respects with the applicable law, subject to legal penalties.  
 Airport of Departure (optional): \_\_\_\_\_  
 Airport of Destination (optional): \_\_\_\_\_

**WARNING**  
 Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties.

**NATURE AND QUANTITY OF DANGEROUS GOODS**

Dangerous Goods Identification						
Unit of Measure	Proper Shipping Name	Class or Division	Packing Group	Quantity and Type of Packing	Packing Int.	Additional

Additional handling information: \_\_\_\_\_

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/coded, and are in all respects in proper condition for transport, according to applicable international and national governmental regulations. I declare that all of the applicable air transport requirements have been met.

Name of Signatory: \_\_\_\_\_  
 Date: \_\_\_\_\_  
 Signature (over enclosing document): \_\_\_\_\_



(see [FAQ 16](#) and [25](#))

## 5. Competency-based approach to training and assessment (CBTA)

**Example 1: Staff of freight forwarder responsible for –**

- (i) preparing DG consignments for and on behalf of shipper client (e.g. signing DGD) (Role a); and**
- (ii) processing or accepting DG consignments (Role c)**

Personnel, especially those of freight forwarders, may be responsible for multiple roles such as preparing dangerous goods consignments for and on behalf of their shipper client, as well as processing or accepting dangerous goods consignments. In this circumstance, the personnel will be required to complete training for personnel who is responsible for both (i) preparing, and (ii) processing or accepting dangerous goods consignments (roles a and c), and employers shall ensure their personnel complete training commensurate with all relevant job functions.

It is noted that certain training courses provided by third party training providers may cover multiple roles. In this regard, employers shall ensure that their employees obtain certificate(s) covering the required multiple roles upon completion of such training course, with a view to fulfilling the CBTA requirements.

## 5. Competency-based approach to training and assessment (CBTA)

**Example 2: Staff of warehouse sub-contractor responsible for –**

- (i) processing or accepting goods presented as general cargo (Role b); and**
- (ii) handling cargo in a warehouse and loading and unloading unit load devices (Role d)**



(see [FAQ 17](#))

## 5. Competency-based approach to training and assessment (CBTA)

**Example 2: Staff of warehouse sub-contractor responsible for –**

- (i) processing or accepting goods presented as general cargo (Role b); and**
- (ii) handling cargo in a warehouse and loading and unloading unit load devices (Role d)**

Only personnel who has completed dangerous goods training for processing or accepting dangerous goods consignments (role c) may process or accept dangerous goods. Therefore, freight forwarders shall ensure that their warehouse operations will only engage in processing or acceptance of dangerous goods consignments in the presence of a personnel who has completed the said training.

Section II of Packing Instructions 965 to 970 have provided exceptions to the air transport requirements in order to facilitate the transport of lithium batteries of small size and quantity (whether on their own, contained in or packed with equipment), therefore allowing these types of dangerous goods to be processed or accepted by appropriately trained “personnel responsible for processing or accepting goods presented as general cargo” (role b).



- (i) processing or accepting DG consignments (Role c)**
- (ii) processing or accepting goods presented as general cargo (Role b); and**
- (iii) handling cargo in a warehouse and loading and unloading unit load devices (Role d)**



The collage features several business documents and a 3D bar chart. The documents include:

- Kundenkarte (Customer Card):** A form for 'Herrn Dr. H. G.' with fields for 'Name', 'Geburtsdatum', 'Geburtsort', 'Beruf', 'Telefon', 'Fax', 'E-Mail', 'Adresse', and 'Anmerkungen'. The 'Name' field is filled with 'Herrn Dr. H. G.'.
- Kundenkarte (Customer Card):** A form for 'Herrn Dr. H. G.' with fields for 'Name', 'Geburtsdatum', 'Geburtsort', 'Beruf', 'Telefon', 'Fax', 'E-Mail', 'Adresse', and 'Anmerkungen'. The 'Name' field is filled with 'Herrn Dr. H. G.'.
- Kundenkarte (Customer Card):** A form for 'Herrn Dr. H. G.' with fields for 'Name', 'Geburtsdatum', 'Geburtsort', 'Beruf', 'Telefon', 'Fax', 'E-Mail', 'Adresse', and 'Anmerkungen'. The 'Name' field is filled with 'Herrn Dr. H. G.'.
- Kundenkarte (Customer Card):** A form for 'Herrn Dr. H. G.' with fields for 'Name', 'Geburtsdatum', 'Geburtsort', 'Beruf', 'Telefon', 'Fax', 'E-Mail', 'Adresse', and 'Anmerkungen'. The 'Name' field is filled with 'Herrn Dr. H. G.'.

