

出國報告（出國類別：進修）

危險物品規範年度複訓課程

服務機關：航空警察局

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出國期間：111/09/18-111/09/24

報告日期：111/11/17

摘要

依據內政部警政署組織法、民用航空法及航空相關法規等，賦予警察對於出入境航空器及旅客安全檢查之職責，國際機場為國家關鍵基礎建設，航空保安與飛航安全之良窳不僅僅是影響航空器、貨物、乘客之安全關鍵，亦影響各國航空路徑上之安全。航空警察局為守護飛航安全的第一線。飛航安全中，涵蓋對於上機之貨物、人員安全檢查，便是本局最為核心的任務之一，亦是此次前往國際航空運協會新加坡訓練中心參加最新的危險物品規則訓練的目的。隨著社會與科技的日新月異，隱藏性危險品越來越多元化，機場航空保安儼然已成為各國交通單位首要重視的問題，為了杜絕一切飛航安全有危險性之疑慮，提升安檢人員辨別危（安）險品，違禁物以及相關法規與國際規定之核心技能、知識，唯有不斷學習成長，精益求精，才能在這個千變萬化的世代，確保我國的飛航安全。

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一、出國目的與說明

現今科技發達的時代，人與物都不斷地在變化，新興物品、物質越來越多樣化，相對影響飛航安全的可能性也不斷地在提高，為保護國際上飛航安全，國際空運協會便會因應國際情勢去變更危險物品內容規則，以一致性的標準提升各國安全檢查，本次訓練課程以國際航空運輸協會危險物品規範第六十三版(IATA Dangerous Goods Regulations Edition 63)為首要學習內容，從新增規範到各章節重要規定，再至細節危險物品之知識等都包含在內。其宗旨在於提升機場各部門負責航空保安之人員，對於新修正危險物品國際規範的知能，與世界接軌。在此次課程當中與講師、其他成員交流各國以及各航空業者對於現行實務上執行此規範之情形，透過交換意見和想法也能促進我國安全檢查之進步，並減少飛航安全問題之發生。

二、行程規劃

本次出國行程自 111 年 09 月 18 日至 111 年 09 月 24 日，總計 7 日，行程規劃如下：

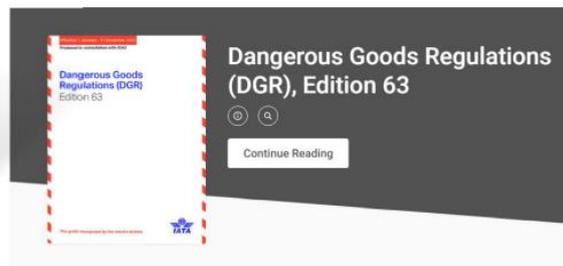
日期	地點	行程紀要
111 年 09 月 18 日	桃園—新加坡	去程
111 年 09 月 19 日 至 111 年 09 月 23 日	新加坡	報到及參加 「危險品規則初訓—類 別六」訓練課程
111 年 09 月 24 日	新加坡—桃園	返程

三、過程

本次訓練從 9 月 19 日至 9 月 23 日止，共 5 日，每日八小時，總時數共計四十四小時，包含課堂講授、課堂作業練習及測驗三部分。訓練所採行之教材，係以國際航空運輸協會危險物品規範第六十三版(IATA Dangerous Goods Regulations 63 Edition)工具書。由講師 Eric Tan 授課並搭配國際航空運輸協會(IATA)編撰之課堂講義及練習題為主要教學內容。以下將依訓練之日程，摘取重要之內容介紹。另附相關課程圖片及課程證照於附錄。



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課程五日的大綱內容如下:

➤ Day1

- Introduction to the course
- Legal Requirements
- Definitions and Responsibilities
- Training provisions
- Limitations of DG
- Classification of DG

➤ Day2

- Identification of DG
- General packing requirements.
- Packing Instructions
- “Q value”
- Overpacks
- Packaging specifications & performance tests

➤ Day3

- Marking and Labelling
- Documentation
- Excepted quantities

➤ Day 4

- Dry ice as a refrigerant
- Lithium batteries
- Handling DG
- Radioactive Material

