



Doc 9284-AN/905  
ADDENDUM/  
CORRIGENDUM  
18/8/05

**INTERNATIONAL CIVIL AVIATION ORGANIZATION**

**TECHNICAL INSTRUCTIONS FOR THE SAFE TRANSPORT  
OF DANGEROUS GOODS BY AIR**

**2005-2006 EDITION**

**ADDENDUM/CORRIGENDUM**

The attached addendum/corrigendum should be incorporated into the 2005-2006 Edition of the Technical Instructions (Doc 9284).

(9 pages)

## TECHNICAL INSTRUCTIONS FOR THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR

In Part 2, Introductory Chapter, page 2-0-3, paragraph 5.3 c), *amend* the second reference to 5.3.2.6.

In Part 2, Introductory Chapter, page 2-0-4, *add* the following footnotes below Table 2-1:

\* Substances of Division 4.1 other than self-reactive substances, and solid desensitized explosives and substances of Class 3 other than liquid desensitized explosives.

\*\* For pesticides only, the primary risk must be Division 6.1.

In Part 2, Chapter 2, page 2-2-2, *replace* paragraph 2.5 with the following:

### 2.5 AEROSOLS

2.5.1 For aerosols, the division of Class 2 and the subsidiary risks depend on the nature of the contents of the aerosol dispenser. The following provisions must apply:

- a) Division 2.1 applies if the contents includes 85 per cent by mass or more flammable components and the chemical heat of combustion is 30 kJ/g or more;
- b) Division 2.2 applies if the contents contains 1 per cent by mass or less flammable components and the heat of combustion is less than 20 kJ/g;
- c) otherwise the product must be classified as tested by the tests described in the *Manual of Tests and Criteria*, Part III, section 31. Extremely flammable and flammable aerosols must be classified in Division 2.1; non-flammable in Division 2.2;
- d) gases of Division 2.3 must not be used as a propellant in an aerosol dispenser;
- e) where the contents, other than the propellant of aerosol dispensers, to be ejected are classified as Division 6.1, Packing Groups II or III or Class 8, Packing Groups II or III, the aerosol must have a subsidiary risk of Division 6.1 or Class 8;
- f) aerosols with contents meeting the criteria of Packing Group I for toxicity or corrosivity are prohibited from transport.

2.5.2 Flammable components are flammable liquids, flammable solids or flammable gases and gas mixtures as defined in Notes 1 to 3 of subsections 31.1.3 of Part III of the *Manual of Tests and Criteria*. This designation does not cover pyrophoric, self-heating or water-reactive substances. The chemical heat of combustion must be determined by one of the following methods ASTM D 240, ISO/FDIS 13943: 1999 (E/F) 86.1 to 86.3 or NFPA 30B.

In Part 2, Chapter 4, page 2-4-4, Table 2-6, *amend* the twenty-first entry to read “2,5-Dibutoxy-4-(4-morpholinyl)-benzenediazonium, tetrachlorozincate (2:1)”.

In Part 3, Chapter 2, Table 3-1, page 3-2-59, **Consumer commodity**, ID 8000, *amend* columns 10 and 12 to read “30 kg G”.

In Part 3, Chapter 2, Table 3-1, page 3-2-127, **Lithium batteries**, UN 3090, *add* “US 2” in column 6.

In Part 3, Chapter 2, Table 3-1, page 3-2-128, **Lithium batteries contained in equipment**, UN 3091, *add* “US 2” in column 6.

In Part 3, Chapter 2, Table 3-1, page 3-2-128, **Lithium batteries packed with equipment**, UN 3091, *add* “US 2” in column 6.

In Part 3, Chapter 2, Table 3-1, page 3-2-128, *delete* the entry for “**Lithium hydroxide, solid**”.

In Part 3, Chapter 2, Table 3-1, page 3-2-137, **Methanol**, UN 1230, *delete* “& Toxic” in column 5.

In Part 3, Chapter 2, Table 3-1, page 3-2-149, **Nicotine sulphate, solid**, UN 3445, *delete* UN packing group III and corresponding data in columns 9 to 12.

