



**Economic and Social
Council**

Distr.
GENERAL

TRANS/WP.15/AC.1/2001/23

19 March 2001

ENGLISH

Original: ENGLISH and FRENCH

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on the Transport of Dangerous Goods

**Joint Meeting of the RID Safety Committee and the
Working Party on the Transport of Dangerous Goods**
(Bern, 28 May – 1 June 2001)

PART 4

Note by the Secretariat */

This document contains proposed amendments to Part 4 of the restructured RID/ADR for harmonization with the 12th revised edition of the United Nations Recommendations on the Transport of Dangerous Goods, Model Regulations, on the basis of the decisions of the Committee of Experts on the Transport of Dangerous Goods at its twenty-first session, (Geneva, 4-13 December 2000) (See ST/SG/AC.10/27 and addenda 1 and 2).

***/** Circulated by the Central Office for International Carriage by Rail (OCTI) under the symbol OCTI/RID/GT/III/2001/23.

PART 4

Chapter 4.1

Delete the introductory notes (Notes 1 and 2).

4.1.1 Amend the title to read: "**General provisions for the packing of dangerous goods in packagings, including IBCs and large packagings.**"

Amend the note under the title to read:

"NOTE: The general provisions of this section only apply to the packing of goods of Class 2, 6.2 and 7 as indicated in 4.1.8 (Class 6.2), 4.1.9 (Class 7) and in the applicable packing instructions of 4.1.4 (packing instructions P201 and P202 for Class 2 and P621, IBC620 and LP621 for Class 6.2)."

4.1.1.1 Replace "and/or" with "and between transport units and".

Insert the following sentence after "(resulting from altitude, for example)": "Packagings, including IBCs and large packagings, shall be closed in accordance with the information provided by the manufacturer."

Amend the end of the last sentence to read: "...and to new, reused, repaired or remanufactured IBCs, and to new or reused large packagings."

4.1.1.3 and
4.1.1.9

Add "6.3.2" after "6.1.5" and replace "respectively" with "as applicable".

4.1.1.12(c) Amend to read:

"(c) after the repair or remanufacture of any IBC, before it is re-used for carriage."

4.1.1.17 Add the following new paragraph:

"4.1.1.17 Explosives, self-reactive substances and organic peroxides

Unless specific provision to the contrary is made in RID/ADR, the packagings, including IBCs and large packagings, used for goods of Class 1, self-reactive substances of Class 4.1 and organic peroxides of Class 5.2 shall comply with the provisions for the medium danger group (packing group II)."

Renumber following paragraph and sub-paragraphs accordingly.

4.1.1.18.1 (Former 4.1.1.17.1) Amend to read as follows:

"4.1.1.18.1 Damaged, defective, leaking or non-conforming packages, or dangerous goods that have spilled or leaked may be carried in salvage packagings mentioned in 6.1.5.1.11. This does not prevent the use of a bigger size packaging of appropriate type and performance level under the conditions of 4.1.1.18.2."

4.1.2.4 Add a new 4.1.2.4 to read as follows:

"4.1.2.4 Except for routine maintenance of metal, rigid plastics and composite IBCs performed by the owner of the IBC, whose State and name or authorized symbol is durably marked on the IBC, the party performing routine maintenance shall durably mark the IBC near the manufacturer's UN design type marking to show:

- (a) The State in which the routine maintenance was carried out; and
- (b) The name or authorized symbol of the party performing the routine maintenance."

4.1.3.4 Amend IBCs composite as follows: "Composite: 11HZ2 and 21HZ2"

4.1.3.6 Amend to read as follows:

"4.1.3.6 Cylinders, bundles of cylinders, pressure drums and tubes conforming to the construction requirements of packing instruction P200 are authorized for the carriage of any liquid or solid substance assigned to packing instructions P001 or P002 unless otherwise indicated in the packing instruction or by a special provision in Column (9a) of Table A of Chapter 3.2. The capacity of bundles of cylinders and tubes shall not exceed 1000 litres."