➤ Day 5

- Radioactive material
- DG AutoCheck
- Examination

依據 IATA 課程摘要節錄重點內容:

此次課程由國際航空運輸協會(IATA) 專任講師 Eric Tan 講授空運危險物品規範 (Dangerous Goods Regulations) 第 63 版線上電子書以及由該協會編撰的課堂講義，上課方式不同以往使用紙本書籍一律採用電腦線上教學。透過線上教學可以更快更精準掌握學習內容及重點，也可以直接在電子書上做筆記。第 63 版電子書共有 1168 頁，透過課堂講述可以了解修正前及修正後規範之差異，以及最新空運危險品的各項規則，課堂中除透過講師講解空運危險品規則，也與各國受訓成員交流意見以及規範在實際上操作遇到的各種狀況及解決方式。課堂中除了講解九大類危險品外也包含了危險品運送包裝和標籤規範。使能正確的分類各項危險品並給予適當的包裝，以利運送過程中安全無虞。以下重點節錄於課程講義。

- Dangerous Goods Regulations 危險品規則的內容建立是由以下五大協會共同合作完成
 - ✓ 聯合國專家小組委員會
 - ✓ 國際原能會
 - ✓ 國際民用航空組織
 - ✓ 國際航空運輸協會
 - ✓ 瑞士聯邦民航局

1.1 Basis of the DGR



The UN Subcommittee of Experts (SCoETDG)

Procedures for the transport of Dangerous Goods by all modes.



International Atomic Energy Agency (IAEA)

Procedures for transporting radioactive materials.



International Civil Aviation Organization (ICAO)

Technical Instructions for the Safe Transport of Dangerous Goods by Air, based on SCoETDG and IAEA procedures.



International Air Transport Association (IATA)

IATA Dangerous Goods Regulations - contain ICAO requirements, as well as more restrictive requirements.



Swiss Federal Office of Civil Aviation (FOCA)

OATr. (sr 748.411) Art. 16

- 誰適用 Dangerous Goods Regulations 危險品規則
 - 國際航空運輸協會會員
 - 國際航空運輸協會準會員
 - 國際航空運輸協會多邊聯運協定締約方(貨運)
 - 所有提供危險物品載運於航空器之託運人和業者

1.2 Application of DGR

- All airlines which are:
 - Members IATA
 - Associate Members of IATA;
 - Party to the IATA Multilateral Interline Traffic Agreement – Cargo;
- All shippers and agents that offer consignments of dangerous goods to the organization engaged in an aircraft operations



- 除 1.4S 類外，高度危險性物品常被濫用於恐怖攻擊以致於造成傷亡慘重及大規模破壞，TABLE 1.7.A、TABLE 1.7.B 為一般常見的高度危險品。

1.7.3.1 High Consequence Dangerous Goods

- Substances and articles which have the potential for misuse in a terrorist event and which may, as a result, produce serious consequences such as mass casualties or mass destruction
- Listed in DGR Tables 1.7.A and 1.7.B

Table 1.7.A Indicative List of High Consequence Dangerous Goods (1.7.3.1.2)

	Class 1	Division 1.1
	Class 1	Division 1.2
	Class 1	Division 1.3 compatibility group C
△	Class 1	Division 1.4, UN 0104, UN 0237, UN 0255, UN 0267, UN 0289, UN 0361, UN 0365, UN 0366, UN 0440, UN 0441, UN 0455, UN 0456, UN 0500, UN 0512, UN 0513
	Class 1	Division 1.5
□	Class 1	Division 1.6
	Class 2	Division 2.3 toxic gases (excluding aerosols)
	Class 3	desensitized explosives
	Class 4	Division 4.1 desensitized explosives
	Class 6	Division 6.1 substances of Packing Group I, except when transported under the excepted quantity provisions (see 2.6)
△	Class 6	Division 6.2 infectious substances of Category A (UN 2814 and UN 2900) and medical waste of Category A (UN 3549)

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- 任何物品及物質，只要有以下情況就一律視為禁運危險品:
 1. 易爆炸或有危險反應
 2. 產生火花
 3. 引成熱危險反應
 4. 產生毒氣、腐蝕及易燃氣體

2.1 Forbidden dangerous goods

• Any article or substance which, as presented for transport, is liable to:

- Explode or dangerously react
- Produce a flame
- Cause dangerous evolution of heat
- Produce a toxic, corrosive, flammable gases



must not be carried on aircraft under any circumstance.