The 3D bar chart shows four bars of increasing height, with the tallest bar having a small house icon on top. A circular inset shows a close-up of a document with a house icon.



21

## 5. Competency-based approach to training and assessment (CBTA)

**Example 3: Staff of freight forwarder responsible for –**


- (i) processing or accepting DG consignments (Role c)**
- (ii) processing or accepting goods presented as general cargo (Role b); and**
- (iii) handling cargo in a warehouse and loading and unloading unit load devices (Role d)**

In general, the approved dangerous goods training programmes for “personnel responsible for processing or accepting dangerous goods consignments” (role c) should cover the training elements for processing or accepting goods presented as general cargo as well as handling of cargo in a warehouse and loading and unloading ULD (roles b and d), and therefore these trained personnel may also perform the said job functions. Further reference can be made to the Training Need Analysis forms, and Tables 1 and 2 of Appendix I of Guidance on adopting Competency-based approach to dangerous goods training and assessment, as well as FAQ 25.

## 5. Competency-based approach to training and assessment (CBTA)

CAD's website: <https://www.cad.gov.hk/>

**1**



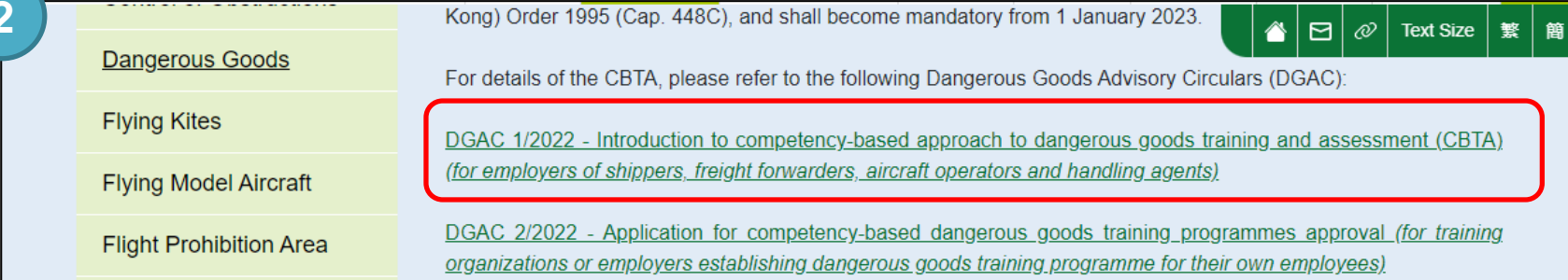
Civil Aviation Department  
The Government of the Hong Kong Special Administrative Region

About Us Our Services Publications Media Public Forms Tender Notices FAQ Contact Us

CADSTAT e-Filing system Aviation Education Path Tips for booking airline tickets Packing tips for air passenger Information on flight application ICAO new policy direction on air cargo security Hong Kong Schedule Coordination Office

Hong Kong Aeronautical Information Services Small Unmanned Aircraft (SUA) Shining bright light or laser at aircraft **Competency-based dangerous goods training and assessment (CBTA)** Licences, exemptions & certificates General e-Demand note Other languages

**2**



Kong) Order 1995 (Cap. 448C), and shall become mandatory from 1 January 2023.

For details of the CBTA, please refer to the following Dangerous Goods Advisory Circulars (DGAC):

**DGAC 1/2022 - Introduction to competency-based approach to dangerous goods training and assessment (CBTA) (for employers of shippers, freight forwarders, aircraft operators and handling agents)**

DGAC 2/2022 - Application for competency-based dangerous goods training programmes approval (for training organizations or employers establishing dangerous goods training programme for their own employees)

Dangerous Goods

Flying Kites

Flying Model Aircraft




Flight Prohibition Area

### Dangerous Goods Advisory Circular DGAC 1/2022 Introduction to Competency-based Approach to Dangerous Goods Training and Assessment (CBTA) (for Employers)

