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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

Thirty-fourth session  
Geneva, 1-9 December 2008  
Item 7 of the provisional agenda

**MISCELLANEOUS PROPOSALS OF AMENDMENTS TO THE MODEL REGULATIONS  
ON THE TRANSPORT OF DANGEROUS GOODS**

Transport of coolant/conditioning units

Transmitted by the expert from the United Kingdom<sup>1</sup>

1. Experts will recall that the expert from the United Kingdom presented ST/SG/AC.10/C.3/2008/9 at the July 2008 session which dealt with proposals covering the transport of fumigated and cooling/conditioning units. The Sub-Committee subsequently agreed proposals on fumigated units but asked that the expert from the United Kingdom submit revised proposals on coolant/conditioning units. Experts will be aware that these can also pose a safety risk to personnel unfamiliar with dangerous goods regulations or unaccustomed to handling dangerous goods. Below are revised proposals from the expert from the United Kingdom, which he believes can be adopted at this session, for consideration by the Sub-Committee.

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<sup>1</sup> In accordance with the programme of work of the Sub-Committee for 2007-2008 approved by the Committee at its third session (refer to ST/SG/AC.10/C.3/60, para. 100 and ST/SG/AC.10/34, para. 14).

## **Proposal**

2. The expert from the United Kingdom proposes to include the following new section 5.5.3 to chapter 5.5 of the Model Regulations:

### **5.5.3 Special provisions applicable to packages and cargo transport units containing substances presenting a risk of asphyxiation when used for cooling or conditioning purposes (such as dry ice (UN 1845) or nitrogen, refrigerated liquid (UN 1977))**

#### **5.5.3.1 General**

5.5.3.1.1 The transport of dangerous goods used for cooling and conditioning in portable tanks is not subject to these Regulations.

5.5.3.1.2 Cargo transport units containing substances used for cooling or conditioning purposes (other than fumigation) are not subject to any provisions of these Regulations other than those of this section.

5.5.3.1.3 When the cooled or conditioned cargo transport unit is loaded with dangerous goods, in addition to the coolant or conditioner, any provision of these Regulations relevant to these dangerous goods (including placarding, marking and documentation) applies in addition to the provisions of this chapter.

#### **5.5.3.2 Packages containing a coolant or conditioner**

5.5.3.2.1 Packaged dangerous goods requiring cooling or conditioning shall meet the appropriate requirements of the Packing Instruction to which they are assigned (see Packing Instructions P203; P620; P650; P904)

5.5.3.2.2 Packages containing other goods requiring cooling or conditioning shall indicate the quantity and type of coolant or conditioner contained within the package, which shall be designed and constructed to permit the release of gas to prevent a build-up of pressure that could rupture the packaging. Such packages shall be transported in well ventilated cargo transport units.

#### **5.5.3.3 Cargo transport units containing a coolant or conditioner**

5.5.3.3.1 Cargo transport units containing unpackaged coolant or conditioner, such as dry ice, shall be clearly marked with the words 'WARNING – CONTAINS xxxx'

5.5.3.3.2 Cargo transport units containing a coolant or conditioner, such as argon or nitrogen, directly pumped into the cargo transport unit shall be clearly marked with the words "WARNING – CONTAINS CONDITIONING GAS".

#### **5.5.3.4 [Unit Load Containers containing a coolant or conditioner**

5.5.3.4.1 Unit load containers containing a loose coolant or conditioner, such as dry ice, shall be clearly marked with the words 'WARNING – CONTAINS LOOSE xxxx'

5.5.3.4.2 Unit load containers containing a coolant or conditioner, such as argon or nitrogen, directly pumped into the unit load container shall be clearly marked with the words “WARNING – CONTAINS CONDITIONING GAS”].

#### **5.5.3.5 Training**

Persons engaged in the handling of cooled or conditioned cargo transport units shall be trained commensurate with their responsibilities.

#### **5.5.3.6 Marking and placarding**

5.5.3.6.1 Packages containing solid carbon dioxide (dry ice) used as a coolant shall be clearly marked with the words “WARNING - UN 1845 CARBON DIOXIDE SOLID (DRY ICE)”. For packages containing other dangerous goods used for cooling or conditioning, the UN number preceded by the letters “UN” and the proper shipping name of these dangerous goods shall be marked on the package, in addition to the word “WARNING”. The markings shall be durable, legible and placed in such a location and of such a size relative to the packaging as to be readily visible.