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- 舉例來說:以下紅框內的 Acetylene(liquefied)乙炔就是禁運危險品，無論客機、貨機都禁運也沒有任何例外條件允許可上機。

UN/ ID no.	Proper Shipping Name/Description	Class or Div. (Sub Hazard)	Hazard Label(s)	PG	Passenger and Cargo Aircraft						Cargo Aircraft Only		S.P. see 4.4	ERG Code	
					EQ see 2.6	Ltd Qty		Pkg Inst	Max Net Qty/Pkg	Pkg Inst	Max Net Qty/Pkg	Pkg Inst			Max Net Qty/Pkg
						G	H								
A	B	C	D	E	F	G	H	I	J	K	L	M	N		
1648	Acetonitrile	3	Flamm. liquid	II	E2	Y311	1 L	353	5 L	364	60 L		3L		
1716	Acetyl bromide	8	Corrosive	II	E2	Y840	0.5 L	851	1 L	855	30 L		8L		
1717	Acetyl chloride	3 (8)	Flamm. liquid & Corrosive	II	E2	Y340	0.5 L	352	1 L	363	5 L		3C		
	Acetyl cyclohexanesulphonyl peroxide, more than 82%, wetted with less than 12% water						Forbidden		Forbidden		Forbidden				
	Acetylene dichloride, see 1,2-Dichloroethylene (UN 1150)						Forbidden		Forbidden		Forbidden				
1001	Acetylene, dissolved	2.1	Flamm. gas		E0		Forbidden		Forbidden	200	15 kg	A1	10L		
	Acetylene (liquefied)						Forbidden		Forbidden		Forbidden				
3374	Acetylene silver nitrate						Forbidden		Forbidden		Forbidden				
	Acetylene, solvent free	2.1	Flamm. gas		E0		Forbidden		Forbidden	200	15 kg	A1	10L		
	Acetylene tetrabromide, see Tetrabromoethane (UN 2504)						Forbidden		Forbidden		Forbidden				

➤ **隱藏性危險物品**

可能出現於手提行李或貨物內，收運隱藏性危險品的工作人員需接受相關課程訓練。

一般未申報的飛機航材和零件也可能包含隱藏性危險品，例如:有加壓氣體、易燃液體或腐蝕性物質，都必須依本規範分類和運送。

2.2 Hidden dangerous goods

- Possible in Baggage or Cargo

- Acceptance staff must be trained

- General description may contain hazardous materials

- Need to be aware of possible, hidden dangerous goods



<https://www.google.com.au/search?q=images>

2.2 Hidden dangerous goods

- COMAT and aircraft spare parts are commonly undeclared. However, it may contain:
 - Chemical oxygen generators in a passenger service unit,
 - Compressed gases, flammable liquids, Corrosive material
- Must be classified and transported in accordance with the Regulations



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- 旅客及組員可攜帶或託運上機之危險物品，除放射性物質外禁止攜帶外，其餘經准許危險物品供個人使用規範於 2.3.2 到 2.3.5 章節內。

2.3 DG Carried by passengers or crew

- Dangerous goods, including excepted packages of radioactive material, are forbidden for carriage by passengers or crew:
 - as or in checked baggage;
 - as or in carry-on baggage; or
 - on their person;except as permitted in 2.3.2 to 2.3.5 for personal use.



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- 可上機之行動輔助裝置(例如輪椅)，動力由：非溢漏式濕電池；鎳氫電池；乾電池必須符合以下規範:
- 1.必須避免機上被意外啟動之措施。
 - 2.每一個電池必須藉由有效絕緣裸露之電極，以保護其避免短路。
 - 3.提供行動輔助裝置所安裝電池類型及行動輔助裝置使用說明之資訊(包括如何將電池絕緣之操作指引)。
 - 4.若為非溢漏式濕電池：每一個電池必須符合特殊條款 A67 規範，和每個人僅能攜帶 1 個備用電池。
 - 5.需要航空公司同意，並告知機長。

2.3 DG Carried by passengers or crew

• Wheelchairs/Mobility Aids with non-spillable wet batteries, Nickel-Metal Hydride Batteries or Dry Batteries

- Prepared to prevent unintentional activation
- Must be secured with installed batteries
- Terminals are protected from short-circuit
- Following manufacturer references for securing the batteries
- Use rigid packaging if the battery can be removed
- Maximum one spare battery
- Pilot in command must be informed.



