International Civil Aviation Organization

WORKING PAPER

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Addendum/Corrigendum
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English only

DANGEROUS GOODS PANEL (DGP)

TWENTY-EIGHTH MEETING

Virtual, 15 to 19 November 2021

Agenda Item 1: Harmonizing ICAO dangerous goods provisions with UN Recommendations on the Transport of Dangerous Goods *(Ref: REC-A-DGS-2023)*
1.2: Develop proposals, if necessary, for amendments to the *Technical Instructions for the Safe Transport of Dangerous Goods by Air* (Doc 9284) for incorporation in the 2023-2024 Edition

REVISIONS TO THE REQUIREMENTS FOR AEROSOLS AND GAS CARTRIDGES TO ALIGN WITH THE UN RECOMMENDATIONS

(Presented by the Rapporteur of the DGP-WG/UN Harmonization)

ADDENDUM/CORRIGENDUM

Add the following consequential amendment to Part 1;3:

Part 1

GENERAL

. . .

Chapter 3

GENERAL INFORMATION

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3.1 DEFINITIONS

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Aerosol or aerosol dispenser. An article consisting of a non-refillable receptacle meeting the requirements of ~~6;3.2.7~~ 6;5.4, made of metal, glass or plastics and containing a gas, compressed, liquefied or dissolved under pressure, with or without a liquid, paste or powder, and fitted with a release device allowing the contents to be ejected as solid or liquid particles in suspension in a gas, as a foam, paste or powder or in a liquid state or in a gaseous state.

Replace Appendix B with the attached.

Note.— The only revision to Appendix B is the striking out of "that are necessary to expel liquids, powders or pastes". It is shown as highlighted yellow text. The text implies that an aerosol cannot expel gas. However, there is nothing in the definition of "aerosol or aerosol dispenser", in Packing Instruction 203 or Y203 or in Part 6;5.4 that has this limitation.

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APPENDIX B

CONSEQUENTIAL AMENDMENTS TO THE TECHNICAL INSTRUCTIONS AS A RESULT OF THE AMENDMENTS PROPOSED IN APPENDIX A TO THIS WORKING PAPER

Part 4

PACKING INSTRUCTIONS

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Packing Instruction Y963

Limited quantities
Passenger and cargo aircraft for ID 8000 only

Consumer commodities are materials that are packaged and distributed in a form intended or suitable for retail sale for the purposes of personal care or household use. These include items administered or sold to patients by doctors or medical administrations. Except as otherwise provided below, dangerous goods packed in accordance with this packing instruction do not need to comply with 4;1 or Part 6 of these Instructions; they must, however, comply with all other applicable requirements. Other dangerous goods not classified as ID 8000 must not be packed in the same outer packaging with ID 8000.

a) Each packaging must be designed and constructed to prevent leakage that may be caused by changes in altitude and temperature during air transport.

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h) Class 2 substances must be further limited to aerosol products containing non-toxic compressed or liquefied gas(es) ~~that are necessary to expel liquids, powders or pastes,~~ ~~packed in inner non-refillable non-metal receptacles not exceeding 120 mL capacity each, or in inner non-refillable metal receptacles not exceeding 820 mL capacity each (except that flammable aerosols must not exceed 500 mL capacity each), subject in either case to the following provisions~~. Aerosols must meet the requirements of Part 6;5.4. The valves must be protected by a cap or other suitable means during transport.~~:~~

~~1) the pressure in the aerosol must not exceed 1 500 kPa at 55°C and each receptacle must be capable of withstanding, without bursting, a pressure of at least 1.5 times the equilibrium pressure of the contents at 55°C;~~

~~2) if the pressure in the aerosol exceeds 970 kPa at 55°C but does not exceed 1 105 kPa at 55°C, an inner IP.7, IP.7A or IP.7B metal receptacle must be used;~~

~~3) if the pressure in the aerosol exceeds 1 105 kPa at 55°C but does not exceed 1 245 kPa at 55°C, an IP.7A or IP.7B metal receptacle must be used;~~

~~4) if the pressure in the aerosol exceeds 1 245 kPa at 55°C, an IP.7B metal receptacle must be used;~~

~~5) IP.7B metal receptacles having a minimum burst pressure of 1 800 kPa may be equipped with an inner capsule charged with a non-flammable, non-toxic compressed gas to provide the propellant function. In this case, the pressures indicated in 1), 2), 3) or 4) do not apply to the pressure within the capsule. The quantity of gas contained in the capsule must be so limited such that the minimum burst pressure of the receptacle would not be exceeded if the entire gas content of the capsule were released into an aerosol;~~

~~6) the liquid contents must not completely fill the closed receptacle at 55°C;~~

~~7) each aerosol exceeding 120 mL capacity must have been heated until the pressure in the aerosol is equivalent to the equilibrium pressure of the contents at 55°C, without evidence of leakage, distortion or other defect; and~~

~~8) the valves must be protected by a cap or other suitable means during transport.~~

~~i) For aerosols containing a biological or medical preparation which will be deteriorated by a heat test and which are non-toxic and non-flammable, packed in inner non-refillable receptacles not exceeding 575 mL capacity each, the following provisions are applicable:~~

~~1) the pressure in the aerosol must not exceed 970 kPa at 55°C;~~

~~2) the liquid contents must not completely fill the closed receptacle at 55°C;~~

~~3) one aerosol out of each lot of 500 or less must be heated until the pressure in the aerosol is equivalent to the equilibrium pressure of the contents at 55°C, without evidence of leakage, distortion or other defect; and~~

~~4) the valves must be protected by a cap or other suitable means during transport.~~

j) Except for aerosols, inner packagings must not exceed:

1) 500 mL for liquids; and

2) 500 g for solids.

k) Consumer commodities shipped according to these provisions may be shipped in a unit load device prepared by a single shipper provided they contain no other dangerous goods other than UN 1845 — **Carbon dioxide, solid** (dry ice) used as a refrigerant. When the unit load device contains dry ice, the provisions of these Instructions applicable to dry ice must be met in addition to the provisions set out in this packing instruction. The shipper must provide the operator with written documentation stating the number of packages of consumer commodities contained in each unit load device.

l) The gross mass on the dangerous goods transport document must be shown as:

1) for one package, the actual gross mass of the package;

2) for more than one package, either the actual gross mass of each package or as the average mass of the packages. (For example, if there are 10 packages and the total gross mass of them is 100 kg, the dangerous goods transport document may show this as “average gross mass per package 10 kg”.)

m) Packages prepared in accordance with these provisions must be durably and legibly marked with the mark shown in Figure 3-1.

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Part 6

PACKAGING NOMENCLATURE, MARKING, REQUIREMENTS AND TESTS

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Table 6-3. Index of inner packagings

Code	*Kind*	*Paragraph*
	Glass	3.2.1
	Plastic	3.2.2
	Metal cans, tins or tubes	3.2.3
	Paper bags	3.2.4
	Plastic bags	3.2.5
	Fibre cans or boxes	3.2.6
~~IP.7~~	~~Metal receptacles (aerosols), non-refillable~~	~~3.2.7.1~~
~~IP.7A~~	~~Metal receptacles (aerosols), non-refillable~~	~~3.2.7.1~~
~~IP.7B~~	~~Metal receptacles (aerosols), non-refillable~~	~~3.2.7.2~~
~~IP.7C~~	~~Plastic receptacle (aerosols), non-refillable~~	~~3.2.8~~
	Metal or plastic flexible tubes	~~3.2.9~~3.2.7

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