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Geneva, 11-15 September 2006

**HARMONIZATION WITH THE UN MODEL REGULATIONS
ON THE TRANSPORT OF DANGEROUS GOODS */**

Pressure receptacles for liquids

New Chapter 4.1.3.6

Transmitted by the European Chemical Industry Council (CEFIC)

SUMMARY

Executive Summary: The information paper seeks to highlight the differences between 4.1.3.6 of the UN Model Regulations, 14th revised edition (Pressure receptacles for liquids and solids) and existing ADR/RID 4.1.4.4 (PR1-PR7) and proposes to harmonize fully with the 14th revised edition.

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Introduction

1. During the Joint Meeting of 13-23 September 2005, the ADR/RID 4.1.4.4 particular requirements applicable to the use of pressure receptacles for substances other than those of class 2 were discussed. Aim was to harmonize with the 14th revised edition of the UN Recommendations on the Transport of Dangerous Goods, Model Regulations.
2. To facilitate the discussion, CEFIC submitted a comparison table highlighting the differences between 4.1.3.6 of the UN Model Regulations, 14th revised edition (Pressure receptacles for liquids and solids) and existing ADR/RID 4.1.4.4 (PR1-PR7) (Information paper 16).
3. Further the deletion of the current PR1-PR7 was discussed and after a vote, the deletion was not adopted. Many delegates expressed that more time was needed in order to see the consequences of deleting PR1-PR7. Others delegates regretted that no full harmonization with the 14th revised edition of the UN Model Regulations was achieved.
4. Because the current situation, i.e. the new 4.1.3.6 provisions together with the old PR1-PR7 provisions, leads to problems in practice, CEFIC submitted the old INF.16 paper as a formal proposal in order to finalize the discussion on this topic.

Comparison table

5. In table 1, the above mentioned comparison table is given. Aspects addressed are the test pressure, capacity, filling, periodic test and inspection and requirements as given in the relevant packaging instruction for the UN numbers listed in existing PR1 – PR7. This comparison table is drafted to facilitate the discussion on whether 4.1.4.4 can be deleted. It appeared that PR4 - PR7 are assigned to only one or two individual UN numbers and are in some aspects substances specific.

Suggestions for consideration

6. With reference to document TRANS/WP.15/AC.1/2005/42/Add.1 regarding the existing 4.1.4.4 the following alternatives are offered for further consideration:

Alternative 1:

- Delete 4.1.4.4
- Insert in chapter 1.6 at the appropriate place (1.6.1.5?) the following:
"Pressure receptacles for substances other than those of class 2, manufactured before 1 January 2007/1 July 2007 in accordance with the requirements of ADR/RID 4.1.4.4 in force up to 31 December 2006, but which are not in accordance with the requirements of 4.1.3.6, applicable as from 1 January 2007, may continue to be used for their entire lifetime under the provisions as prescribed in 4.1.4.4."
- For UN 1614 (listed in PR7), replace P601 with P099 in 3.2, dangerous goods list, column (8)

- Delete all PR-1 to PR7 in 3.2, dangerous goods list, column (8)

Alternative 2:

- Delete 4.1.4.4
- Delete all PR1 to PR7 in 3.2, dangerous goods list, column (8)
- Retain the specific text for the individual UN numbers of PR4, PR5 and PR7 in new PPxx in the relevant packing instruction as follows:
(from PR4)
Insert in P601: PPxx For UN No. 1185, the mass of the contents shall not exceed 0.67 kg per litre capacity. A package shall not weigh more than 75 kg. (from PR5)
Insert in P601: PPxy For UN No. 2480 and 2481, the substance shall be packed in receptacles made of pure aluminium having a wall thickness of not less than 5 mm or in receptacles of stainless steel. The receptacles shall be fully welded. (from PR7)
Insert in P601: PPxz For UN No. 1614, when completely absorbed by an inert porous material, shall be packed in metal receptacles of a capacity of not more than 7.5 litres, placed in wooden cases in such a manner that they cannot come into contact with one other. The receptacle shall be entirely filled with porous material which shall not shake down or form dangerous spaces even after prolonged use under impact, even at temperatures of up to 50 °C.
- Insert in chapter 1.6 at the appropriate place (1.6.1.5?) the following:
"Pressure receptacles for substances other than those of class 2, manufactured before 1 January 2007/1 July 2007 in accordance with the requirements of ADR/RID 4.1.4.4 in force up to 31 December 2006, but which are not in accordance with the requirements of 4.1.3.6, applicable as from 1 January 2007, may continue to be used for their entire lifetime under the provisions as prescribed in 4.1.4.4."

