

**Committee of Experts on the Transport of Dangerous Goods  
and on the Globally Harmonized System of Classification  
and Labelling of Chemicals**

Sub-Committee of Experts on the Transport of Dangerous Goods

23 June 2010

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Item 3 of the provisional agenda

**Listing, classification and packing**

**Proposal for classification criteria and packing requirements  
for chemicals under pressure**

**Transmitted by the International Council of Chemical Association  
(ICCA)**

1. The classification and packaging requirements for chemicals under pressure issue was already discussed at the thirty-fifth and thirty-sixth sessions of the Sub-Committee (see informal document INF.18 (thirty-fifth session), ST/SG/AC.10/C.3/2009/41, informal documents INF.16 and INF.54 (thirty-sixth session). These chemicals are liquids or solids, e.g. an adhesive or paint, and a gas or gas-mixture in a pressure receptacle, which is under sufficient pressure to allow spray application or extrusion.

2. A summary of the discussions in the subsequent meetings can be found in Annex II of this document.

3. As a result from these discussions and the comments made, ICCA proposes the following amendments.

**Proposal**

4. Create six new entries (UN 3XXX, UN 3YYY, 3AAA, 3BBB, 3CCC, 3DDD) in Class 2:

(a) Add six new entries to the Dangerous Goods List, as follows:

UN No.	Name and description	Class or division	Subsidiary risk	UN Packing group	Special provisions	Limited and excepted quantities		Packagings and IBCs		Portable tanks and bulk containers	
						(7a)	(7b)	Packing instructions	Special packing provisions	Instructions	Special provisions
(1)	(2)	(3)	(4)	(5)	(6)	(7a)	(7b)	(8)	(9)	(10)	(11)
3XXX	CHEMICAL UNDER PRESSURE, N.O.S.	2.2			274 XYZ	0	E0	P2YY		[T50	TPXX]
3YYY	CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.	2.1			274 XYZ	0	E0	P2YY	PPYY	[T50	TPXX]
3AAA	CHEMICAL UNDER PRESSURE, TOXIC, N.O.S.	2.2	6.1		274 XYZ	0	E0	P2YY	PPYY	[T50	TPXX]
3BBB	CHEMICAL UNDER PRESSURE, CORROSIVE, N.O.S.	2.2	8		274 XYZ	0	E0	P2YY	PPYY	[T50	TPXX]

3CCC	CHEMICAL UNDER PRESSURE, FLAMMABLE, TOXIC, N.O.S.	2.1	6.1		274 XYZ	0	E0	P2YY	PPYY	[T50	TPXX]
3DDD	CHEMICAL UNDER PRESSURE, FLAMMABLE, CORROSIVE, N.O.S.	2.1	8		274 XYZ	0	E0	P2YY	PPYY	[T50	TPXX]

- (b) Add a new Special Provision XYZ in Chapter 3.3:

XYZ: This entry applies to liquids, pastes or powders, pressurized with a **propellant, which meets the definition of an gas in 2.2.1.1 and 2.2.1.2 (a) or (b)**

*Note: A Chemical under pressure in an aerosol dispenser shall be transported under UN1950.*

The following provisions shall apply:

- (a) The chemical under pressure shall be classified based on the hazard properties of the components in the different states:

- (i) **The propellant** ;
- (ii) **The liquid** ; or
- (iii) **The solid.**

If one of these components, which can be a pure substance or a mixture, needs to be classified as flammable, the chemical under pressure shall be classified as flammable in division 2.1. Flammable components are flammable liquids and liquid mixtures, flammable solids and solid mixtures or flammable gases and gas mixtures meeting the following criteria:

- (i) A flammable liquid means a liquid having a flashpoint of not more than 93°C..
- (ii) For the definition of flammable solids, see paragraph 2.4.2.2 of these Regulations..
- (iii) **A flammable gas is a gas which meets the criteria in 2.2.2.1.**

- (b) Gases of Division 2.3 **and gases with a subsidiary risk of 5.1** shall not be used as a propellant in a chemical under pressure;

- (c) Where the liquid or solid components are classified as Division 6.1, packing groups II or III, or Class 8, packing groups II or III, the chemical under pressure shall be assigned a subsidiary risk of Division 6.1 or Class 8 and the appropriate UN number shall be assigned. Components classified in Division 6.1, packing group I, or Class 8, packing group I, **shall not be used** for transport under this proper shipping name.

