



香港特別行政區政府

民航處

Civil Aviation Department

The Government of the Hong Kong Special Administrative Region

Regulatory Update – Major Changes in the 2023-2024 Edition of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (TIs)

Background

The 2023-2024 edition of the International Civil Aviation Organization's ("ICAO") Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284) ("TIs"), upon which the Dangerous Goods (Consignment by Air) (Safety) Ordinance (CAP. 384) and Air Navigation (Dangerous Goods) Regulations (Schedule 16 to CAP. 448C) are based, will come into effect on 1 January 2023.

The major changes below have been produced to facilitate the industry to comply with the new international requirements for the safe transport of dangerous goods by air. For compliance with the requirements, the industries and the parties concerned shall refer to the current edition of the TIs.

Should you have any query about the major changes to the TIs, please contact the Dangerous Goods Office of Civil Aviation Department at 2910 6856 / 2910 6857 / 2910 6855.

Prepared by

Dangerous Goods Office
Civil Aviation Department Hong Kong
November 2022

Major changes to ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air (Doc 9284) with effect from 1 January 2023

TI Reference	Detail	Concerned Party
Revisions to general provisions :		Shipper, freight forwarder, operator
1;2.2.1 d)	Addition of new exception for alcohol-based hand sanitizers and cleaning products carried by the operator (added through Addendum No. 1 to the 2021–2022 Edition)	
1;4	Removal of provision allowing for the training provisions contained in the 2019–2020 Edition of the Instructions to be used	
Revisions to classification criteria :		Shipper, freight forwarder
2;7	Revisions to radioactive material criteria to align with the International Atomic Energy Agency Regulations for the Safe Transport of Radioactive Material	
2;8.3	Revision to corrosive substances criteria for packing group assignment	
2;9.3	Addition of an exception for button cells installed in equipment from the requirement for lithium battery manufacturers and subsequent distributors to make available a summary of the required test for lithium batteries	
3;4.1.2	Revision to list of classes, divisions and packing groups for which dangerous goods in limited quantities are permitted	
3;2(Table 3-1)	Addition of new entries : <ul style="list-style-type: none"> ○ Cobalt dihydroxide powder, containing not less than 10% respirable particles (UN 3550) 	
3;2(Table 3-1)	Deletion of entries : <ul style="list-style-type: none"> ○ Extracts, aromatic, liquid (UN 1169) 	
3;2(Table 3-1)	Revision of entries to make them forbidden for transport under any circumstance: <ul style="list-style-type: none"> ○ Self-reactive liquid type B* (UN 3221) ○ Self-reactive liquid type B, temperature controlled* (UN 3231) 	
3;2(Table 3-1)	Revision of entries concerning class and subsidiary hazard and other consequential changes: <ul style="list-style-type: none"> ○ Ethyl bromide (UN 1891) 	
Revisions to proper shipping names :		
3;2(Table 3-1)	○ Renaming of Extracts, flavouring, liquid to Extracts, liquid , for flavour or aroma for UN 1197	
3;2(Table 3-1)	○ Renaming of Radioactive material, surface contaminated objects (SCO-I or SCO-II) , non-fissile or fissile excepted to Radioactive material, surface contaminated objects (SCO-I, SCO-II or SCO-III) , non-fissile for UN 2913	
Revisions to special provisions :		Shipper, freight forwarder
3;3	Special Provisions A1 and A2: Addition of requirement for transport in accordance with the special provision to be noted on the dangerous goods transport document	
3;3	Special Provision A4: Revised to address an inconsistency between the maximum net quantity per package permitted by the special provision and the maximum net quantity per package permitted for some substances in Table 3-1	
3;3	Special Provision A19: Addition of a note to clarify the scope of what is considered a portable fire extinguisher	

TI Reference	Detail	Concerned Party
3;3	Special Provision A35: Revised to clarify that particle sizes equal to 53 microns (mechanically produced) or 840 microns (chemically produced) were included in the exception from the Technical Instructions for UN 1326 — Hafnium powder, wetted , UN 1352 — Titanium powder, wetted and UN 1358 — Zirconium powder, wetted	
3;3	Special Provisions A61: Addition of requirement for “not restricted” and the special provision number to be provided on the air waybill when issued	
3;3	Special Provision A117: Revised to include UN 3549 — Medical waste, Category A, affecting humans or Medical waste, Category A, affecting animals with UN 2814 and UN 2900 as the applicable entries for wastes containing Category A infectious substances	
3;3	Special Provision A132: Revised to remove the transition period during which an exception from the requirement for articles containing smoke-producing substance(s) corrosive according to criteria for Class 8 to be labelled with a toxic subsidiary label could be applied	
3;3	Special Provision A176: Addition of requirement for transport in accordance with the special provision to be noted on the dangerous goods transport document	
3;3	Special Provision A180: Inclusion of a formaldehyde solution in criteria for an exception for non-infectious specimens	
Addition of new special provisions :		Shipper, freight forwarder
3;3	Special Provision A221: New provision to clarify scope of classification criteria for UN1002 — Air, compressed	
3;3	Special Provision A222: New provision to clarify what can be classified as UN 1012 — Butylene	
3;3	Special Provision A223: Criteria for excepting life-saving appliances containing only small cartridges of a Division 2.2 gas from the Technical Instructions that is moved from Packing Instruction 955	
3;3	Special Provision A224: Criteria for allowing UN 3548 — Articles containing miscellaneous dangerous goods, n.o.s.* to be transported on passenger and cargo aircraft	
3;3	Special Provision A225: Criteria for allowing UN 3538 — Articles containing non-flammable, non toxic gas, n.o.s.* to be transported on passenger and cargo aircraft	
Revisions to packing requirements :		
4;2.3	Clarification of scope for mass and volume limits of packagings not subject to design type testing	
4;4.1.1.6	Revision to general requirements for filling of cylinders and closed cryogenic receptacles to take into account components with varying pressure ratings	
4;4.1.1.8, 4; Packing Instruction 214, 219	Updating of references to ISO standards	
4; Packing Instruction	Revisions to provisions for aerosols to address inconsistencies with the UN Model Regulations	