5.5.3.6.2 A cargo transport unit [or unit load container]containing dangerous goods used for cooling or conditioning shall be marked with a warning mark, as specified in 5.5.2.6.3, affixed at each access point in a location where it will be easily seen by persons opening or entering the cargo transport unit [or unit load container]. This mark shall remain on the cargo transport unit [or unit load container] until the following provisions are met:

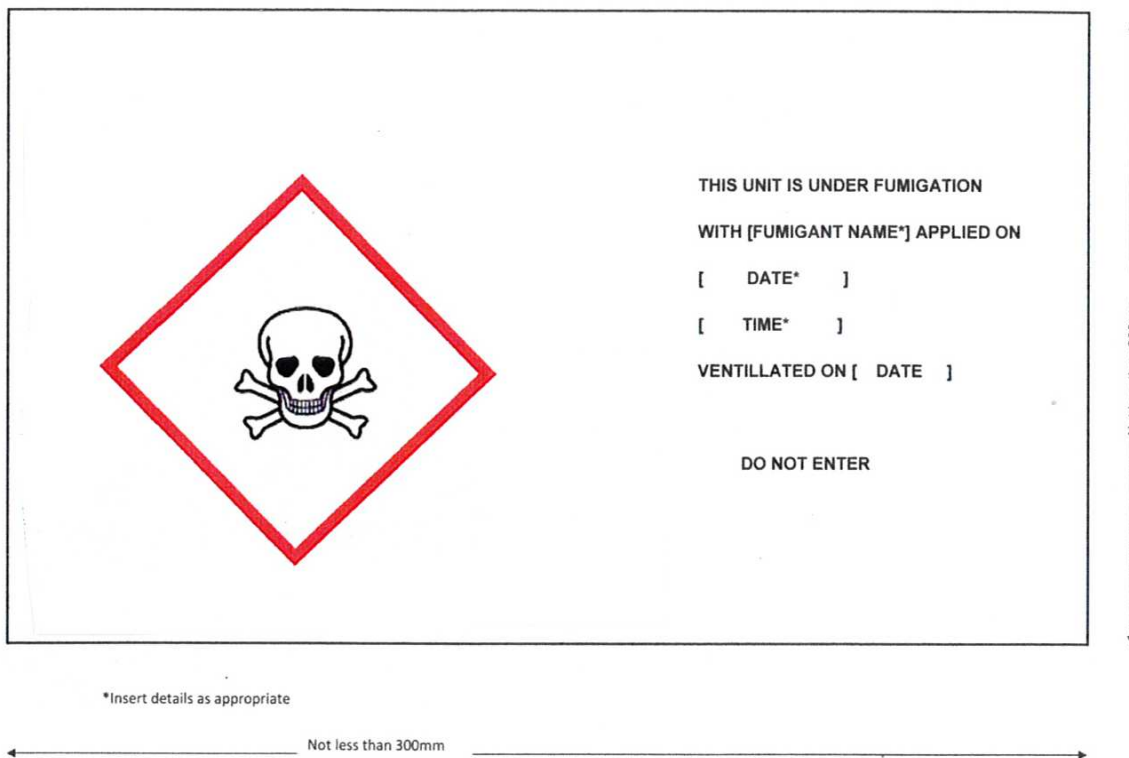
- (a) The cargo transport unit has been ventilated to remove harmful concentrations of fumigant gas; and
- (b) The cooled or conditioned goods have been unloaded.

5.5.3.6.3 The warning mark shall be rectangular and shall not be less than 300 mm wide and 250 mm high. The markings shall be red and black print on a white background with lettering not less than 25 mm high. The warning mark shall include:

- (a) The word “WARNING”; and
- (b) If solid carbon dioxide is used, the text “UN1845 CO2 SOLID (DRY ICE)” or, if other dangerous goods for cooling or conditioning are used, the UN number and proper shipping name of these dangerous goods.

An illustration of this mark is given in Figure 5.5.2 [NOTE: THIS ILLUSTRATION WILL NEED TO BE AMENDED TO INCLUDE CORRECT WORDING AND DIMENSIONS. IT HAS BEEN COPIED FROM THE CURRENT UN TEXT AND COULD NOT BE AMENDED]

**Figure 5.5.2:**



5.5.3.6.4 Placards related to the risks of the dangerous goods used for cooling or conditioning shall not be affixed to the cargo transport unit containing such coolants or conditioners.

### 5.5.3.7 Documentation

5.5.3.7.1 Documents associated with the transport of cargo transport units that have been cooled or conditioned and have not been completely ventilated before transport shall include the following information:

- (a) The UN number preceded by the letters “UN”;
- (b) The proper shipping name;
- (c) The primary hazard class or, when assigned, the division of the goods. The words “class” or “division” may be included preceding the primary hazard class or division numbers.

For example: UN 1845, dry ice, 9

5.5.3.7.2. The transport document may be in any form, provided it contains the information required in 5.5.2.7.1. This information shall be easy to identify, legible and durable.