- (d) In addition, chemicals under pressure with components meeting the properties of : Class 1, Explosives; Class 3, liquid desensitized explosives; Division 4.1, self reactive substances and solid desensitized explosives; Division 4.2, Substances liable to spontaneous combustion; Division 4.3, substances which, in contact with water, emit flammable gases; Division 5.1 oxidizing substances and 5.2 organic peroxides; Division 6.2, Infectious substances and Class 7 Radioactive material, shall **not be used** for transport under this proper shipping name."

(e) **Substances for which PP86 or TP7 is assigned and therefore require air to be eliminated from the vapour space, shall not be used for transport under this UN number but shall be transported under their respective UN numbers as listed in Chapter 3.2, Dangerous Goods List.**

5. Amend 4.1.6.1.5 to read as follows:

"Prior to filling, the filler shall perform an inspection of the pressure receptacle and ensure that the pressure receptacle is authorized for the gas **and in case of a chemical under pressure for the propellant** to be transported and that the provisions of these Regulations have been met. Shut-off valves shall be closed after filling and remain closed during transport. The consignor shall verify that the closures and equipment are not leaking."

6. Amend 4.1.6.1.10 to read as follows:

Refillable pressure receptacles, other than cryogenic receptacles, shall be periodically inspected according to the provisions of 6.2.1.6 and packing instruction P200 or packing instruction P2YY as applicable. Pressure receptacles shall not be filled after they become due for periodic inspection but may be transported after the expiry of the time limit."

7. Add a new packing instruction P2YY as follows:

P2YY	PACKING INSTRUCTION	P2YY
This instruction applies to UN 3XXX, UN 3YYY, 3AAA, 3BBB, 3CCC and 3DDD		
For cylinders and pressure drums, the general packing requirements of <b>4.1.6.1</b> shall be met. Unless otherwise indicated in these Regulations, cylinders, pressure drums and tubes conforming to the applicable requirements of Chapter 6.2 are authorized. <b>The maximum test period for periodic inspection shall be 5 years.</b> Pressure receptacles shall be so filled that at 50°C the non-gaseous phase does not exceed 95% of their water capacity and they are not completely filled at 60°C. When filled, the internal pressure at 65°C shall not exceed the test pressure of the pressure receptacle. The vapour pressures and volumetric expansion of all substances in the pressure receptacle shall be taken into account. The minimum test pressure <b>shall be in accordance with P200 for the propellant but shall not be less than 20 bar.</b>		
<b>Additional requirement</b>		
Pressure receptacles shall not be offered for transport when connected with spray application equipment such as a hose and wand assembly.		
<b>Special packing provisions:</b>		
<b>PPYY:</b> For UN3YYY, 3AAA, 3BBB, 3CCC and 3DDD, notwithstanding 4.1.6.1.9 (b), non-refillable cylinders used may have a water capacity in litres not exceeding 1000 l divided by the test pressure expressed in bars provided capacity and pressure restrictions of the construction standard <b>comply with ISO 11118:1999. 1., which limits the maximum capacity to 50 litres.</b>		

8. amend 6.2.1.1.5 to read as follows:

The test pressure of cylinders, tubes, pressure drums and bundles of cylinders shall be in accordance with packing instruction P200, and for a chemical under pressure with P2YY.

9. under 6.2.1.6, after (e) , add to the note :

For the periodic inspection and test frequencies, see Packing instruction P200 and for a chemical under pressure P2YY of 4.1.4.1.