

## 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 provisional agenda

**Listing, classification and packing**

### Transport of articles containing gas in cryogenic receptacle

Transmitted by the expert from the Kingdom of the Netherlands

#### I. Introduction

1. The expert from the Kingdom of the Netherlands would like to bring a recent case to the attention of the Sub-Committee, where articles containing 1800 litres (~255 kg) of cryogenic helium (Division 2.2) in a receptacle were offered for transport. The designated UN number for transport of these articles is UN 3538 (ARTICLES CONTAINING NON-FLAMMABLE, NON TOXIC GAS, N.O.S.). However, the applicable packing instruction P006 only imposes conditions for receptacles containing compressed or liquefied gases (equivalent level of protection as packing instruction P200) or adsorbed gases (equivalent level of protection as packing instruction P208). This situation has led authorities to consider that these articles containing cryogenic liquids can only be transported under conditions approved by a competent authority. However, special provision 391 does not require an approval for Division 2.2 gases.

2. We are of the opinion that this situation is undesirable and, as it concerns multimodal transport, a solution should preferably be sought in the *Model Regulations*.

3. A possible solution, for transport under UN 3538, is to include in packing instruction P006 a reference to packing instruction P203 for cryogenic receptacles. Packing instruction P006 currently states under (3) (d): "Receptacles within articles containing gases shall meet the requirements of section 4.1.6 and chapter 6.2 as appropriate or be capable of providing an equivalent level of protection as packing instructions P200 or P208". Adding P203 would enable transport of cryogenic gases in articles, on condition of an equivalent level of protection as packing instruction P203.

4. According to the Model Regulations, the capacity of open cryogenic receptacles shall be not more than 450 litres (see packing instruction P203), or of closed cryogenic receptacles not more than 1000 litres (see definition in Chapter 1.2). However, we are of the opinion that this value of 450 or 1000 litres is a practical limit based on cryogenic gases in receptacles. Since an article already provides a certain level of protection, this limit would not be applicable and safe transport can still be guaranteed for open cryogenic receptacles with a capacity of more than 450 litres or for a closed cryogenic receptacle with a capacity of more than 1000 litres.

5. Additionally, because of a possible asphyxiation risk, cargo transport units containing these articles should be well ventilated during transport and should be marked in accordance with 5.5.3.6. This could be arranged by means of a special provision similar to special provision 396.

6. A proposal reflecting these issues is added below.

## II. Proposal

New text is underlined.

7. In packing instruction P006, under (3) (d), add the following:

“Receptacles within articles containing gases shall meet the requirements of section 4.1.6 and chapter 6.2 as appropriate or be capable of providing an equivalent level of protection as packing instructions P200, P203 or P208”.

8. Add a new special provision to UN 3538:

“XXX Articles transported under this entry include large and robust articles with cryogenic receptacles containing gas of Division 2.2. Cargo transport units containing articles with cryogenic receptacles containing a gas presenting a risk of asphyxiation are well ventilated and marked in accordance with 5.5.3.6. The transport document includes the following statement “Transport in accordance with special provision XXX”.”

## III. Sustainable Development Goals

9. This proposal aims to ensure safe transport of articles, thereby contributing to Sustainable Development Goal 11: *Sustainable cities and communities*.

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