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- 可攜帶危險物品：
- 1.酒精飲料:以含酒精濃度超過 24%但小於等於 70%之飲品為例，必須為零售包裝。且每人攜帶的總淨量不得超過 5 公升。
 - 2.安全包裝且屬分類 1.4S 之彈藥(只限 UN0012 及 UN0014):每人僅能攜帶毛重 5 公斤以內；兩名以上旅客所攜帶之彈藥，不得合併為一個或數個包裝件。
 - 3.雪崩救援背包:每人最多攜帶 1 個雪崩救援背包；救援背包必須妥適包裝以

確保不會被意外啟動；可內裝含有淨重不超過 200 毫克屬危險物品分類 1.4S 類之煙火觸發裝置；其內含的氣囊必須配備有壓力釋放閥。

4. **配備有鋰電池且電池超過以下規定之行李箱**，必須以手提行李方式攜帶，除非鋰電池已從行李箱移除並依據限制第 7 點規定攜帶：鋰金屬電池：鋰金屬含量 0.3 公克；或鋰離子電池：功率 2.7 瓦特小時。

5. **備用電池規定**:每個電池須符合下列規定：鋰金屬電池：鋰含量不得超過 2 公克；或鋰離子電池：瓦特小時功率不得超過 100 瓦特小時。必須採取措施防止該裝置意外啟動並保護該裝置不被損壞。每人最多可攜帶 20 個備用電池，但各航空公司可視情況允許攜帶超過 20 個備用電池。**(註:行動電源屬於備用電池。)** 非溢漏式電池:每一個電池不得超過 12 伏特，亦不得超過 100 瓦特小時。且每人不得攜帶超過 2 個備用電池。

2.3 DG Carried by passengers or crew

The pilot-in-command must be informed of the location				
Permitted in or as carry-on baggage				
Permitted in or as checked baggage				
The approval of the operator is required				
Alcoholic beverages , when in retail packagings, containing more than 24% but not more than 70% alcohol by volume, in receptacles not exceeding 5 L, with a total net quantity per person of 5 L.	NO	YES	YES	NO
Ammunition, securely packaged (in Div. 1.4S, UN 0012 or UN 0014 only), in quantities not exceeding 5 kg gross weight per person for that person's own use. Allowances for more than one person must not be combined into one or more packages.	YES	YES	NO	NO
Avalanche rescue backpack , one (1) per person, containing cartridges of compressed gas in Div. 2.2. May also be equipped with a pyrotechnic trigger mechanism containing no more than 200 mg net of Div. 1.4S. The backpack must be packed in such a manner that it cannot be accidentally activated. The airbags within the backpacks must be fitted with pressure relief valves.	YES	YES	YES	NO
Baggage with installed lithium batteries non-removable batteries exceeding 0.3 g lithium metal or 2.7 Wh.	NO	FORBIDDEN		NO
Baggage with installed lithium batteries: - non-removable batteries. Batteries must contain no more than 0.3 g lithium metal or for lithium ion must not exceed 2.7 Wh; - removable batteries. Batteries must be removed if baggage is to be checked in. Removed batteries must be carried in the cabin.	NO*	NO	YES	NO
Batteries, spare/loose , including lithium batteries, non-spillable batteries, nickel-metal hydride batteries and dry batteries (see 2.3.5.8) for portable electronic devices must be carried in carry-on baggage only. Articles which have the primary purpose as a power source, e.g. power banks are considered as spare batteries. These batteries must be individually protected to prevent short circuits. Lithium metal batteries: the lithium metal content must not exceed 2 g (see 2.3.5.8.4). Lithium ion batteries: the Watt hour rating must not exceed 100 Wh (see 2.3.5.8.4). Each person is limited to a maximum of 20 spare batteries. *The operator may approve the carriage of more than 20 batteries. Non-spillable batteries: must be 12 V or less and 100 Wh or less. Each person is limited to a maximum of 2 spare batteries (see 2.3.5.8.5)	NO*	NO	YES	NO