TI Reference	Detail	Concerned Party
203, Y203, Y963		
4; Packing Instruction 220, 378	Addition of packing requirements for engines and machinery to align with text in the associated packing instruction in the UN Model Regulations (P005) and in Packing Instruction 972	
4; Packing Instructions 220, 378, 950, 951, 952, 955	Addition of existing provision prohibiting lithium batteries identified as being damaged or defective from transport to packing instructions for engines, machinery, vehicles, battery-powered equipment, and life-saving appliances	
4; Packing Instruction 220, 378, 950, 951, 952	Clarification of scope of exception from the requirements of Part 2;9.3 for lithium batteries installed in engines, machinery or vehicles to be transported under State approval	
4; Packing Instruction 222	Addition of packing instruction for UN 3538 — Articles containing non-flammable, non toxic gas, n.o.s.*	
4; Packing Instruction 492	Establishment of a total quantity per package limit for UN 3292 — Cells, containing sodium for transport on cargo aircraft to align with the maximum quantity limitations of packagings permitted	
4; Packing Instruction 621	Revisions to include packagings with non-removeable heads for drums and jerricans and to align with standard packing instructions and corresponding provisions in the UN Model Regulations	
4; Packing Instruction 870	Revisions to establish a total quantity per package limit for UN 2794 — Batteries, wet, filled with acid and UN 2795 — Batteries, wet, filled with alkali for transport on cargo aircraft to align with the maximum quantity limitations of packagings permitted and to remove packing conditions for these batteries when installed in equipment since batteries installed in equipment are classified under a different UN number and subject to a different packing instruction	
4; Packing Instructions 965, 968	Removal of exceptions from full regulation provided in accordance with Section II by deletion of that section	
4; Packing Instructions 965, 968	Addition of a requirement for a stack test in Section IB	
4; Packing Instruction 966, 969	Revision to clarify the requirements for protection against short circuits in Sections I and II	
4; Packing Instructions 966, 967, 969, 970	Addition of a requirement in Section II for packages placed in overpacks to be secured and the intended function of each package not impaired by the overpack	
4; Packing Instructions 967, 970	Addition of a requirement in Sections I and II to ensure that multiple pieces of equipment packed into the same outer packaging are packed so as to prevent damage due to contact between the pieces of equipment	
4; Packing Instructions 975	Addition of packing instruction for UN 3548 — Articles containing miscellaneous dangerous goods, n.o.s.*	
Revisions to marking and labelling requirements :		Shipper, freight forwarder
5;2.4.16	Removal of requirement for a telephone number for additional information to appear on the lithium battery mark	
Revisions to documentation requirements :		

TI Reference	Detail	Concerned Party
5;4.1.5.8.1 g)	Addition of a requirement for supplementary information to be included on the dangerous goods transport document when unknown radionuclides or mixtures are offered for transport	
5;4.1.5.10	Addition of a requirement for additional information required by a special provision to be included on the dangerous goods transport document	
Revisions to packaging marking requirements and tests :		Shipper, freight forwarder
Table 6-3, 6;3, 6;5	Revision to provisions for metal receptacles (aerosols), non-refillable	
6;5	Revisions to distinguish between cylinder shells, inner vessels and closed cryogenic receptacles	
6;5.1.1.1	Revision to the design and construction provisions for cylinders and closed cryogenic receptacles to include "intended use" as one of the conditions they must be designed, manufactured, tested and equipped to withstand	
6;5.1.4 and 6;5.2.5	Addition of provisions for parts of cylinders and closed cryogenic receptacles to be conformity assessed separately	
6;5.2.5	Revision to the procedures for design type approval of cylinders and closed cryogenic receptacles	
6;5.2.7 and 6;5.2.8	Revision to marking provisions for UN cylinders and closed cryogenic receptacles	
Revisions to operator responsibilities :		
7;2.7	Revision to extend existing requirement for operators to replace labels that are lost, detached or illegible to marks	
7;2.13	Revision to provisions for loading of battery-powered mobility aids by passengers or crew	
Table 7-9	Revision to list of dangerous goods not required to appear in the information to the pilot-in-command	

Dangerous Goods Office
Civil Aviation Department Hong Kong
November 2022

-End-