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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 Globally
Harmonized System of Classification
and Labelling of Chemicals

Eighth session, 6-9 December 2004
Item 2(b) of the provisional agenda

**UPDATING OF THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND
LABELLING OF CHEMICALS (GHS)**

Proposal for revision of Chapter 3.1: rationale

Transmitted by the Organisation for Economic Co-operation and Development (OECD)

1. In December 2002, the UN Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals requested that OECD, during the biennium 2003-2004, among other things:

- completes the on-going work on classification criteria for substances, which in contact with water release toxic/corrosive gases and for respiratory tract irritation;
- revises the classification criteria for acute toxicity to take account of the experimentally obtained acute toxicity range estimates to point estimates for the respective routes of exposure;
- defines the terms for dust, mist and vapour in relation to inhalation toxicity.

2. The attached proposal for revision of Chapter 3.1 includes:

(a) optional additional labelling of substances and mixtures for which data are available that indicates that the mechanism of toxicity was corrosion of the respiratory tract when inhaled: see new Paragraph 3.1.2.6.5 and Note I to Table 3.1.3;

(b) several slight changes in paragraph 3.1.2.1, in Tables 3.1.1 and 3.1.2 to clarify that the existing conversion rate that may have been perceived as only applicable to mixtures also applies to substances;

(c) definitions of “dust”, “mist” and “vapour” with general information on formation processes and size range in Note (d) under Table 3.1.1. The proposed definitions are short and simple; information on formation processes and size is not included in the definition since agreement on details would take considerable time and is not needed in this context.

NOTE: *Paragraph 3.1.2.6.4 was missing in GHS Chapter 3.1, but later inserted in (Corrigendum ST/SG/AC.10/30/Corr.1).*

Annex

PROPOSAL FOR REVISION OF CHAPTER 3.1

- 3.1.2.1** Insert in the second line “cut-off” between “numeric” and “criteria”;
Insert “as shown in the table below. Acute toxicity values are” between “criteria” and “expressed”. In the third line, insert “or as acute toxicity estimates (ATE)” after “LC₅₀ (inhalation) values” In the third line, delete “as shown in the table below”.

Table 3.1.1 Insert a new Note (a) under Table 3.1.1 as follows:

- “a) *the acute toxicity estimate (ATE) for the classification of a substance or ingredient in a mixture is derived using:*
- *the DL₅₀/LC₅₀ where available,*
 - *the appropriate conversion value from Table 3.1.2 that relates to the results of a range test, or*
 - *the appropriate conversion value from Table 3.1.2 that relates to a classification category.”*

Rename accordingly Notes (a) to (e): “Notes (b) to (f)”.

In the renamed Note (d), replace the last sentence with the following:

“The terms “dust”, “mist” and “vapour” are defined as follows:

⇓ *Dust : solid particles of a substance or mixture suspended in a gas (usually air);*

⇓

⇓ *Mist: liquid droplets of a substance or mixture suspended in a gas (usually air);*

⇓

⇓ *Vapour: the gaseous form of a substance or mixture released from its liquid or solid state.*

Dust is generally formed by mechanical processes. Mist is generally formed by condensation of supersaturated vapours or by physical shearing of liquids. Dusts and mists generally have sizes ranging from less than 1 to about 100 µm ”.

In the left column of Table 3.1.1, insert “Note (a)” in cells for Oral and Dermal Exposures, “Note (b)” in the cells for Gases and for Dusts and Mists, “Note (d)” in the box for Vapours and “Note (e)” in the box for Dusts and Mists. Delete “Note (d)” in the box for Dust and Mists.

In the right column of Table 3.1.1, replace “Note (e)” with “Note (f)”.

3.1.2.5 In the footnote on page 111, replace “Note (e)” with “Note (f)”.

3.1.2.6.4 After paragraph 3.1.2.6.4, insert Paragraph 3.1.2.6.5 as follows:

3.1.2.6.5 In addition to classification for inhalation toxicity, if data are available that indicates that the mechanism of toxicity was corrosivity of the substance or mixture, certain authorities may also label it as *corrosive to the respiratory tract*. Corrosion of the respiratory tract is defined by destruction of the respiratory tract tissue after a single, limited period of exposure analogous to skin corrosion; this includes destruction of the

mucosa. The corrosivity evaluation could be based on expert judgment using such evidence as: human and animal experience, existing (*in vitro*) data, pH values, information from similar substances or any other pertinent data.”

Table 3.1.2 In the title of the table, insert “for classification” between “toxicity point estimates” and “for the respective routes”;

In the NOTE 2, under the table, insert in the first line “classification of” between “ATE for” and “a mixture”.

Table 3.1.3 In the first column, bottom left cell of the table, insert “NOTE 1” after “Inhalation”

Under Table 3.1.3, insert the following note:

“NOTE 1: If a substance/mixture is also determined to be corrosive (based on data such as skin or eye data), corrosivity hazard may also be communicated by some authorities as symbol and/or hazard statement. That is, in addition to an appropriate acute toxicity symbol, a corrosivity symbol (used for skin and eye corrosivity) may be added along with a corrosivity hazard statement such as “corrosive” or “corrosive to the respiratory tract”.

3.1.3.3 Delete (b); rename accordingly “(c)”: “(b)”.