## 5. Competency-based approach to training and assessment (CBTA)


CAD's website: <https://www.cad.gov.hk/>

3

Flying Model Aircraft	1/2022	<a href="#">Introduction to Competency-based Approach to Dangerous Goods Training and Assessment (CBTA) (for Employers)</a>  (PDF:136KB)	Effective
Flight Prohibition Area		<a href="#">Attachment I - Proposed Framework for Implementation of Competency-based Approach to Dangerous Goods Training and Assessment in Hong Kong</a>  (PDF:263KB)	
Heliports and Helicopter Services		Attachment II - Dangerous Goods Training Needs Analysis Form Templates	
Packing Tips for Air Passenger		<a href="#">For Staff Members of Shippers, Freight Forwarders &amp; Sub-Contractors</a>  (Word:38KB)	
Paragliding		<a href="#">For Staff Members of Aircraft Operators &amp; Handling Agents</a>  (Word:30KB)	
Air Traffic Engineering Services		<a href="#">Attachment III - Dangerous Goods Training and Assessment Record Template</a>  (Word:36KB)	
		<a href="#">Related Frequently Asked Questions</a>  (PDF:234KB)	


4

For more information, please contact Safety Officer (Dangerous Goods) on telephone no. (852) 2910 6856, 2910 6857 or 2910 6855.

- ▶ [List of Approved DG Training Courses for Shippers and Freight Forwarders](#)  (PDF: 379KB)
- ▶ [List of Approved DG Training Courses for Operators and Their Handling Agents](#)  (PDF: 260KB)

# 5. Competency-based approach to training and assessment (CBTA)

CAD's website: <https://www.cad.gov.hk/>



香港特別行政區政府  
民航處  
Civil Aviation Department  
The Government of the Hong Kong Special Administrative Region

## Dangerous Goods Advisory Circular DGAC 1/2022

**Introduction to Competency-based Approach to Dangerous Goods Training and Assessment (CBTA) (for Employers)**

Introduction

Under the Dangerous Goods (Consignment by Air) (Safety) Regulations (Cap. 384A) and the Air Navigation (Dangerous Goods) Regulations, an Schedule 16 to the Air Navigation (Long Kong) Order 1995 (Cap. 448C), it is a requirement that all personnel involved in the transport of cargo, passengers and baggage by air, including but not limited to the staff of shippers, freight forwarders, aircraft operators and handling agents, whether they are in-house or sub-contracted office or warehouse personnel, shall have completed DG training programmes that are appropriate to their functions and approved by the Civil Aviation Department (CAD), prior to carrying out relevant job functions and responsibilities.

2. In the 2021-2022 edition of Technical Instructions for the Safe Transport of Dangerous Goods by Air (TIs), the International Civil Aviation Organization (ICAO) has updated the requirements of DG training and assessment for employees of shippers, freight forwarders, aircraft operators and handling agents from the categorization approach to the competency-based approach, with a view to producing a competent workforce by providing focused training. In accordance with the TIs, these personnel must be trained in the requirements commensurate with their job functions and responsibilities. Such training must also include general familiarization training, function-specific training as well as safety training.

3. These changes have been given legal effect in laws mentioned in paragraph 1 above and shall become mandatory from 1 January 2023. In this connection, employers shall ensure that DG training and assessment provided to employees meet this new requirement commencing from 1 January 2023. As a transitional arrangement, training and assessment completed and certificates that are issued before 1 January 2023 with a validity period beyond 1 January 2023 will continue to be valid until they expire.

4. In April 2021, the CAD has published a document explaining the new requirements under the framework of Competency-based Approach to Dangerous Goods Training and Assessment (CBTA); it has been included in Attachment 1 of this circular for reference.



香港特別行政區政府  
民航處  
Civil Aviation Department  
The Government of the Hong Kong Special Administrative Region

## 付運人、貨運代理人及其外判商的員工——空運危險品培訓需求分析表格 Dangerous Goods (DG) Training Needs Analysis Form for Staff Members of Shippers, Freight Forwarders & Sub-Contractors

機構名稱 Company Name: \_\_\_\_\_

**培訓需求分析記錄 (請填寫此部份)**  
Training Needs Analysis Record (Please fill in this part)

附註 Notes:

- 每位僱員可負責多項工作(見下表)內不同的職能工作(組合或負責多於一職角色(全適用)). Each employee may be responsible for a mixture of tasks or be responsible for more than one role (if applicable) shown in Table 1 on the next page.
- 僱主可將此表格內所列的職能工作與僱員的工作職能對照表(全適用), 以代替下列的每位僱員填寫的表格, 並要求分析記錄. Employers may substitute a training needs analysis record for each employee with an internal training policy manual (as appropriate), describing the training needs for certain job functions.