In Part 3, Chapter 2, Table 3-1, page 3-2-162, *amend* the entry for **Organometallic substance, liquid, water reactive, flammable\***, UN 3399 as follows:

Name	UN No.	Class or division	Subsidiary risk	Labels	State variations	Special provisions	UN packing group	Passenger aircraft		Cargo aircraft	
								Packing Instruction	Max. net quantity per package	Packing instruction	Max. net quantity per package
1	2	3	4	5	6	7	8	9	10	11	12
Organometallic substance, liquid, water reactive, flammable*	3399	4.3	3	Danger if wet & Liquid flammable		A3	I II III	FORBIDDEN 409 431	1 L 5 L	409 431 432	1 L 5 L 60 L

In Part 3, Chapter 2, Table 3-1, page 3-2-171, UN 3346, *amend* the last entry to read “**Phenoxyacetic acid derivative pesticide, liquid, flammable, toxic\***, flash point less than 23°C”.

In Part 3, Chapter 2, Table 3-1, page 3-2-174, **Phosphoric acid, solid**, *amend* column 2 to read “3453”.

In Part 3, Chapter 2, Table 3-1, page 3-2-174, **Phosphoric acid, solution**, *amend* column 2 to “1805”.

In Part 3, Chapter 2, Table 3-1, page 3-2-213, **Thionyl chloride**, UN 1836, *delete* UN packing group “I” from column 8.

In Part 3, Chapter 2, Table 3-1, page 3-2-233, *amend* the first entry to read “**Zirconium picramate, wetted** with not less than 20% water, by mass”.

In Part 3, Chapter 3, page 3-3-7, special provision A98, *delete* “and with a pressure not exceeding 970 kPa at 55°C”.

In Part 4, Chapter 4, page 4-4-5, Table 1, UN 3156, **Compressed gas, oxidizing, n.o.s.**, *add* “5.1” in the column “Subsidiary risk”.

In Part 4, Chapter 4, page 4-4-9, Table 2, UN 3300, **Ethylene oxide and carbon dioxide mixture** with more than 87% ethylene oxide, *delete* “e” in the column “Special packing provisions”.

In Part 4, Chapter 5, page 4-5-5, Packing Instruction Y305, **COMBINATION PACKAGINGS, INNER**, *delete* “UN 1154”.

In Part 4, Chapter 5, page 4-5-10, Packing instruction Y309, **COMBINATION PACKAGINGS, INNER**, *delete* “UN 2530”.

In Part 4, Chapter 6, page 4-6-4, Packing instruction 409, **COMBINATION PACKAGINGS, INNER, amend** UN No. 3207 to read UN No. 3399 and *add* the following entry:

<i>UN No.</i>	<i>Glass or earthenware IP.1 (L)</i>	<i>Metal (not aluminium) IP.3 (L)</i>	<i>Glass ampoule IP.8 (L)</i>	<i>Particular packing requirements</i>
1389	1	1	0.5	5,13

In Part 4, Chapter 6, page 4-6-12, Packing Instruction Y416, **COMBINATION PACKAGINGS, INNER, delete** the entries for UN 2555, 2556 and 2557.

In Part 4, Chapter 6, page 4-6-24, Packing Instruction 431, **COMBINATION PACKAGINGS, INNER, amend** UN 3207 to read UN 3399.

In Part 4, Chapter 6, page 4-6-25, Packing Instruction 432, **COMBINATION PACKAGINGS, INNER, amend** UN 3207 to read UN 3399.

In Part 4, Chapter 7, page 4-7-2, Packing Instruction 501, **COMBINATION PACKAGINGS, INNER, amend** the entry for UN 1873 to read as follows:

<i>UN No.</i>	<i>Glass or earthenware IP.1 (L)</i>	<i>Plastic IP.2 (L)</i>	<i>Metal (not aluminium) IP.3 (L)</i>	<i>Aluminium IP.3A (L)</i>	<i>Glass ampoule IP.8 (L)</i>	<i>Particular packing requirements</i>
1873	1	1	1	1	1	13

In Part 4, Chapter 7, page 4-7-2, Packing Instruction 501, **PARTICULAR PACKING REQUIREMENTS delete** the entry for “8”.

