

**Committee of Experts on the Transport of Dangerous Goods
and on the Globally Harmonized System of Classification
and Labelling of Chemicals**

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**Issues relating to the Globally Harmonized System
of Classification and Labelling of Chemicals:
Corrosivity criteria**

**Sub-Committee of Experts on the Globally Harmonized
System of Classification and Labelling of Chemicals**

Twenty-sixth session

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Item 2 (c) of the provisional agenda

**Classification criteria and hazard communication:
corrosivity criteria**

**Skin corrosive substances listed by name in the Dangerous
Goods List (DGL) in the context of harmonization with the
Global Harmonized System (GHS)**

Transmitted by the European Chemical Industry Council (CEFIC)

Background

1. Classification of substances with respect to defined hazards according to uniform rules as first step facilitates the correct and consistent assessment and thus the communication. Therefore the harmonization of transport regulations and GHS will be a major improvement.
2. Previous informal documents from CEFIC (UN/SCETDG/42/INF.16 – UN/SCEGHS/24/INF.8; UN/SCETDG/43/INF.26 – UN/SCEGHS/25/INF.9) and from the United Kingdom (UN/SCETDG/43/INF.42 – UN/SCEGHS/25/INF.11) described the consequences of a too simplistic approach for the harmonization of GHS/TDG classification criteria which might lead to over-classification of corrosive substances.
3. Taking into account that the over-classification of corrosive substances has a direct impact on numerous chemicals resulting in much stricter transport and storage conditions without adequate safety-related justification or benefit, the joint TDG-GHS working group on corrosivity criteria at its last meeting in July 2013 concluded that the harmonization of GHS/TDG classification criteria for corrosive substances should not lead to a reclassification of Class 8 substances (ST/SG/AC.10/C.3/86; ST/SG/AC.10/C.4/50), i.e. should not substantially change the current assignments for transport of the substances listed by name in the DGL of the UN Model Regulations which would be consistent with the approach for other classes in transport.

Introduction

4. Within transport regulations classification according to intrinsic hazards is not an end in itself but is together with the consideration of the specific risks in transport the basis for defining the appropriate conditions to ensure safe operational procedures.

Consequently the overall correlation between classification and packing group is a mixed picture in transport regulations. In cases where health hazards are decisive for classification additional properties of the substances seem to be applied to establish the appropriate transport conditions and packing group.

5. For skin corrosive substances currently listed by name in the DGL, in addition to test data consisting of exposure time and observation time, other indicators have been taken into account to assign the appropriate packaging group. These indicators are of importance for the evaluation, if a substance shows additional effects, which might be dangerous beyond the location of a possible incident and accidental exposure. Therefore these indicators are a valuable tool to achieve a meaningful graduation of dangerousness and degree of risk for the event of transportation. They support to identify substances posing a very high risk during transport, keeping in mind that only to these substances Packing Group I should be assigned.

6. The indicators based on specific properties of the substance provide the essential information to assign tailor-made transport conditions; however, they are not characterized by defined criteria and therefore cannot be applied uniformly. The complete information about the hazard and risks has to be weighed and should be the basis for an assessment if the substance shows dangerous effects beyond the location of exposure comparable or exceeding those effects observed for corrosive substances already assigned to Packing Group I.

7. As the affiliation of a substance to the DGL happens on UN-level by the participating experienced and independent experts it is assured that the information about these indicators are considered objectively and adequate in a substantiated manner by the responsible committee, even if no distinct criteria for these indicators are defined.

Proposal

8. For substances already listed by name in the DGL and for those substances to be affiliated by name to the DGL on UN-level, the fundament for classification as corrosive (Class 8) and subsequently for the assignment of a packaging group to stipulate the required transport conditions is

- (a) information according to corrosivity and
- (b) based on accidental experience, the consideration of additional indicators which give information about the risk of dangerous effects beyond the location of a possible incident.

9. As a consequence in the context of harmonization with GHS no change of the current assignment of the Packaging Group to substances of Class 8 listed by name in the actual DGL is required.

10. This established procedure, also reflecting the history associated with the existing and proven assignment of transport conditions to the entries in the DGL, should be clearly described and highlighted in Chapter 2.8 of the Model Regulations. The respective amendment of the first sentence in 2.8.2.2 could read as follows:

2.8.2.2 Allocation of substances listed in the Dangerous Goods List in Chapter 3.2 to the packing groups in Class 8 has been made on the basis of corrosive properties and experience taking into account such additional ~~factors~~ indicators as inhalation risk (see 2.8.2.3) and reactivity with water (including the formation of dangerous decomposition products and heat) relevant in cases of accidental exposure and effect-areas beyond the location of the incident.

Justification

11. Experience with instances of accidental exposure during transport of Class 8 substances has proven that a sufficient protection level is achieved by the current requirements for the substances listed by name in the DGL of Chapter 3.2. Therefore, the assignment of these substances as mentioned in the DGL has to be kept in their existing and binding form.

12. A new assessment of individual substances is only necessary in case new information is available and discussed on UN-level. For reasons of consistency the basic principles of the assessment applied in the past have to be preserved and in the same way applied to new skin corrosive substances for the affiliation to the DGL.

13. Based on the outcome of the discussion in the joint TDG-GHS working group on corrosivity criteria, CEFIC is prepared to provide a detailed proposal for amendments for the text of Chapter 2.8 of the UN Model Regulations.