僱員姓名 Name of Employee	僱員角色 (原列表一) Role of Employee (see Table 1)	僱員姓名 Name of Employee	僱員角色 (原列表一) Role of Employee (see Table 1)
1. e.g. Chan Tai Man	a	11.	
2. e.g. Wong Ka Man	b, d	12.	
3.		13.	
4.		14.	
5.		15.	
6.		16.	
7.		17.	
8.		18.	
9.		19.	
10.		20.	

**員工角色 Role (請參閱列表一, 勿隨意刪減, see Table 1 for the Task List)**

a = 負責準備危險品附帶之文件 Personnel responsible for preparation of DG assignments  
b = 負責包裝、包裝貼上標籤 Personnel responsible for processing or accepting goods presented as general cargo  
c = 負責包裝危險品附帶之文件 Personnel responsible for processing or accepting DG consignments  
d = 負責在倉庫或貨運站接收及交運、裝載及卸載之文件 Personnel responsible for handling cargo in a warehouse and loading and unloading unit vehicles

負責人簽名 Responsible Person: (姓名 Name) (職位 Position)  
(電話 Phone) (電郵 Email)  
(簽署 Signature)

(Revised on 17.08.22)

此列表是為協助僱主進行員工的培訓需求分析而設, 只供參考, 不需填寫. This table aims to assist employers in conducting Training Needs Analysis for employees. It is for reference only, not required to be filled.

列表一 培訓需求分析範本 (參考國際民航組織的「明確界定的員工角色」)  
Table 1 Training Needs Analysis Template (with defined roles with reference to the International Civil Aviation Organization)  
根據以下列出的職能, 為每位僱員選擇適當的角色  
Select the most appropriate role(s) for each employee based on the task list below:

職務/工作 Tasks	員工角色 Roles*			
	a	b	c	d
6. 一般知識及安全培訓 (包括範圍、應用性、限制、識別未申報危險品及緊急應變程序等) General awareness and safety training (including scope, applicability, limitations, recognition of undeclared DG and emergency response procedures, etc.)	Y	Y	Y	Y
1. 分類危險物品 Classifying dangerous goods				
1.1 按分類標準評定物質及物品 (確定其是否屬危險品, 及是否在不有關情況下禁止運輸) Evaluate substance or article against classification criteria (determine if it is DG, and whether forbidden under any circumstances)	Y	-	-	-
1.2 申報危險品 (的正確性) (判斷危險品的類別、包裝、標籤、標籤號碼等) Determine DG description (determine class or division, packing group, UN number, etc.)	Y	-	-	-
1.3 審核特殊規定 Review special provisions	Y	-	-	-
2. 預備運輸危險物品 Preparing dangerous goods shipments				
2.1 評估包裝選擇的可行性 (考慮各種限制、限制和航空公司差異等) Assess packing options including quantity limitations (consider limitations, state and operator variations, etc.)	Y	-	-	-
2.2 編制包裝標籤 (考慮包裝限制、限制、選擇適當包裝材料等) Apply packing requirements (consider constraints of packing instructions, select appropriate packaging materials, etc.)	Y	-	-	-
2.3 編制包裝標籤及貼上標籤 Determine and apply marks and labels	Y	-	-	-
2.4 評估包裝標籤的完整性 Assess use of overpacks	Y	-	-	-
2.5 準備危險品文件 Prepare documentation	Y	-	-	-
3. 接收貨物 Receiving/accepting cargo				
3.1 審核危險品文件 (如危險品申報單) Review documentation (i.e. Shipper's Declaration for DG)	-	-	Y	-
3.2 檢查危險品包裝、標籤及標籤 Review packaging, marks and labels	-	-	Y	-
3.3 檢查危險品包裝及標籤 Conduct and complete DG acceptance procedures	-	-	Y	-
3.4 處理未申報之貨物 (檢查文件及包裝標籤是否與申報危險品一致) Process/accept cargo other than DG (check documentation and packages for indications of undeclared DG)	-	Y	-	-
4. 裝載貨物 Managing cargo pre-loading				
4.1 計劃裝載危險品貨物 (判斷貨物包裝、分類等要求) Plan loading DG cargo (determine segregation, separation, etc. requirements)	-	-	-	Y
4.2 裝載危險品貨物 (檢查包裝標籤是否與申報危險品一致) Load DG cargo (check packages for indications of undeclared DG, check for damage/knag, apply 1.1.1.1 tags when applicable, etc.)	-	-	-	Y
7. 收集安全數據 (報告危險品意外、事故、未申報/錯誤申報危險品及其他事故) Collecting safety data (report DG accidents, incidents, undeclared/incorrectly declared DG & other occurrences)				
員工角色 Roles				
a = 負責準備危險品附帶之文件 Personnel responsible for preparation of DG consignments				
b = 負責包裝、包裝貼上標籤 Personnel responsible for processing or accepting goods presented as general cargo				
c = 負責包裝危險品附帶之文件 Personnel responsible for processing or accepting DG consignments				
d = 負責在倉庫或貨運站接收及交運、裝載及卸載之文件 Personnel responsible for handling cargo in a warehouse and loading and unloading unit vehicles				