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- 組員及旅客可攜帶上機之危險物品：安全火柴、香菸打火機
 1. 每人最多限帶 1 個香菸打火機或 1 盒安全火柴且不可含有未被吸收之液體燃料(不含液化氣體)。
 2. 必須以隨身方式攜帶上機。
 3. 若係以鋰電池為驅動方式且無安全蓋或其他方式防止意外啟動之鋰離子或鋰金屬電池動力打火機禁止攜帶。

2.3 DG Carried by passengers or crew

- Safety matches or cigarette lighters
 - One safety matches/small cigarette lighter that does not contain unabsorbed liquid fuel carried on the person.
 - Not permitted in checked or carry on baggage.
 - Cigarette lighters, powered by a lithium ion or lithium metal battery without a safety cap or means of protection against unintentional activation are not permitted on one's person, carry-on or checked baggage.



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- **包裝分類:**危險物品包裝是根據危害級別去劃分的。
包裝級別第一級為高度危險；包裝級別第二級為中度危險；包裝級別第三級為輕度危險

3.0.3 Packing groups

- DG are assigned to relevant packaging group according to the degree of hazard they present (Classes 3, 4, Div 5.1, Div 6.1 and Class 8)

Packing Group I – High danger

Packing Group II – Medium danger

Packing Group III – Low danger



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- 九大類危險物品分別為:
- 第一類為爆炸物品(受熱、震動可能發生不同規模爆炸並由爆炸規模以及物質敏感程度細分為 1.1 類至 1.6 類)，其中屬 1.4 類爆炸物品可以由貨機或客機運送。其餘類別的爆炸物品只能由貨機運送。

3.1 Class 1 – Explosives

- A substance which is not itself an explosive, but which can form an explosive atmosphere of gas, vapor or dust is not included in Class 1.
- Assigned to six divisions



<http://simulants.co.uk/explosive-simulants/>

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3.1.3 Divisions



Division 1.1

- mass explosion hazard
- IMP Code: REX



Division 1.2

- having a projection hazard
- IMP Code: REX



Division 1.3

- having a minor blast or projection hazard
- IMP Code:
 - REX
 - RCX (when permitted)
 - RGX

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3.1.3 Divisions



Division 1.4

- Present no significant hazard
- IMP Code:
 - RXE
 - RXB
 - RXC



Division 1.5

- Very insensitive substances which have a mass explosion hazard
- MP Code: REX



Division 1.6

- Extremely insensitive articles which do not have a mass explosion hazard
- IMP Code: REX

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3.1.4 Compatibility Groups

- Assigned to 13 compatibility groups that identify the kinds of explosives that are compatible
 - Only explosives in Div.1.4, compatibility group S are permitted on a passenger aircraft
 - All other explosives on Cargo Aircraft Only (CAO)



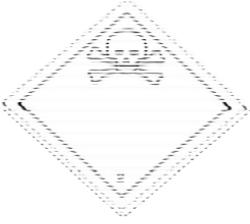
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- 第二類為氣體又細分為:
- ✓ 2.1 類易燃氣體；例如:丁烷、丙烷、氫、乙炔、打火機。
 - ✓ 2.2 類非易燃、非毒性氣體；例如:固態二氧化碳(乾冰)、氦。
 - ✓ 2.3 類毒性氣體，一般來說大多數的毒性氣體都是禁止運送但有少部分為例外，例如:低毒性的噴霧或噴罐。

3.2 Class 2 – Gases

		
Division 2.1	Division 2.2	Division 2.3
<ul style="list-style-type: none">• Flammable Gas• Mixed with air forms a flammable mixture.• IMP Code: RFG• Butane, Hydrogen, Propane, Acetylene, Lighters	<ul style="list-style-type: none">• Non-Flammable non-toxic gas• Any non-flammable, non-toxic gas or refrigerated liquefied gas• IMP Code: RNG• Carbon dioxide, Neon	<ul style="list-style-type: none">• Toxic Gas• Gases known to be toxic or corrosive to humans and known to pose a health hazard• IMP Code: RPG• Most toxic gases are forbidden. However, some are permitted (aerosols of low toxicity)