In Part 4, Chapter 7, page 4-7-18, Packing Instruction 517, **COMBINATION PACKAGINGS, INNER, add** the following entry after UN 1511:

<i>UN No.</i>	<i>Glass or earthenware IP.1 (kg)</i>	<i>Plastic IP.2 (kg)</i>	<i>Metal (not aluminium) IP.3 (kg)</i>	<i>Plastic bag IP.5 (kg)</i>	<i>Fibre IP.6 (kg)</i>	<i>Glass ampoule IP.8 (kg)</i>	<i>Particular packing requirements</i>
1748	1	1	1	1	No	0.5	4

In Part 4, Chapter 7, page 4-7-19, Packing instruction Y517, **COMBINATION PACKAGINGS, INNER, add** the following entry after UN 2208:

<i>UN No.</i>	<i>Glass or earthenware IP.1 (kg)</i>	<i>Plastic IP.2 (kg)</i>	<i>Metal (not aluminium) IP.3 (kg)</i>	<i>Plastic bag IP.5 (kg)</i>	<i>Fibre IP.6 (kg)</i>	<i>Glass ampoule IP.8 (kg)</i>	<i>Particular packing requirements</i>
1748	1	1	1	1	No	0.5	4

In Part 4, Chapter 7, page 4-7-20, Packing Instruction 519, **COMBINATION PACKAGINGS, INNER**, add the following entry after UN 1511:

<i>UN No.</i>	<i>Glass or earthenware IP.1 (kg)</i>	<i>Plastic IP.2 (kg)</i>	<i>Metal (not aluminium) IP.3 (kg)</i>	<i>Plastic bag IP.5 (kg)</i>	<i>Fibre IP.6 (kg)</i>	<i>Glass ampoule IP.8 (kg)</i>	<i>Particular packing requirements</i>
1748	5	5	5	5	No	0.5	4

In Part 4, Chapter 8, page 4-8-4, Packing Instruction 605, **COMBINATION PACKAGINGS, INNER**, delete the entries for UN 1541, 1647, 2485 and 2740.

In Part 4, Chapter 8, page 4-8-4, Packing Instruction 605, **COMBINATION PACKAGINGS, SINGLE PACKAGINGS**, delete the entries for UN 1541, 2485 and 2740.

In Part 4, Chapter 8, page 4-8-7, Packing instruction 608, **COMBINATION PACKAGINGS, INNER**, delete the entry for UN 1889.

In Part 4, Chapter 8, page 4-8-8, Packing Instruction Y609, **COMBINATION PACKAGINGS, INNER**, delete the entry for UN 2743 and add the entries UN 3361 and UN 3362.

In Part 4, Chapter 10, page 4-10-28, Packing Instruction 825, **COMBINATION PACKAGINGS, INNER**, replace “UN No.1805” with “UN No. 3453”.

In Part 4, Chapter 10, page 4-10-29, Packing Instruction Y825, **COMBINATION PACKAGINGS, INNER**, replace “UN No. 1805” with “UN No. 3453”.

In Part 4, Chapter 10, page 4-10-30, Packing Instruction 826, **COMBINATION PACKAGINGS, INNER**, replace “UN No. 1805” with “UN No. 3453”.

In Part 4, Chapter 11, page 4-11-3, Packing Instruction 903, last paragraph, *amend* the last line to read:

“and batteries containing one or more cells, are forbidden from transport.”

In Part 4, Chapter 11, page 4-11-7, Packing Instruction 910, *amend* the figure in subparagraph g) to read “30 kg G”.

In Part 4, Chapter 11, page 4-11-9, Packing Instruction 912, second paragraph, *amend* the second sentence to read:

“Cells with a liquid cathode containing sulphur dioxide, sulphuryl chloride or thionyl chloride must not be capable of being discharged...”.

In Part 5, Chapter 4, page 5-4-2, *amend* the date in Note 1 to read “1 January 2007”.

In Part 6, Chapter 6, page 6-6-1, Table 6.1.5, *replace* the column title “refer to 6.2.2.1” with “refer to 6.2”.

In Part 7, Chapter 3, page 7-3-1, paragraph 3.1.3, *delete* “and 3.1.5” at the end of the paragraph.

In Part 7, Chapter 4, page 7-4-1, paragraph 4.1.1 b), *amend* the first sentence to read:

“the proper shipping name (supplemented with the technical name(s) if appropriate, see Part 3, Chapter 1) and UN number as listed in these Instructions.”