(Revised on 17.08.22)

DGAC 1/2022

Training Needs Analysis Template



to perform some job functions that are typically performed by shippers such as labelling, marking or declaring dangerous goods. In this case, they would need to be trained to perform these functions competently regardless of their job title.

4. As an employer in the air logistics and/or aviation industry, is there anything I need to do differently under the CITA framework?

Employers shall ensure that employees involved in the transport of cargo, passengers and baggage by air have completed appropriate dangerous goods training programmes. Similar to current arrangements, they may establish and maintain their own dangerous goods training programmes approved by the CAD, which shall be reviewed and updated to cater for the CITA framework as deemed necessary. Alternatively, employers may delegate parts of their responsibility to a third party providing CAD-approved dangerous goods training programmes to their employees.

In both situations above, employers have new responsibilities under the CITA framework which include conducting training needs analysis and maintaining training and assessment records for their employees. [Chart 1](#) demonstrates the changes to employers' responsibilities for employees' dangerous goods training from 1 January 2023 under different scenarios. More details can be found in DGAC 1/2022 at the following website: [https://www.cad.gov.hk/english/DGAC-DGAC1\\_2022.pdf](https://www.cad.gov.hk/english/DGAC-DGAC1_2022.pdf)

**B) Training Needs Analysis**

5. What is training needs analysis?

Training needs analysis is the initial phase of the implementation of a competency-based dangerous goods training programme, which identifies the training needs of personnel involved in the transport of cargo, passengers and baggage by air. The result from this analysis can be a list of tasks that are typically performed by the employees. Based on the results of this analysis, appropriate dangerous goods training programmes can then be developed or sought for the employees.

6. What is the expected output of training needs analysis?

Upon completion of the training needs analysis, employers should have developed the list of tasks that need to be performed by their employees, whose job functions involve the transport of cargo, passengers and baggage by air, in a specific operational setting. It will form the basis for formulating the type of training and assessment suitable for the employee. The CAD has prepared training needs analysis form templates which can be used by employers as a means of compliance for fulfilling this responsibility, as appropriate. The forms can be downloaded from the following website.

Page 2 of 11



# 5. Competency-based approach to training and assessment (CBTA)

CAD's website: <https://www.cad.gov.hk/>

## Important note 重要事項

The International Civil Aviation Organization requirement for dangerous goods (DG) training and assessment has been changed from a categorization approach to competency-based approach and shall become mandatory from 1 January 2023. The list of approved DG training courses will be progressively transitioned into this new training framework.

國際民航組織更新了危險品培訓及評估規定，由現行的分類為本模式改為能力為本模式，並將由二零二三年一月一日起全面實施。此危險品培訓課程名單將逐步過渡至新的培訓框架。

### List of Approved DG Training Courses for Shippers and Freight Forwarders under Regulation 7, 7A and 7B of Dangerous Goods (Consignment by Air) (Safety) Regulations Cap. 384A, Laws of Hong Kong

根據香港法例第 384A 章《危險品(航空托運)(安全)規例》第 7, 7A 及 7B 條獲批准的付運人及貨運代理人危險品培訓課程名單

#### A. Categories of Personnel of Shippers and Freight Forwarders who are subject to dangerous goods training requirement

