CIVIL AVIATION AUTHORITY OF MALAYSIA
SAFETY INFORMATION 08/2025

30th September 2025

DANGEROUS GOODS SECURITY: STRENGTHENING THE AIR CARGO SUPPLY CHAIN

1 Introduction

1.1 The Civil Aviation Authority of Malaysia (CAAM) issues this Safety Information (SI) to reinforce the importance of robust security measures in the transport of dangerous goods by air. This SI is directed to all operators, shippers, ground handling agents, and associated entities involved in the air cargo supply chain.

1.2 Recent global security assessments continue to highlight the persistent risks of unlawful interference in air cargo and transport, including the misuse of dangerous goods for malicious purposes. Such threats underscore the vulnerabilities that may arise if security measures are not diligently applied and maintained.

1.3 In view of this evolving threat landscape, strict adherence to established security requirements, alongside existing safety protocols is essential to safeguard the entire air cargo supply chain to ensure that dangerous goods are transported in a manner that protects aviation, passengers and the public.

2 Background

2.1 The transport of certain dangerous goods presents a significant security risk if they are diverted from the supply chain and exploited for unlawful purposes. Accordingly, the focus must extend beyond preventing accidental harm to also include preventing deliberate, malicious acts.

2.2 The International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284) prescribe mandatory security provisions. However, global and regional experience has shown that challenges remain in ensuring consistent implementation, security awareness, and enforcement across all segments of the supply chain.

2.3 Security is a shared responsibility. All personnel – from shippers and freight forwarders to ground handlers and airline staff, plays a pivotal role in safeguarding the integrity of the supply chain. Effective risk mitigation requires proactive security management, reinforced by vigilance at all operational levels.

3 Key Security Provisions

3.1 General Security and Training Requirements

a) All entities involved in the transport of dangerous goods must establish and implement effective measures to prevent unauthorised access, tampering, or interference throughout the transport process, including storage, handling, and transfer.

b) Security awareness training is mandatory for all personnel involved in the transport of dangerous goods. Training must cover the nature of security threats, risks and methods of prevention and detection, and individual responsibilities in safeguarding the supply chain.

3.2 High Consequence Dangerous Goods

a) High consequence dangerous goods are those which, if misused, have the potential to cause mass casualties, severe disruption, or significant destruction, particularly in the context of a terrorist act or other unlawful interference. Shippers, operators and all entities involved in their handling must identify such items and implement enhanced security measures to prevent diversion or misuse.

b) An indicative list of high consequence dangerous goods (excluding Class 7 – Radioactive Material) is provided in the table below for reference.

Class 1	Division 1.1	Explosive
Class 1	Division 1.2	Explosive
Class 1	Division 1.3	Compatibility Group C explosive
Class 1	Division 1.4	UN Nos. 0104, 0237, 0255, 0267, 0289, 0361, 0365, 0366, 0440, 0441, 0455, 0456, 0500, 0512 and 0513
Class 1	Division 1.5	Explosive
Class 1	Division 1.6	Explosive
	Division 2.3	Toxic gases (excluding aerosols)
Class 3		Desensitised explosives
	Division 4.1	Desensitised explosives
	Division 6.1	Substances of Packing Group I; except when transported under the excepted quantity provisions in 3;5 of ICAO TI
	Division 6.2	Infectious substances of Category A (UN Nos. 2814 and 2900) and medical waste of Category A (UN 3549)

Table 3.1 – Indicative List of High Consequence Dangerous Goods
(Adapted from ICAO Doc 9284, Table 1-5)

c) Class 7 Dangerous Goods – High-consequence radioactive material packages, defined as those containing activity levels equal to or exceeding 3,000 A_2 – fall within this category. Exceptions apply for certain radionuclides, with specific thresholds outlined in the table below.

Element Radionuclide	Radionuclide	Transport Security Threshold (TBq)
Americium	Am-241	0.6
Gold	Au-198	2
Cadmium	Cd-109	200
Californium	Cf-252	0.2
Curium	Cm-244	0.5
Cobalt	Co-57	7
Cobalt	Co-60	0.3
Caesium	Cs-137	1
Iron	Fe-55	8000
Gadolinium	Gd-153	10
Germanium	Ge-68	7
Iridium	Ir-192	0.8
Nickel	Ni-63	600
Palladium	Pd-103	900
Promethium	Pm-147	400
Polonium	Po-210	0.6
Plutonium	Pu-238	0.6
Plutonium	Pu-239	0.6
Radium	Ra-226	0.4
Ruthenium	Ru-106	3
Selenium	Se-75	2
Strontium	Sr-90	10
Thallium	Tl-204	200
Thulium	Tm-170	200
Ytterbium	Yb-169	3

Table 3.2 – Transport Security Thresholds for Specific Radionuclides
(Adapted from ICAO Doc 9284, Table 1-6)

3.3 Security Plans:

a) Shippers, operators and any entities handling high-consequence dangerous goods are required to adopt, implement, and maintain a formal security plan as part of their operations.

b) The security plan must clearly define the security responsibilities and accountabilities in the transport chain, procedures for securing dangerous goods,

and protocols for regular review and updating of security measures to reflect changes in threat assessments, operations and regulations.

4 Recommendations

4.1 All operators, shippers, and freight forwarders should conduct a comprehensive review of their existing security programmes, policies and procedures to ensure they adequately and effectively address the risks associated with the transport of dangerous goods.

4.2 All entities must establish and maintain clear, documented security measures, including training policies, which are reviewed regularly to maintain currency and effectiveness and are consistently implemented by all relevant personnel to maintain a high level of vigilance and competency.

4.3 A robust security culture should be actively promoted and fostered throughout the organisation and across business partnerships. Every individual in the supply chain should understand their role in protecting the integrity of air transport and be encouraged to report any concerns or irregularities without hesitation.

5 References

5.1 For further information on Dangerous Goods Security, please refer to the Civil Aviation Directive (CAD) 18 – National Transport of Dangerous Goods Programme.

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