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- 第三類為易燃液體。易燃液體指可燃蒸氣之閃火點溫度於閉杯測試 $\leq 60^{\circ}\text{C}$ ，或在開杯測試溫度時 $\leq 65.6^{\circ}\text{C}$ 時，放出易燃蒸氣的液體、混合液體、固定的溶液或懸浮液。本類易燃液體的包裝等級依其閃點與沸點來劃分。詳如 IATA DGR TABLE 3.3A 表。

3.3 Class 3 – Flammable liquids

- Class 3 includes the following substances:
 - Flammable liquids
 - Liquid desensitized explosives
- No divisions
- IMP Code RFL
- Packing groups apply
- Packing groups based on flash and boiling point



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TABLE 3.3A 表

包裝等級	閃點（閉杯）	初始沸點
I	—	$\leq 35^{\circ}\text{C}$
II	$< 23^{\circ}\text{C}$	$> 35^{\circ}\text{C}$
III	$\geq 23^{\circ}\text{C}$ but $\leq 60^{\circ}\text{C}$	

第四類又細分為三類分別是:

- ✓ 4.1 易燃固體：在運輸條件下容易燃燒或摩擦可能引燃或助燃的固體；可能發生強烈放熱反應的自我反應物質；不充分稀釋可能發生爆炸的固態減敏爆炸品。例如安全火柴。
- ✓ 4.2 自燃物質：在正常運輸條件下異於自發加熱或與空氣接觸即升溫，從而易於著火的物質、起火物質、自燃物質。例如活性碳白磷、黃磷。
- ✓ 4.3 遇水釋放易燃氣體之物質：與水相互作用易於變成自燃物質或放出危險數量的易燃氣體物質。例如鎂粉。

3.4 Class 4 – Flammable Solids; Substances Liable to Spontaneous Combustion; Substances which, in Contact with Water, Emit Flammable Gases

- Div. 4.1, Flammable Solids, self-reactive, polymerizing substances and solid desensitized explosives
- Div. 4.2, Substances liable to spontaneous combustion
- Div. 4.3, Substances which, in contact with water, emit flammable gases



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➤ 第五類細分為兩類:

- ✓ 5.1 氧化物：本身未必燃燒，但通常因放出氧可能引起或促使其他物質燃燒的物質，這種物品可能含在一種物品內。例如硝酸銨肥料、氯酸鈣和漂白劑。
- ✓ 5.2 有機過氧化物：一種有機物質，可看作過氧化氫的衍生物，有機過氧化物是熱不穩定物質，可能發生放熱自加速分解。例如過氧化叔丁醇。

3.5 Class 5 — Oxidizing substances and organic peroxides



Division 5.1

- Oxidizer
- IMP Code: **ROX**
- Example: Ammonium nitrate fertilizer, calcium chlorate, bleaches



Division 5.2

- Organic Peroxide
- IMP Code: **ROP**
- Example: tert-Butyl hydroperoxide

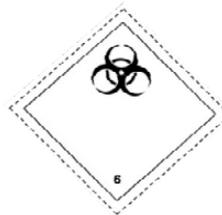
- 第六類細分成兩類:
- ✓ 6.1 毒性物質：這些物質在吞食、吸入或與皮膚接觸後可能造成死亡或嚴重受傷或損害人體健康。例如砷、尼古丁、氰化物、農藥。
 - ✓ 6.2 傳染性物質：已知或有理由認為含有病源體的物質，病源體是指會使人或動物感染疾病的微生物（包括細菌、病毒、立克次式體、寄生蟲、真菌）及其他媒介物。例如:病毒、細菌、樣本、醫療廢棄物。

3.6 Class 6 – Toxic and infectious substances



Division 6.1

- Toxic Substances
- IMP Code: **RPB**
- Example: Arsenic, Nicotine, Cyanide, Pesticides, Strychnine.



