

## 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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### TRANSPORT OF GASES

#### Amendments to 4.1.3.6 to allow expanded use of pressure receptacles for liquid or solid substances

Transmitted by the expert from the United States of America

#### **Background**

1. The expert from the United States welcomes the proposal from the United Kingdom to amend Packing Instruction P401 and paragraph 4.1.3.6 to more appropriately reference the applicable requirements for the transport of liquids and solids in pressure receptacles. In the Model Regulations, paragraph 4.1.3.6 allows the use of pressure receptacles for any liquid or solid substance assigned to packing instructions P001 or P002. This allows consignors to use pressure receptacles for substances that are not assigned to P200 or where a specific packing instruction does not include provisions for use of pressure receptacles. The expert from the United States has also recently become aware of the need to transport substances in pressure receptacles other than those assigned to P001 or P002 such as certain pyrophoric and water reactive substances. It is therefore proposed that 4.1.3.6 be revised by expanding the authorization to include substances other than those assigned to P001 or P002.
2. Paragraph 4.1.3.6 requires that pressure receptacles conform “to the construction requirements of packing instruction P200”. The expert from the United States agrees with the expert from the United Kingdom that 4.1.3.6 should be amended to replace the reference to P200 with references to Section 4.1.6 and Chapter 6.2 which contain the general and construction requirements for pressure receptacles. It is proposed that the 1000 L capacity limitation for bundles of pressure receptacles and tubes be removed as the definition for bundles of pressure receptacles allows 3000 L for gases other than toxic by inhalation gases, and there is no reason to be more restrictive on liquid or solid substances which do not pose an inhalation hazard. It is also proposed that the valve protection provisions that are applied in several packing instructions that authorize pressure receptacles for certain liquid and solid substances (see for instance P402) be included in 4.1.3.6.
3. Finally, it is proposed that packing instructions for substances known to be transported in pressure receptacles be amended to include a specific authorization for pressure receptacles. Currently, for example, P401 and P402 contain separate authorization for the use of pressure receptacles. Based on a review of liquid and solid substances currently known to be transported in pressure receptacles, it is proposed that packing instructions P403, P404, and P410 be revised to include the authorization for pressure receptacles as amended by ST/SG/AC.10/C.3/2003/9. A list of substances known to be transported in pressure receptacles under special approval in the United States is provided at Annex A.

### **Proposal**

4. Amend 4.1.3.6 to read as follows:

Unless otherwise indicated in these Regulations, pressure receptacles conforming to the applicable requirements of 4.1.6 and Chapter 6.2 are authorized for the transport of any liquid or solid substance other than explosives, thermally unstable substances, organic peroxides, self reactive substances and substances which react violently when confined. Valves shall be protected with steel valve protection caps or collars or the pressure receptacles shall be overpacked to afford this protection.

5. Add the following authorization for pressure receptacles to packing instructions P403, P404, and P410:

Steel pressure receptacles, pressure drums and tubes having a minimum design pressure of 4 bar conforming to the provisions of Section 4.1.6 and Chapter 6.2. Valves shall be protected with steel valve protection caps or collars or the pressure receptacles, pressure drums or tubes shall be overpacked in strong wood, fibreboard or plastics boxes. Pressure receptacles, pressure drums and tubes shall be secured to prevent movement in the box and shall be packaged and transported so that pressure relief devices remain in the vapour space during normal conditions of handling and transport. Filling shall not be greater than 90% of the capacity of the cylinder, pressure drum or tube.

**Annex A**

Pyrophoric solids, organic, n.o.s.	Division 4.2	UN 2846	P404
Pyrophoric solids, inorganic, n.o.s.	Division 4.2	UN 3200	P404
Self-heating solid, inorganic, n.o.s.	Division 4.2	UN 3190	P410
Water-reactive solid, flammable, n.o.s.	Division 4.3	UN3132	P403/P410
Water-reactive solid, corrosive, n.o.s.	Division 4.3	UN3131	P403/P410
Water-reactive solid, toxic, n.o.s.	Division 4.3	UN3134	P403/P410
Water-reactive solid, self-heating, n.o.s.	Division 4.3	UN3135	P403/P410
Water-reactive solid, n.o.s.	Division 4.3	UN2813	P403

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