

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

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Item 3 of the agenda

LISTING, CLASSIFICATION AND PACKING

Revised proposal on Pressurized Adhesives in gas cylinders (ST/SG/AC.10/C.3/2009/41 and UN/SCETDG/36/INF.16)

Report of the Lunch Time Working Group (ICCA)

1. As a result of the lunch time working session the proposal presented to The UN Sub Committee TDG has been updated. Below the changes are briefly described:
2. The portable tank instructions will be separated and there will be another document to discuss this in detail, as more information is required for this.
3. It was agreed, that new UN-numbers need to be created to cover this kind of products.
4. The definition has been deleted and the wording has been moved into the new Special Provision SPXX;
5. The description has been changed to “Chemicals under pressure”;
6. 4 new UN-number have been raised to reflect the possible subsidiary risks to help in case of emergency response and to follow the new logic in the UN Model Regulations, resulting in a total of 6;
7. The UN-numbers have been amended with n.o.s. and require SP274;
8. The flammability criteria are taken from the UN Manual of Test and Criteria; which means that liquids are considered flammable up to a flashpoint of 93°C;
9. Components classified in Division 6.1 packing group I or Class 8 packing group I are prohibited (propellants of Division 2.3 where prohibited already in the initial working paper and they remain prohibited in this proposal);

10. The division 5.1 and 5.2 are prohibited in addition to those already listed in the new Special provision SPXX. The last part of the last sentence, which would allow these hazards in case there is a provision for it, has been deleted;

11. The same size restriction which apply to chemical under pressure, flammable, n.o.s. will also apply to the UN-numbers with subsidiary hazards (3AAA – 3DDD), even if they are non-flammable.

12. The inspection period is changed from 10 years to 5 years for Chemicals under pressure with a division 6.1 or class 8 subsidiary risks.

13. The packing instruction P2YY now includes compatibility requirements for both the gaseous and the non gaseous components.

Proposal

14. Create 6 new entries (UN 3XXX, UN 3YYY, 3AAA, 3BBB, 3CCC, 3DDD) in Class 2:

(a) Add 6 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	<u>CHEMICAL UNDER PRESSURE, NON FLAMMABLE, N.O.S.</u>	2.2			<u>274 XYZ</u>	0	E0	P2YY			
3YYY	<u>CHEMICAL UNDER PRESSURE, FLAMMABLE, N.O.S.</u>	2.1			<u>274 XYZ</u>	0	E0	P2YY	PPYY		
3AAA	<u>CHEMICAL UNDER PRESSURE, NON FLAMMABLE, TOXIC, N.O.S.</u>	<u>2.2</u>	<u>6.1</u>		<u>274 XYZ</u>	0	E0	<u>P2YY</u>	<u>PPYY</u>		
3BBB	<u>CHEMICAL UNDER PRESSURE, NON FLAMMABLE, CORROSIVE, N.O.S.</u>	<u>2.2</u>	<u>8</u>		<u>274 XYZ</u>	0	E0	<u>P2YY</u>	<u>PPYY</u>		
3CCC	<u>CHEMICAL UNDER PRESSURE, FLAMMABLE, TOXIC, N.O.S.</u>	<u>2.1</u>	<u>6.1</u>		<u>274 XYZ</u>	0	E0	<u>P2YY</u>	<u>PPYY</u>		
3DDD	<u>CHEMICAL UNDER PRESSURE, FLAMMABLE, CORROSIVE, N.O.S.</u>	<u>2.1</u>	<u>8</u>		<u>274 XYZ</u>	0	E0	<u>P2YY</u>	<u>PPYY</u>		

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

XYZ: This entry applies to liquids, pastes or powders, pressurized [under pressure] with a compressed or liquefied gas or a mixture thereof without subsidiary risks, under sufficient pressure to eject the contents.

Note: Aerosol containers (UN 1950) do not fall under this definition. An example of a “chemical under pressure” is 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.

The division of Class 2 and the subsidiary risks depend on the nature of the contents of the chemical under pressure. The following provisions shall apply:

- (a) The product shall be classified based on the components in the different states: the propellant (gas) or mixtures of the propellant with other gases, the liquid and/or the solid. If one of these components needs to be classified as flammable the chemical under pressure needs to be classified as flammable in division 2.1. Flammable components are flammable liquids, flammable solids or flammable gases and gas mixtures as defined in Notes 1 to 3 of sub-section 31.1.3 of Part III of the UN Manual of Tests and Criteria;
- (b) Gases of Division 2.3 shall not be used as a propellant in a chemical under pressure;
- (c) Where the components other than the propellant of the chemical under pressure receptacle to be ejected are classified as Division 6.1 packing groups II or III or Class 8 packing groups II or III, the chemical under pressure shall have a subsidiary risk of Division 6.1 or Class 8 and assigned to the appropriate UN-numbers. Components classified in Division 6.1 packing group I or Class 8 packing group I shall be prohibited.
- (d) In addition Chemicals under pressures with components meeting, 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 be prohibited
- (e) The appropriate subsidiary risk labels are required.

15. Amend 4.1.6.1.5 as follows (*no change to document ST/SG/AC.10/C.3/2009/41 – the underlined text refers to an amendment to the UN Model Regulations*):

Prior to filling, the filler shall perform an inspection of the pressure receptacle and ensure that the pressure receptacle is authorized for the gas or chemical under pressure 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.

16. Amend 4.1.6.1.10 as follows (*no change to document ST/SG/AC.10/C.3/2009/41 – the underlined text refers to an amendment to the UN Model Regulations*):

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.

17. Add a new packing instruction P2YY as follows:

P2YY	PACKING INSTRUCTION	P2YY
	This instruction applies to UN 3XXX, <u>UN 3YYY, 3AAA, 3BBB, 3CCC and 3DDD</u>	
	For cylinders, pressure drums and tubes, the general packing requirements of 4.1.6.1 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. <u>For Chemicals under pressure, flammable or non flammable, without subsidiary risk, and packed in refillable pressure receptacles, the maximum test period for periodic inspection shall be 10 years; for chemicals under pressure, with subsidiary risk of division 6.1 or class 8, the maximum test period for periodic inspections shall be 5 years.</u> Pressure receptacles shall not be offered for transport when connected with spray application equipment such as a hose and wand assembly. <u>Material compatibility for the gaseous components shall be verified according to ISO-11114-1:1997 and ISO 11114-2:2000.</u> <u>The parts of the pressure receptacles in immediate contact with the non gaseous components shall not be affected or weakened by those components and shall not cause a dangerous effect e.g. catalysing a reaction or reacting with the component.</u> Pressure receptacles shall be so filled that at 50°C the non gas phase does not exceed 95% of their water capacity and is not completely filled at 60°C. When filled, the internal pressure at 65°C shall not exceed the test pressure of the pressure receptacle.	
	Special packing provisions: PPYY: 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 divided by the test pressure expressed in bars provided capacity and pressure restrictions of the construction standard are also observed (e.g. see ISO 11118:1999. 1. a-c pressure x volume function).	

Annex

Graph based on the pressure x volume function of ISO 11118:1999, used for the Special Packing Instruction PPYY