Division 6.2

- Infectious Substances
- IMP Code: **RIS**
- Example: Virus, Bacteria, such as HIV (AIDS), some diagnostic specimens and Medical and Clinical waste

- 第七類放射性物質：指含有含有放射性核種，且放射性活度超過規定的標準值。

Class 7 – Radioactive material

- Articles or substance which, spontaneously and continuously emit certain type of radiation which can be harmful to health or affect other material such as undeveloped photographic or x-ray films
- Examples: Uranium, Iodine 132, etc



- 第八類腐蝕性物質：經由化學作用，會對皮膚造成不可逆傷害、或在滲漏時會有顯著損壞或實質上損毀其他物質或運輸工具。符合 IATA DGR3.8.2 章節一般分類條款內容會對皮膚腐蝕物質或混合物。腐蝕皮膚參照產品會對皮膚產生不可逆損傷，也就是說接觸物質或混合物會造成腐蝕表皮和進入真皮造成壞死。固體和液體於運輸中會變成液體，如被判定不會對皮膚造成腐蝕，仍必須根據 IATA DGR3.8.3.3.3 章節考慮物質對於金屬表面的潛在腐蝕性。例如電池酸液、氫氧化鈉、水銀、氫氧化鉀。

Class 8 – Corrosives

- No Division
- Corrosive Material
- IMP Code: **RCM**
- A substances which, by chemical action, will cause irreversible damage when in contact with living tissue to the skin or, in the case of leakage will materially damage or even destroy, other goods or the means of transport
- Example: Battery acids, sulphuric and other acids, sodium hydroxide, potassium hydroxide, Mercury



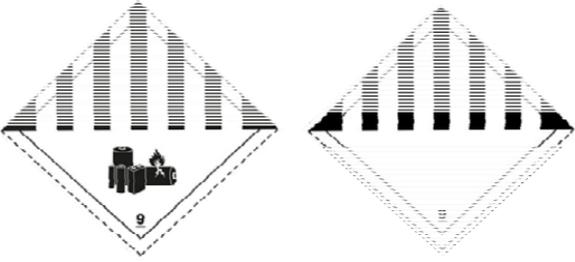

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包裝等級	暴露時間	觀察時間	作用
I	≤3 分鐘	≤60 分鐘	完好表面厚度完全損壞
II	>3 分鐘 ≤60 分鐘	≤14 天	完好表面厚度完全損壞
III	>60 分鐘 ≤4 小時	≤14 天	完好表面厚度完全損壞
III	-	-	在 55°C 鋁/鐵腐蝕率 >6.25 毫米

- 第九類其他危險物品和物質，包含對環境有害的物質：在空運過程中存在不屬於其他類別危險性的危險物質或物品。如磁性物質、環境危害物質、乾冰、航空管制的固體或液體、鋰電池、升溫物質、基因改造微生物（GMMOs）或基因改造生物（GMOs）、雜項物質或物品（如消費產品、救生器材、引擎等）

Class 9 – Miscellaneous dangerous substances and articles, including environmentally hazardous substances

- Articles and Substances, which during air transport, present a danger not covered by other classes.



**RMD
ICE
RSB**

**RBI
RBM
RLI
RLM**

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四、心得與建議

我航空警察局是負責守護飛航安全及航空保安權責單位之一，工作內涵包括檢查客貨機載運物品和人員攜帶之物，藉由此次的空運危險物品規則訓練課程，不僅能更瞭解危險物品樣態和分類，也更熟知對危險物品包裝、運送以及標示等規定。對於飛航安全，除本局所有同仁共同努力外，乘客、組員、航空業者以及貨運承攬業者等，也都應有共同遵守規範和維護飛航安全的義務，而本局人員身為把關安全之角色，為了熟捻危險物品規則、增廣見聞、學習新興物品及規定，爭取此機會，特派本員前往國際航空運輸協會（IATA）新加坡訓練中心參與危險物品處理規則之課程，再透過經驗、資訊分享讓更多同仁能精進新知，並且熟知規定。