4.1.3.8 Add a new section 4.1.3.8 as follows:

"4.1.3.8 *Unpackaged articles other than Class 1 articles*

4.1.3.8.1 Where large and robust articles cannot be packaged in accordance with the requirements of Chapters 6.1 or 6.6 and they have to be carried empty, uncleaned and unpackaged, the competent authority may approve such carriage. In doing so the competent authority shall take into account that:

- (a) Large and robust articles shall be strong enough to withstand the shocks and loadings normally encountered during carriage including trans-shipment between transport units and between transport units and warehouses, as well as any removal from a pallet for subsequent manual or mechanical handling;
- (b) All closures and openings shall be sealed so that there can be no loss of contents which might be caused under normal conditions of carriage, by vibration, or by changes in temperature, humidity or pressure (resulting from altitude, for example). No dangerous residue shall adhere to the outside of the large and robust articles;
- (c) Parts of large and robust articles, which are in direct contact with dangerous goods:
 - (i) shall not be affected or significantly weakened by those dangerous goods; and
 - (ii) shall not cause a dangerous effect e.g. catalysing a reaction or reacting with the dangerous goods;

- (d) Large and robust articles containing liquids shall be stowed and secured to ensure that neither leakage nor permanent distortion of the article occurs during carriage;
- (e) They shall be fixed in cradles or crates or other handling devices in such a way that they will not become loose during normal conditions of carriage.

4.1.3.8.2 Unpackaged articles approved by the competent authority in accordance with the provisions of 4.1.3.8.1 shall be subject to the consignment procedures of Part 5. In addition the consignor of such articles shall ensure that a copy of any such approval is carried with the large and robust articles.

NOTE: A large and robust article may include flexible fuel containment systems, military equipment, machinery or equipment containing dangerous goods above the limited quantity thresholds."

4.1.4.1 Add "plywood (1D)" in the column "Outer packagings and arrangements" under "Drums" for packing instructions P112 (a), P112 (b), P112 (c), P113, P116, P130, P131, P134, P135, P136, P138, P140, P141 and P142.

Add "plastics, removable head (1H2)" in the column "Outer packagings and arrangements" under "Drums" for packing instructions P112(c), P113, P115, P134, P138 and P140.

Add "fibreboard (1G)" in the column "Outer packagings and arrangements" under "Drums" for packing instructions P134 and P138.

Add "steel, removable head (1A2)", "aluminium, removable head (1B2)" and "plastics, removable head (1H2)" in the column "Outer packagings" under "Drums" for packing instruction P144.

Add "aluminium (4B)" in the column "Outer packagings and arrangements" under "Boxes" for packing instructions P112 (c) and P113.

Add "plastics, solid (4H2)" in the column "Outer packagings and arrangements" under "Boxes" for packing instruction P144.

P001: Add a new special packing provision to read as follows:

"PP81 For UN 1790 with not more than 85% hydrofluoric acid and UN 2031 with more than 55% nitric acid, the permitted use of plastics drums and jerricans as single packagings shall be two years from their date of manufacture."

P002: In PP11 under the heading "Special packing provisions", replace "or" with "and" after "plastics bags".

P003: In PP19 under the heading "Special packing provisions", add "1856" and "3360".

P201: The following text becomes new (2):

"(2) In addition, the following packagings are authorized provided that the general provisions of **4.1.1** and **4.1.3** are met."

Rename the existing (2) and (3) as (a) and (b) respectively.

P202: Amend the first sentence to read: "The following packagings are authorized, provided that the general provisions of **4.1.1** and **4.1.3** are met."

P400(1), P401(1) and

P402(1): In the first sentence, replace "Steel gas cylinders and gas receptacles" with "Steel cylinders, pressure drums and tubes".

In the second sentence, replace "or the gas cylinders or receptacles" with "or the cylinders, pressure drums or tubes".

In the third sentence, replace "Cylinders and gas receptacles" with "Cylinders, pressure drums and tubes" and delete "of the cylinder".

P402(1): In the last sentence, amend the end to read: "of the capacity of the cylinder, pressure drum or tube."

P406: Amend the special provision PP24 to read as follows:

"UN Nos. 2852, 3364, 3365, 3366, 3367, 3368 and 3369 shall not be carried in quantities of more than 500 g per package."

Add the following new special provisions PP78 and PP80 to read as follows:

"PP78 UN 3370 shall not be carried in quantities of more than 11.5 kg per package.";

"PP80 For UN Nos. 2907 and 3344, packagings shall meet the packing group II performance level. Packagings meeting the test criteria of packing group I shall not be used."

P601: In the first sentence, after "and **4.1.3** are met", insert: "and the packagings are hermetically sealed..."

Under (3) "Combination packagings", amend (f) to read:

"(f) The outer and inner packagings shall be subjected periodically to a leakproofness test according to (b) at intervals of not more than two and a half years;"

Under (4), replace "Gas cylinders and gas receptacles" with "Cylinders, pressure drums and tubes".

P602: In the first sentence, after "and **4.1.3** are met", insert: "and the packagings are hermetically sealed..."