In Part 7, Chapter 4, page 7-4-2, paragraph 4.2, *add* below subparagraph b):

“Where applicable, this information must also be provided to ground handling agents.”

In Attachment 2, page A2-7, **Lithium battery or lithium cells**, *amend* the beginning of the definition to read:

“A battery is one or more cells...”.

## STATE VARIATIONS

The following amendments should be made to Attachment 3, Chapter 1, Table A-1 — State variations.

<i>Identifying code</i>	<i>Variation</i>	<i>Relevant paragraphs</i>
	<b>FR — FRANCE</b>	
	<i>Replace</i> as follows:	
FR 6	Category B infectious materials and biological products listed under UN 3373 may only be transported by air to, from or through France under the conditions described below. These do not apply to the non-stop overflight of French territory: <ul style="list-style-type: none"><li>— dangerous goods training as outlined in the ICAO Technical Instructions, Part 1, Chapter 4, paragraph 4.1.1 a) is strongly recommended for shippers of Category B infectious materials;</li><li>— the proper shipping name, the UN number, and the name, address and telephone number of a responsible person must be indicated on the package;</li><li>— the operator must put in place dangerous goods training as outlined in the ICAO Technical Instructions, Part 1, Chapter 4, Table 1-4 for the personnel in charge of the transport by air and the handling of Category B infectious material, UN 3373;</li><li>— the operator must establish procedures so that:<ul style="list-style-type: none"><li>— the incidents related to Category B infectious materials, UN 3373, are reported to the Competent Authority and handled as Category A infectious materials incidents;</li><li>— the emergency measures to be taken for Category B infectious materials, UN 3373, are expedited as those of Category A infectious materials.</li></ul></li></ul>	
	<b>JM — JAMAICA</b>	
	<i>Add</i> the following entries:	
JM-1	Applications for approval to transport dangerous goods under Special Provisions A1, A2 and A109 and exemption applications must be directed to:  The Director General Jamaica Civil Aviation Authority 4 Winchester Road Kingston 10 Jamaica, West Indies	
JM-2	On shipments to, from, within or transiting through Jamaica, emergency response information, as described in JM-3, must be provided for all dangerous goods other than magnetized material and dangerous goods for which no Transport Document is required.	

Identifying code	Variation	Relevant paragraphs
JM-3	<p><i>Emergency Response Information.</i> The Transport Document required by these Technical Instructions must include a 24-hour emergency response telephone number (including all area codes, and for international numbers for locations outside Jamaica, the international access code and country and city codes needed to complete the call from within Jamaica). The number <b>must</b> be monitored by an individual who:</p> <ul style="list-style-type: none"> <li>— speaks English fluently;</li> <li>— is knowledgeable of the hazards and characteristics of the dangerous good(s) being transported;</li> <li>— has comprehensive emergency response and accident mitigation information for the dangerous good(s);</li> <li>— has immediate access to a person who possesses such knowledge and information.</li> </ul>	
JM-4	<p>Transport of dangerous goods by air must be in accordance with the current edition of the ICAO <i>Technical Instructions for the Safe Transport of Dangerous Goods by Air</i> (Doc 9284). Failure to comply with the Technical Instructions is a violation of the Jamaica Civil Aviation Regulations, 2004.</p>	
<b>JP — JAPAN</b>		
<i>Amend</i> as follows:		
JP-3	<p>“Excepted radioactive material” must not contain pyrophoric (liquid) or explosive radioactive material.</p>	2;7.9
JP-8	<p>All Type B(U) and Type B(M) packages, and packages containing 0.1 kg or more of uranium hexafluoride require both packages design approvals and shipment approvals of the appropriate authorities of Japan.</p>	5;1.3.3 6;7.5.4 6;7.8
JP-23	<p>Radioactive material of Class 7 in excepted packages with an associated risk of another class specified in Part 1;2.4.2.2 must be subject to the provisions of 2;7.9 and to the variations JP-3 and JP-9.</p>	1;2.4.2
<i>Delete</i> the entry for JP-25.		
<b>TR — TURKEY</b>		
<i>Add</i> the following entries:		
TR-1	<p>The Authority responsible for dangerous goods in Turkey is the Directorate General of Civil Aviation, one of the departments of the Ministry of Transportation:</p> <p>Postal Address: Directorate General of Civil Aviation Bosna Hersek Cad. 90. Sok. No. 5 Emek - Ankara</p> <p>Telephone: (0312) 215 50 82 215 61 72 215 73 73</p> <p>Facsimile: (0312) 212 46 84 215 80 94</p> <p>Comm: CIVIL AIR</p> <p>Telex: 44659 CAD TR</p> <p>AFTN: LTAYAAT</p> <p>SITA: ANKYXYA</p>	