平時執勤上，多為檢查手提行李及託運行李勤務，遇有旅客攜帶不可上機的危險物品時，除依規定請其退運或拋棄，更應解決旅客不知為何不可攜帶該物品之疑惑，秉持耐心和同理心告知旅客相關規定及危險物不可攜帶之原因，不僅展現安檢人員專業素養，更體現我國公務機關服務群眾的品質。此次出國進修，旨在強化安全檢查的專業知識，清楚瞭解規範，便能明白解釋給旅客知曉，讓執法過程清清楚楚不含糊，就可以大大減少爭議以及衝突。

飛航安全的提升不可僅倚賴個人或一個組織，而是需要大家共同去遵守及付出，知識需要日積月累，規範需要漸進修正，作為則要精益求精，希望我國守護飛航安全能日益進步，嚴謹且落實。

五、附件資料



Certificate

This is to certify that

Shih-Hui Wang

born on 02 May, has passed the IATA classroom course

Dangerous Goods Regulations (DGR) - Initial - Category 6

19-23 September 2022

Singapore, Singapore

given by instructor(s) Ming Wee Tan

Expiry date: 30 September 2024

A handwritten signature in blue ink, appearing to read "Willie Walsh".

Willie Walsh
Director General, IATA

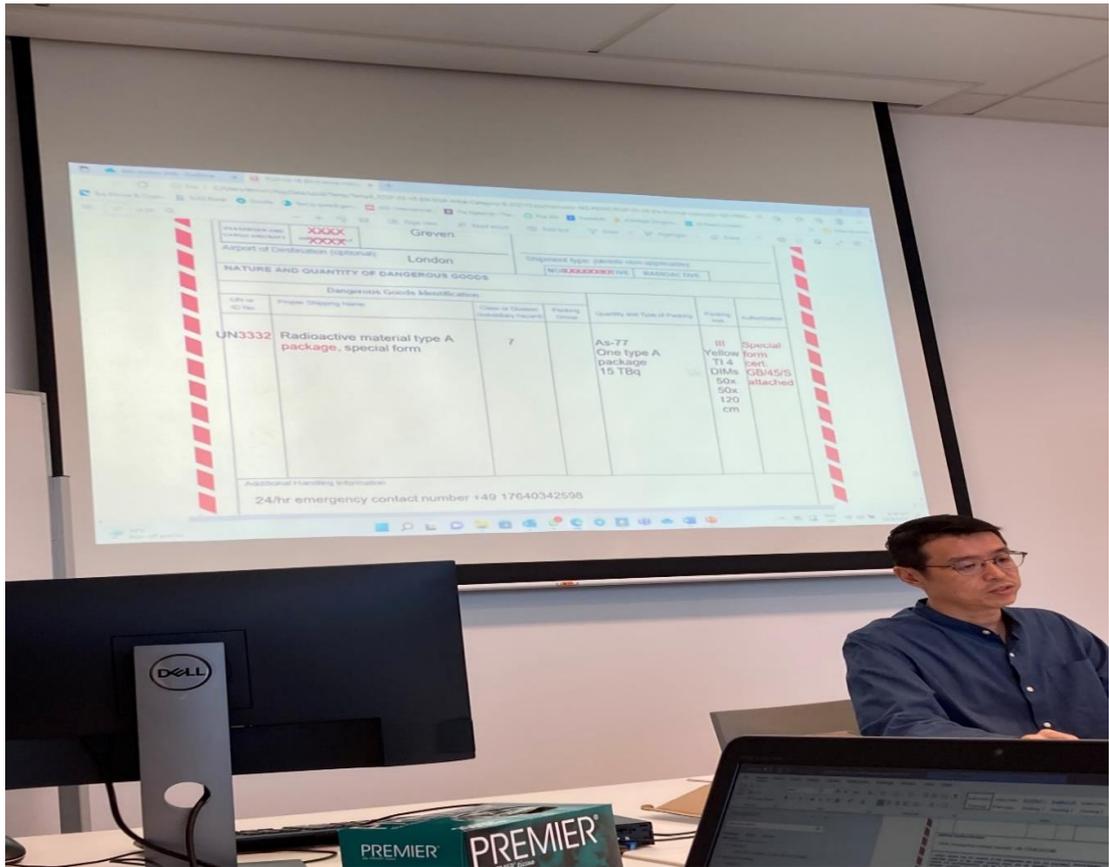


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DGR 證照



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