7. CEFIC prefers the "alternative 1" in order to align with the UN Model regulations as much as possible.

Table 1: Comparison of new 4.1.3.6 (UN 14th edition) and existing 4.1.4.4 (PR1-PR7)

RID/ADR PRno.	RID/ADR Relevant packaging instruction of the UN numbers listed in PRno.	Test pressure (bar)		Capacity (l)		Filling		Periodic test/inspection		Miscellaneous
		New 4.1.3.6 + Packing instruction	According to PRno.	New 4.1.3.6 + Packing instruction	According to PRno	New 4.1.3.6 + Packing instruction	According to PRno	New 4.1.3.6 + Packing instruction	According to PRno	
PR1	P400 13x P402 6x P401 1x P601 1x	10 6 6 10	10 10 10 10	According to chapter 1.2, “pressure receptacle” Cylinder: 150 Pressure drum: 150-1000 Bundle of cylinders: 3000 Tubes: Class 2	450	95% of capacity cylinder at 50 °C. Not liquid full at 55°C	90% (5% empty at 50 °C)	10 years (P400, 401, 402, 601)	5 years	PR1: inert gas 0.5 bar New 4.1.3.6: inert gas 0.2 bar (specified in P400, 401, 402)
PR2	P401 4x	6	4	According to chapter 1.2, “pressure receptacle” Cylinder: 150 Pressure drum: 150-1000 Bundle of cylinders: 3000 Tubes: Class 2	450	95% of capacity cylinder at 50 °C. Not liquid full at 55°C	85% or specific (kg/l)	10 years (P401)	5 years	PR2 -
PR3	P601 6x P602 1x	10 10	10 10	According to chapter 1.2, “pressure receptacle” Cylinder: 150 Pressure drum: 150-1000 Bundle of cylinders: 3000 Tubes: Class 2	250	95% of capacity cylinder at 50 °C. Not liquid full at 55°C	1 kg/l	10 years (P601, 602)	5 years, meticulous inner inspection	PR3: 3 mm wall thickness, <150 l capacity

RID/ADR PRno.	RID/ADR Relevant packaging instruction of the UN numbers listed in PRno.	Test pressure (bar)		Capacity (l)	Filling			Periodic test/inspection		Miscellaneous
PR4	P601 1x	10	10	According to chapter 1.2, “pressure receptacle” Cylinder: 150 Pressure drum: 150-1000 Bundle of cylinders: 3000 Tubes: Class 2	75 kg weight package	95% of capacity cylinder at 50 °C. Not liquid full at 55°C	0.67 kg/l	10 years (P601)	5 years	PR4 -
PR5	P601 2x	10	5	According to chapter 1.2, “pressure receptacle” Cylinder: 150 Pressure drum: 150-1000 Bundle of cylinders: 3000 Tubes: Class 2	Not specified in PR5	95% of capacity cylinder at 50 °C. Not liquid full at 55°C	90%	10 years (P601)	5 years	PR5: 5 mm wall thickness for aluminium receptacle drum >100 kg, rolling hoops or stiffening ribs needed
PR6	P601 1x	10	Calc. pressure 21 2 bar leak proof ness test	According to chapter 1.2, “pressure receptacle” Cylinder: 150 Pressure drum: 150-1000 Bundle of cylinders: 3000 Tubes: Class 2	450	95% of capacity cylinder at 50 °C. Not liquid full at 55°C	92%	10 years (P601)	2 years, internal inspection	PR6: -
PR7	P601 1x (RID/ADR) P099 (UN)	?? (P099)	6	?? (P099)	7.5	95% of capacity cylinder at 50 °C. Not liquid	Not specified in PR7	10 years (P601)	Not specified in PR7	PR7 Absorption in inert porous material

RID/ADR PRno.	RID/ADR Relevant packaging instruction of the UN numbers listed in PRno.	Test pressure (bar)		Capacity (l)	Filling		Periodic test/inspection		Miscellaneous
---	P001 P002	6	--	According to chapter 1.2, "pressure receptacle" Cylinder: 150 Pressure drum: 150-1000 Bundle of cylinders: 3000 Tubes: Class 2	-	full at 55°C 95% of capacity cylinder at 50 °C. Not liquid full at 55°C	-	5 years -	-