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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 4 of the provisional agenda

**LISTING, CLASSIFICATION, AND PACKING**

Materials which are Toxic by Inhalation

Transmitted by the experts from the Netherlands and the United States of America<sup>1</sup>

**Background**

1. Over the past several years, the Sub-Committee adopted numerous amendments to the Dangerous Goods List relative to substances which are toxic by inhalation. At its thirteenth session, for example, the Sub-Committee amended the portable tank assignments for a number of substances based on data showing them to be toxic by inhalation (see ST/SG/AC.10/C.3/2006/93 and informal document UN/SCETDG/30/INF.74). Subsequently, at its thirty-third session, the Sub-Committee adopted a number of amendments aligning the packing instructions for those substances whose portable tank authorizations had been amended (see ST/SG/AC.10/C.3/2008/52). At the same session, the expert from the Netherlands presented further information for a number of substances listed in ST/SG/AC.10/C.3/2006/93 but which were deemed to require additional supporting data (see ST/SG/AC.10/C.3/2008/49 and informal document UN/SCETDG/33/INF.8). The information provided was based on a thorough review

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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).

of literature which included sources such as the Acute Exposure Guideline Levels (AEGL) database, the Agency for Toxic Substances and Disease Registry (ATSDR) database, Annex I of EU directive 67/548/EEC, the Cameo Chemicals and CICAD databases, the European Chemical Substances Information System (IUCLID), and other sources<sup>2</sup>.

2. Based on the data provided by the expert from the Netherlands, the goal of the present proposal is to further align the packaging and portable tank provisions for a number of substances which are toxic by inhalation with the appropriate provisions based on the Guiding Principles. In some cases, it is proposed that the listed classifications also be amended to reflect the precedence of hazard characteristics of 2.0.3 of the Model Regulations (for example, UN1810, phosphorous oxychloride, would be classed in Division 6.1 and receive a Class 8 subsidiary risk).

3. In order to facilitate identification of substances which are toxic by inhalation, it is in addition proposed that a new special provision be assigned to indicate the toxic inhalation hazard posed by the material.

4. The Sub-Committee will recall that when the portable tank assignments for certain toxic by inhalation substances were amended on the basis of ST/SG/AC.10/C.3/2006/93, portable tank special provision TP35 was added to state that "Portable tank instruction T14 prescribed in the Model Regulations annexed to the 14<sup>th</sup> revised edition of the Recommendations on the Transport of Dangerous Goods may continue to be applied until 31 December 2014." This was to allow a transition period to facilitate compliance for industry. It is proposed that a similar provision be added to provide a similar length of transition. It has been worded more generally to account for the various types of portable tanks currently authorized (in this case, not all substances are currently assigned T14).

## Proposal

5. Based on the data presented by the Netherlands in ST/SG/AC.10/C.3/2008/49 and informal document UN/SCETDG/33/INF.8, it is proposed that the below listed entries in the Dangerous Goods List be amended as follows:

The following substances have an  $LC_{50} \leq 200$  ppm and saturated vapour concentration  $V \geq 500LC_{50}$ . The entries are proposed to be revised to read as follows:

| (1)  | (2)                             | (3) | (4)    | (5) | (6)        | (7a) | (7b) | (8)                            | (9) | (10)                      | (11)                       |
|------|---------------------------------|-----|--------|-----|------------|------|------|--------------------------------|-----|---------------------------|----------------------------|
| 1251 | METHYL VINYL KETONE, STABILIZED | 6.1 | 3<br>8 | I   | <b>3XX</b> | 0    | E5   | P601                           |     | <del>T14</del> <b>T22</b> | TP2<br>TP13<br><b>TPXX</b> |
| 1580 | CHLOROPICRIN                    | 6.1 |        | I   | <b>3XX</b> | 0    | E5   | <del>P602</del><br><b>P601</b> |     | <del>T14</del> <b>T22</b> | TP2<br>TP13<br><b>TPXX</b> |

The following substances have an  $LC_{50} \leq 1000$  ppm and saturated vapour concentration  $V \geq 10LC_{50}$ . The entries are proposed to be revised to read as follows:

<sup>2</sup> For a more complete description of these sources see informal document UN/SCETDG/33/INF.8, p.7.