<i>Identifying code</i>	<i>Variation</i>	<i>Relevant paragraphs</i>
TR-2	In the following cases, applications for diplomatic transit and landing flights authorization shall be made 10 work days before the planned flight: <ul style="list-style-type: none"> <li>— aircraft carrying explosives, weapons and ammunitions;</li> <li>— aircraft carrying army personnel and staff;</li> <li>— aircraft carrying radioactive materials to/from Turkey.</li> </ul> <p><b>US — UNITED STATES</b></p>	
US 2	<i>Add</i> the following paragraph: <p>Primary (non-rechargeable) lithium batteries and cells UN 3090, are forbidden for transportation aboard passenger-carrying aircraft. Equipment containing or packed with primary (non-rechargeable) lithium batteries and cells UN 3091, are forbidden from transport aboard passenger-carrying aircraft except if they meet the conditions of Special Provision A101 or A102 (see 49 CFR 172.102). Packages containing primary (non-rechargeable) lithium batteries and cells that meet the exceptions in 49 CFR 173.185 (b) or (c) or Special Provision A45 of the Technical Instructions and are forbidden for transport on passenger aircraft must be marked “PRIMARY LITHIUM BATTERIES - FORBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT”.</p>	1;2.1 3;1
US 3	<i>Delete</i> the last sentence of the first paragraph.	2;5.3.2.5 3;1 (Table 3-1)

**OPERATOR VARIATIONS**

In Attachment 3, Chapter 2, paragraph 2.5 *add* the following airline: “DHL (see European Air Transport) — QY”  
The following amendments should be made to Attachment 3, Chapter 2, Table A-2 — Operator variations.

<i>Identifying code</i>	<i>Variation</i>	<i>Relevant paragraphs</i>
<b>BA — BRITISH AIRWAYS</b>		
<i>Amend</i> as follows:		
BA-01	UN 1169, UN 1197, UN 3334. Single packaging not accepted for liquids of concentrates or essences with strongly irritating or expectorant properties, such as garlic, unless in sturdy, leak-proof supplementary packaging used and meeting the requirements for an overpack. Overpack must bear orientation labels (see Packing Instructions 309 and 906).	4;5 4;11 5;3.2
BA-03	<i>Add</i> the following to the end of BA-03: (See 2.4).	1;2.3
<i>Add</i> the following new entry:		
BA-05	Not used.	
<b>QY — EUROPEAN AIR TRANSPORT / DHL</b>		
<i>Add</i> the following new entry:		
QY-07	Not used.	



<i>Identifying code</i>	<i>Variation</i>	<i>Relevant paragraphs</i>
	<b>US — US AIRWAYS</b>	
	<i>Amend as follows:</i>	
US-01	Division 6.1 — Toxic substances (Packing Groups I and II) are not accepted for carriage.	2;6 5;11
US-07	Dangerous goods are not accepted on US Airways express flights except for the following: <ul style="list-style-type: none"><li>— carbon dioxide, solid (or) dry ice, (or) carbon ice will be accepted in any combination of air cargo carry-on baggage in quantities of 5 lbs or less per aircraft;</li><li>— battery-operated wheelchairs as baggage.</li></ul>	5;1.1 7;2
	<i>Add the following new entries:</i>	
US-08	Division 6.2 — Infectious substances will not be accepted when the per package limit exceeds 50 ml / 50 g.	
US-09	Diagnostic or clinical specimens offered for transport as cargo under UN 3373 will not be accepted on US Airways express flights.  Diagnostic or clinical specimens must be packed, marked and documented in accordance with IATA Packing Instruction 650 and will only be accepted for transport on US Airways mainline flights.	