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**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

Twenty-eighth session, 28 November-7 December 2005  
Item 2 of the provisional agenda

TRANSPORT OF GASES

Proposal to reinstate the requirement for the application of orientation arrows  
to closed cryogenic receptacles (5.2.1.9)

Transmitted by the European Industrial Gases Association (EIGA)

**SUMMARY**

- Executive summary:*** For safety reasons EIGA proposes to reinstate the mandatory application of orientation arrows on closed cryogenic receptacles in the Model Regulations.
- Action to be taken:*** Amend text of sub section 5.2.1.7.
- Related documents:*** Thirteenth and fourteenth revised editions of the UN Recommendations on the Transport of Dangerous Goods, Model Regulations.

**1. Introduction**

- 1.1. The thirteenth and fourteenth revised editions of the UN Model Regulations paragraph 6.2.1.3.6.4.4 require that on closed cryogenic receptacles “All pressure relief device inlets shall under maximum filling conditions be situated in the vapour space of the closed cryogenic receptacle . . . .”
- 1.2. The only way that this can be guaranteed is for the closed cryogenic receptacle to be kept upright in all circumstances. EIGA is of the opinion that the orientation arrows are an important safeguard for ensuring that this condition is maintained during transport and use. Therefore the application of the orientation arrows should be mandatory.

- 1.3. The thirteenth revised edition of the UN Model Regulations required (5.2.2.1.13) that all cryogenic receptacles carried the orientation label. This text was agreed in 2002 when the provisions for closed cryogenic receptacles were adopted. In the fourteenth revised edition when extending the requirement to other receptacles, the requirement to apply the label to closed cryogenic receptacles was discarded.
- 1.4. EIGA is surprised that the UN provisions have been changed this way and requests that they are amended as proposed below.

## 2. Proposal

Modify 5.2.1.7 as follows (new words underlined>:

### “5.2.1.7 *Orientation arrows*

5.2.1.7.1 Except as provided in 5.2.1.7.2:

- combination packagings having inner packagings containing liquids;
- single packagings fitted with vents; and
- ~~open~~ cryogenic receptacles intended for the carriage of refrigerated liquefied gases,

shall be legibly marked with package orientation arrows which are similar to the illustration shown below or with those meeting the specifications of ISO 780:1985. The orientation arrows shall appear on two opposite vertical sides of the package with the arrows pointing in the correct upright direction. They shall be rectangular and of a size that is clearly visible commensurate with the size of the package. Depicting a rectangular border around the arrows is optional.

*(Diagram omitted)*

5.2.1.7.2 Orientation arrows are not required on packages containing:

- (a) pressure receptacles except for closed cryogenic receptacles;”

*(rest unchanged).*

## 3. Justification

### 3.1 *Safety implications*

Safety is restored if the change in the UN Model Regulations is reversed.

### 3.2 *Feasibility*

No problems; the previously satisfactory situation is restored.

### 3.3 *Enforceability*

No problems; the previously satisfactory situation is restored.”

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