Amend (4) as follows:

"(4) Cylinders, pressure drums and tubes with a minimum.... No cylinder, pressure drum or tube may be... Cylinders, pressure drums and tubes shall have...".

P621: Amend the first sentence to read: "The following packagings are authorized, provided that the general provisions of **4.1.1** and **4.1.3** and the special provisions of **4.1.8** are met."

P650: Amend to read as follows:

P650	PACKING INSTRUCTION	P650
<p>This packing instruction applies to UN 3373.</p>		
<p>General provisions</p>		
<p>Diagnostic specimens shall be packed in good quality packagings, which shall be strong enough to withstand the shocks and loadings normally encountered during carriage, including trans-shipment between transport units and between transport units and warehouses as well as any removal from a pallet or overpack for subsequent manual or mechanical handling. Packagings shall be constructed and closed so as to prevent any loss of contents when prepared for carriage which might be caused under normal conditions of carriage, by vibration, or by changes in temperature, humidity or pressure.</p>		
<p>Primary receptacles shall be packed in secondary packagings in such a way that, under normal conditions of carriage, they cannot break, be punctured or leak their contents into the secondary packaging. Secondary packagings shall be secured in outer packagings with suitable cushioning material. Any leakage of the contents shall not substantially impair the protective properties of the cushioning material or of the outer packaging.</p>		
<p>For carriage each package shall be clearly and durably marked with the words "DIAGNOSTIC SPECIMENS".</p>		
<p>The completed package shall be capable of successfully passing the drop test in 6.3.2.5 as specified in 6.3.2.3 and 6.3.2.4 except that the height of the drop shall not be less than 1.2 m.</p>		
<p>For liquids</p>		
<p>The primary receptacle(s) shall be leakproof and shall not contain more than 500 ml.</p>		
<p>There shall be absorbent material placed between the primary receptacle and the secondary packaging; if several fragile primary receptacles are placed in a single secondary packaging, they shall be either individually wrapped or separated so as to prevent contact between them. The absorbent material, such as cotton wool, shall be in sufficient quantity to absorb the entire contents of the primary receptacles and there shall be a secondary packaging which shall be leakproof.</p>		
<p>The primary receptacle or the secondary packaging shall be capable of withstanding without leakage an internal pressure producing a pressure differential of not less than 95 kPa (0.95 bar).</p>		
<p>The outer packaging shall not contain more than 4 litres.</p>		
<p>For solids</p>		
<p>The primary receptacle(s) shall be siftproof and shall not contain more than 500 g.</p>		
<p>If several fragile primary receptacles are placed in a single secondary packaging, they shall be either individually wrapped or separated so as to prevent contact between them and there shall be a secondary packaging which shall be leakproof.</p>		
<p>The outer packaging shall not contain more than 4 kg.</p>		
<p>Provided that diagnostic specimens are packed in accordance with this packing instruction, no other requirements of RID/ADR shall apply.</p>		

P802: Add a new special packing provision to read as follows:

"PP79 For UN 1790 with more than 60 % but not more than 85% hydrogen fluoride, see P001."

In P802(5): replace "conforming to the construction, testing and filling requirements approved by the competent authority" with "conforming to the provisions of packing instruction P200" and "Gas cylinders" with "Cylinders, pressure drums and tubes".

P902: Amend packing instruction **P902** to read as follows:

P902	PACKING INSTRUCTION	P902
This instruction applies to UN 3268.		
The following packagings are authorized, provided the general provisions of 4.1.1 and 4.1.3 are met:		
Packagings conforming to the packing group III performance level. The packagings shall be designed and constructed to prevent movement of the articles and inadvertent operation during normal conditions of carriage.		
The articles may also be carried unpackaged in dedicated handling devices, vehicles, containers or wagons when moved from where they are manufactured to an assembly plant.		
Additional requirement:		
Any pressure vessel shall be in accordance with the requirements of the competent authority for the substance(s) contained in the pressure vessel(s).		

P904: Amend (1) to read:

"(1) Packagings according to P001 or P002 conforming to the packing group III performance level".