##### 甲. 需要接受危險品課程之付運人及貨運代理人員工類別

- |  |                             |
|--|-----------------------------|
| 1 Shippers and persons undertaking the responsibilities of shippers                                    | 1 付運人及承擔付運人責任之人士            |
| 3— Staff members of freight forwarders involved in processing air cargo containing dangerous goods     | 3 從事空運危險品收運工作之貨運代理人員工       |
| 4— Staff members of freight forwarders involved in processing air cargo not containing dangerous goods | 4— 從事零運貨物(非危險品)收運工作之貨運代理人員工 |
| 5 Staff members of freight forwarders involved in the handling, loading or storing air cargo           | 5— 從事搬運、裝載或儲存空運貨物工作之貨運代理人員工 |

#### B. Organizations in Hong Kong providing dangerous goods training recognized as fulfilling the training requirement for the category of personnel under section A

##### 乙. 於本港為甲部所列員工類別提供符合培訓要求之危險品課程的機構

- |  |                         |
|--|-------------------------|
| 1) Air Marine Transport Training Centre Ltd.<br>Contact Person: Ms. Polly KWOK | 航空運輸培訓中心有限公司<br>聯絡人：邱小姐 |
|--|-------------------------|

- 1 -

#### C. "Well-defined roles" of shippers and freight forwarders that require competency-based dangerous goods training, with reference to the International Civil Aviation Organization

丙. 參考國際民航組織需要接受能力為本危險品培訓之付運人及貨運代理人之「明確界定的員工角色」

- |  |                                 |
|--|---------------------------------|
| a Personnel responsible for preparation of dangerous goods consignments (Note 1)                               | a 負責制備危險品貨物之員工 (註釋 1)           |
| b Personnel responsible for processing or accepting goods presented as general cargo (Note 2)                  | b 負責收運一般貨物之員工 (註釋 2)            |
| c Personnel responsible for processing or accepting dangerous goods consignments (Note 1)                      | c 負責收運危險品貨物之員工 (註釋 1)           |
| d Personnel responsible for handling cargo in a warehouse and loading and unloading unit load devices (Note 2) | d 負責在倉庫搬運貨物以及裝載和卸載集裝器之員工 (註釋 2) |

#### Notes 註釋

- In general, these personnel may have completed "Dangerous Goods Regulations (DGR)" training under the categorization approach.
- In general, these personnel may have completed "Dangerous Goods Awareness (DGA)" training under the categorization approach.

- 一般來說，在分類為本模式下，這些人員可完成「危險品規則培訓課程」(DGR)。
- 一般來說，在分類為本模式下，這些人員可完成「危險品意識培訓課程」(DGA)。

#### D. Training organizations in Hong Kong providing approved competency-based dangerous goods training programmes for the "well defined roles" listed in section C

丁. 於本港為丙部所列之「明確界定的員工角色」提供已獲批准的能力為本危險品課程的培訓機構

- |   |  |
|---|--|
| 1) Air Marine Transport Training Centre Ltd.<br>Contact Person: Ms. Polly KWOK<br>Tel: (852) 3462 2481/ 6360 6508<br>Email: admin@amtcl.com<br>Website: www.amtcl.com<br>Role a & c of Part C<br>Role b & d of Part C | 航空運輸培訓中心有限公司<br>聯絡人：邱小姐<br>聯絡電話：(852) 3462 2481/ 6360 6508<br>電郵：admin@amtcl.com<br>網址：www.amtcl.com<br>丙部之 a 及 c 員工角色<br>丙部之 b 及 d 員工角色 |
| 2) Global Cold Chain Solutions Hong Kong Ltd.<br>Contact Person: Mr. Jimmy Ng<br>Tel: (852) 3500 3854<br>Email: jimmyng@gccscourier.com<br>Role a of Part C (Infectious Substances)                                   | 高寶冷鏈速遞有限公司<br>聯絡人：吳先生<br>聯絡電話：(852) 3500 3854<br>電郵：jimmyng@gccscourier.com<br>丙部之 a 員工角色 (感染性物質)  |

- 6 -

## List of Approved DG Training Courses for Shippers and Freight Forwarders

**The industry is reminded to make reference to the current edition of the ICAO TI (or IATA DGR) for the complete requirements on air transport of dangerous goods.**

**Thank you**