| (1)  | (2)                              | (3)                | (4)           | (5)            | (6)        | (7a)          | (7b)             | (8)                              | (9) | (10)                | (11)                |
|------|----------------------------------|--------------------|---------------|----------------|------------|---------------|------------------|----------------------------------|-----|---------------------|---------------------|
| 1135 | ETHYLENE CHLOROHYDRIN            | 6.1                | 3             | I              | 3XX        | 0             | E5               | <del>P001</del><br>P602          |     | <del>T14</del> T20  | TP2<br>TP13<br>TPXX |
| 1182 | ETHYL CHLOROFORMATE              | 6.1                | $\frac{3}{8}$ | I              | 3XX        | 0             | E5               | P602                             |     | <del>T14</del> T20  | TP2<br>TP13<br>TPXX |
| 1510 | TETRANITROMETHANE                | <del>5.1</del> 6.1 | 6.1 5.1       | I              | 3XX        | 0             | E0               | P602                             |     |                     |                     |
| 1541 | ACETONE CYANOHYDRIN, STABILIZED  | 6.1                |               | I              | 3XX        | 0             | E5               | P602                             |     | <del>T14</del> T20  | TP2<br>TP13<br>TPXX |
| 1605 | ETHYLENE DIBROMIDE               | 6.1                |               | I              | 3XX        | 0             | E5               | P602                             |     | <del>T14</del> T20  | TP2<br>TP13<br>TPXX |
| 1670 | PERCHLOROMETHYL MERCAPTAN        | 6.1                |               | I              | 3XX        | 0             | E5               | P602                             |     | <del>T14</del> T20  | TP2<br>TP13<br>TPXX |
| 1810 | PHOSPHORUS OXYCHLORIDE           | 8 6.1              | 8             | <del>H</del> I | 3XX        | 0             | <del>E2</del> E5 | P602                             |     | <del>T7</del> T20   | TP2<br>TP13<br>TPXX |
| 1834 | SULPHURYL CHLORIDE               | 6.1                | 8             | I              | 3XX        | 0             | E0               | P602                             |     | T20                 | TP2<br>TP13<br>TPXX |
| 1838 | TITANIUM TETRACHLORIDE           | 8 6.1              | 8             | <del>H</del> I | 3XX        | 0             | <del>E2</del> E5 | <del>IBC02</del><br>P602         |     | <del>T10</del> T20  | TP2<br>TP13<br>TPXX |
| 1892 | ETHYLDICHLOROARSINE <sup>3</sup> | 6.1                |               | I              |            | 0             | E5               | P602                             |     | T20                 | TP2<br>TP13<br>TPXX |
| 2232 | 2-CHLOROETHANAL                  | 6.1                |               | I              | 3XX        | 0             | E5               | <del>P001</del><br>P602          |     | <del>T14</del> -T20 | TP2<br>TP13<br>TPXX |
| 2382 | DIMETHYLHYDRAZINE, SYMMETRICAL   | 6.1                | 3             | I              | 3XX        | 0             | E5               | <del>P001</del><br>P602          |     |                     | TP2<br>TP13<br>TPXX |
| 2407 | ISOPROPYL CHLOROFORMATE          | 6.1                | $\frac{3}{8}$ | I              | 3XX        | 0             | E5               | P602                             |     |                     |                     |
| 2474 | THIOPHOSGENE                     | 6.1                |               | <del>H</del> I | 279<br>3XX | 100<br>mg/l 0 | <del>E4</del> E5 | <del>P001</del><br>P602          |     | <del>T7</del> -T20  | TP2<br>TP13<br>TPXX |
| 2477 | METHYL ISOTHIOCYANATE            | 6.1                | 3             | I              | 3XX        | 0             | E5               | <del>P001</del><br>P602          |     | <del>T14</del> T20  | TP2<br>TP13<br>TPXX |
| 2485 | n-BUTYL ISOCYANATE               | 6.1                | 3             | I              | 3XX        | 0             | E5               | <del>P001</del><br>P602          |     | <del>T14</del> -T20 | TP2<br>TP13<br>TPXX |
| 2487 | PHENYL ISOCYANATE                | 6.1                | 3             | I              | 3XX        | 0             | E5               | <del>P001</del><br>P602          |     | <del>T14</del> -T20 | TP2<br>TP13<br>TPXX |
| 2521 | DIKETENE, STABILIZED             | 6.1                | 3             | I              | 3XX        | 0             | E5               | <del>P001</del><br>P602          |     | <del>T14</del> T20  | TP2<br>TP13<br>TPXX |
| 2606 | METHYL ORTHOSILICATE             | 6.1                | 3             | I              | 3XX        | 0             | E5               | <del>P001</del><br>P602          |     | <del>T14</del> T20  | TP2<br>TP13<br>TPXX |
| 2644 | METHYL IODIDE                    | 6.1                |               | I              | 3XX        | 0             | E5               | <del>P001</del><br>P602          |     | <del>T14</del> -T20 | TP2<br>TP13<br>TPXX |
| 2668 | CHLOROACETONITRILE               | 6.1                | 3             | <del>H</del> I | 3XX        | 100<br>mg/l 0 | <del>E4</del> E5 | <del>P001</del><br>P602<br>IBC99 |     | <del>T7</del> -T20  | TP2<br>TP13<br>TPXX |
| 3079 | METHACRYLONITRILE, STABILIZED    | 3 6.1              | 6.1 3         | I              | 3XX        | 0             | E0               | <del>P001</del><br>P602          |     | <del>T14</del> -T20 | TP2<br>TP13<br>TPXX |
| 3246 | METHANESULPHONYL CHLORIDE        | 6.1                | 8             | I              | 3XX        | 0             | E5               | <del>P001</del><br>P601          |     | <del>T14</del> T20  | TP2<br>TP13<br>TPXX |

<sup>3</sup> In addition to the data submitted by the Netherlands in informal document UN/SCETDG/33/INF.8, this classification also takes into consideration RTECS data indicating LC50: 36 ppm; SVC ~3000 ppm.

6. It is proposed that a new special provision 3XX be added to Chapter 3.3 as follows:

“3XX This substance is toxic by inhalation.”.

7. It is proposed that special provision 3XX also be assigned to the following UN numbers which were previously agreed to by the Sub-Committee to be toxic by inhalation (see ST/SG/AC.10/C.3/2006/93):

UN1092, UN1098, UN1143, UN1163, UN1185, UN1238, UN1239, UN1244, UN1595, UN1647, UN1695, UN1752, UN1809, UN1994, UN2334, UN2337, UN2480, UN2646, UN3023

8. It is proposed that a new TPXX be added to 4.2.5.3 as follows:

“TPXX The portable tank instructions prescribed in the Model Regulations annexed to the 15<sup>th</sup> revised edition of the Recommendations on the Transport of Dangerous Goods may continue to be applied until 31 December 2016.”.

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