P907: Insert the following new packing instruction to read:

P907	PACKING INSTRUCTION	P907
	<p>If the machinery or apparatus is constructed and designed so that the receptacles containing the dangerous goods are afforded adequate protection, an outer packaging is not required. Dangerous goods in machinery or apparatus shall otherwise be packed in outer packagings constructed of suitable material of adequate strength and design in relation to the packaging capacity and its intended use, and meeting the applicable requirements of 4.1.1.1.</p> <p>Receptacles containing dangerous goods shall conform to the general provisions in 4.1.1, except that 4.1.1.3, 4.1.1.4, 4.1.1.12 and 4.1.1.14 do not apply. For gases of Class 2 (group A or O according to 2.2.2.1.3), the inner cylinder or receptacle, its contents and filling density shall be to the satisfaction of the competent authority of the country in which the cylinder or receptacle is filled.</p> <p>In addition, the manner in which receptacles are contained within the machinery or apparatus, shall be such that under normal conditions of carriage, damage to receptacles containing the dangerous goods is unlikely; and in the event of damage to receptacles containing solid or liquid dangerous goods, no leakage of the dangerous goods from the machinery or apparatus is possible (a leakproof liner may be used to satisfy this requirement). Receptacles containing dangerous goods shall be so installed, secured or cushioned as to prevent their breakage or leakage and so as to control their movement within the machinery or apparatus during normal conditions of carriage. Cushioning material shall not react dangerously with the content of the receptacles. Any leakage of the contents shall not substantially impair the protective properties of the cushioning material.</p>	

4.1.4.2 **IBC03:** Amend the existing additional requirement to read:

"Only liquids with a vapour pressure less than or equal to 110kPa at 50 °C, or 130 kPa at 55 °C are authorized, other than UN 2672 (see B13).".

Add a new special packing provision B13 to read as follows:

"B13: UN 2672 Ammonia solution in concentrations not exceeding 25% may be carried in rigid or composite plastics IBCs (31H1, 31H2 and 31HZ1).".

IBC06: Add a new special packing provision B14 to read as follows:

"B14 For UN 2907, IBCs shall meet the packing group II performance level. IBCs meeting the test criteria of packing group I shall not be used.".

Under "(3) Composite" delete "31HZ2".

IBC620: Amend the second sentence to read: "The following IBCs are authorized, provided that the general provisions of **4.1.1**, **4.1.2** and **4.1.3** and the special provisions of **4.1.8** are met."

4.1.4.3 Add a new packing instruction LP902 to read:

LP902	PACKING INSTRUCTION	LP902
This instruction applies to UN 3268.		
The following packagings are authorized, provided the general provisions of 4.1.1 and 4.1.3 are met:		
Packagings conforming to the packing group III performance level. The packagings shall be designed and constructed to prevent movement of the articles and inadvertent operation during normal conditions of carriage.		
The articles may also be carried unpackaged in dedicated handling devices, vehicles, containers or wagons when moved from where they are manufactured to an assembly plant.		
Additional requirement:		
Any pressure vessel shall be in accordance with the requirements of the competent authority for the substance(s) contained in the pressure vessel(s).		

4.1.7.0.1 Add a new paragraph to read:

"4.1.7.0.1 For organic peroxides, all receptacles shall be "effectively closed". Where significant internal pressure may develop in a package by the evolution of a gas, a vent may be fitted, provided the gas emitted will not cause danger, otherwise the degree of filling shall be limited. Any venting device shall be so constructed that liquid will not escape when the package is in an upright position and it shall be able to prevent ingress of impurities. The outer packaging, if any, shall be so designed as not to interfere with the operation of the venting device."

4.1.7.2.3 and

4.1.7.2.4 Add the following new paragraphs:

"4.1.7.2.3 For self-reactive substances temperature control is required according to 2.2.41.1.17. For organic peroxides temperature control is required according to 2.2.52.1.15 to 2.2.52.1.18. Temperature control provisions are given in special provision V8 of Chapter 7.2.

4.1.7.2.4 Emergencies to be taken into account are self-accelerating decomposition and fire engulfment. To prevent explosive rupture of metal IBCs with a complete metal casing, the emergency-relief devices shall be designed to vent all the decomposition products and vapours evolved during self-accelerating decomposition or during a period of not less than one hour of complete fire engulfment calculated by the equations given in 4.2.1.13.8."

4.1.8.2 Amend to read as follows:

"The definitions in 1.2.1 and the general packing provisions of 4.1.1.1 to 4.1.1.14, except 4.1.1.10 to 4.1.1.12 apply to infectious substances packages. However, liquids shall be

filled into packagings, including IBCs, which have an appropriate resistance to the internal pressure that may develop under normal conditions of carriage."

4.1.8.3 Amend the beginning to read: "For UN 2814 and UN 2900, an itemized..." .

4.1.8.5 Add a new paragraph to read:

"4.1.8.5 The provisions of this section do not apply to UN 3373 Diagnostic specimens (see packing instruction P650)".
