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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**
(Fourth session, 9-11 December 2002,
agenda item 3)

PROGRAMME OF WORK FOR THE BIENNIUM 2003-2004

Decision logic Hazard Statements - Precautionary Statements

Transmitted by the experts from Austria and Germany

Related documents: ST/SG/AC.10/C.4/2001/20
ST/SG/AC.10/C.4/2001/25
ST/SG/AC.10/C.4/2001/26

Introduction

1. Hazard Communication is supposed to induce an adequate precautionary behaviour in users/consumers when handling dangerous substances. The recognition of hazards alone does not necessarily lead to an appropriate response. Risk awareness differs widely even within the various target audiences. "From the perspective of social scientist, risk perception involves people's beliefs, attitudes, judgements and feelings as well as the wider social or cultural values and dispositions that people adopt, towards hazards and their benefits." (Pidgeon, et al, 1992) ¹.

¹ from AK Weyman; CJ Kelly & B Sreenivasan: *RISK PERCEPTION AND RISK COMMUNICATION: A REVIEW OF LITERATURE. UK HEALTH AND SAFETY LABORATORY. Draft: December, 1998.*

2. Recipients of hazard information have the right to get full advice on how to avoid any hazards. Precautionary statements, defined as phrases (and/or pictograms) that describe recommended measures to minimize or prevent adverse effects resulting from exposure to a hazardous product, or improper storage or handling of a hazardous product, may be regarded as a culmination in the hazard or risk assessment procedure.

Actual Status

3. Existing systems of hazard communication provide precautionary information in different forms. The longer the wording the more precise the advice. Depending on the incorporating context, an increasing level of precision is usually required in the order:

Label ⇒ SDS ⇒ Supplementary Information.

4. For labels, the hazard symbols, signal words and hazard statements have all been standardized and assigned to each of the hazard categories. Precautionary statements clearly need to be included on the label. These standardized elements should not be subject to variation, and should appear on the GHS label.

5. The SDS is intended to provide comprehensive information about a chemical substance or mixture. The information therefore enables the employer to develop an active programme of worker protection measures which is specific to the individual workplace. In addition, the SDS provides information for other target audiences in the GHS. However, these audiences receive additional information from a variety of other sources.

6. A reference is made to the IPCS activity. Precautionary information developed for the Chemical Safety Card Programme (ICSC) is expressed as far as possible in standard phrases. The phrases are chosen on the basis of criteria laid down in a Compiler's Guide. The first edition of the Compiler's Guide was published in English in 1990; since then translation into several other languages is a continuing process.

7. As the criteria in the Compiler's Guide are supposed to conform to the relevant international standards, it is expected that a close collaboration will be achieved in the development of information system standards under GHS auspices. The introduction of a harmonized labelling system, therefore, is not intended to affect the primary use of the SDS which is for workplace users.

8. Supplementary information may be required by competent authorities or added by suppliers on their own initiative. An illustrative example is the pesticide issue: plant protection products require extensive advice for a proper and authorized use. Handling of wettable powders or emulsion concentrates in the preparation of applicable dilutions is, for instance, a job quite different from the application of dilutions under various conditions. A single product is often applied differently depending on the target organisms, crops, locations, etc.. Detailed instructions are necessary to guarantee efficacy and to ensure protection of health and environment. Respective supplementary information is usually included on a separate label section (backside label) and/or provided by package inserts.

9. It has to be stated that standardization of phrases is in contradiction to increased accuracy requirements.

Starting Point

10. Until now there was insufficient time to develop detailed proposals during GHS deliberations. Labels will be the primary focus of GHS application. These GHS labels will include the core elements of the GHS, standardized precautionary statements being one of them. The scope of this submission is restricted to GHS core precautionary statements only.

11. Taking the agreed hazard statements as a starting point, the development of a decision-logic for the assignment of GHS core precautionary statements driven by the hazard statements is proposed. The preliminary draft of a scheme, given in the annex to this document (ST/SG7AC.10/C.4/2002/15/Add.1), needs some introductory remarks.

12. The proposal is based on a probable adaptation of the EU Supply and Use Information System to the GHS. The EU system includes a guideline for a hazard based assignment of optional and mandatory precautionary statements. At least the toxicity related hazard statements include an indication of the critical exposure routes. Thus, a logical connection between hazard statements and precautionary statements is evident.

Explanations

13. The tables in the annex are preceded by a heading containing the addressed hazard class, hazard categories and allocated hazard statements.

14. The entries in the second column are in compliance with the EU guideline. The actual catalogue of EU phrases addresses various themes which may be given a structure as set out in the first column of the table:

consumer product / storage	occupational product / storage
consumer product / use	occupational product /use
accidents	personal protective equipment
disposal	

This structure has been used as a template in allocating the EU phrases to the second column.

15. It will be recognized that the CSC catalogue provides generally much more information particularly to be used by specialists such as risk managers and emergency responders (including medical services). This is far beyond the scope of GHS core precautionary statements. The latter could be regarded as a selection aimed at the facilities of the public or commercial user. Equivalent and/or additional CSC phrases (not necessarily in the standardized CSC wording) are given for consideration in the third column of the table. For further deliberations: the second and third column should be condensed to give one.

16. Pictograms have not been included in the columns so far. If it was decided to use them instead of or in addition to GHS core precautionary statements, they could be inserted into the relevant boxes.

17. Several boxes show just a remark with respect to a prohibited or restricted use of substances due to their high hazards. It did not make sense to complete the tables just for theoretical reasons. In case the guideline requires, for example, special personal protective equipment for a safe use, it becomes obvious that the general public should not have access to such products because consumers are not in a position to comply with the associated controlling, supervision and training programmes.

Procedure

- 18.** In practice, the selection of GHS core precautionary statements could proceed along the following lines:
- (a) Start from the complete set of assigned hazard statements to the substance/product;
 - (b) For each hazard statement take the relevant table;
 - (c) For distinction between occupational and consumer products decide if necessary on the intended or permitted use (usually up to suppliers discretion);
 - (d) If indicated by an entry, take at least one phrase from each box.
(Note: it should be considered whether a further standardization of phrases/texts is necessary. Recalling the limited space on the GHS label and the required readability of the text, the main point seems to be that the essential contents are to be reflected in single or combined phrases without compromising the meaning by adding any "unauthorized" conditions. On the other hand, deletion of phrases obviously not applicable must be conceded);
 - (e) Finally, omit the duplicates and select per box the strictest from all derived precautionary statements.

Proposal

19. It should be stressed that this proposal is only intended to give an impulse for further discussions on this essential subject. It is far from being complete and open to any amendments but raises some fundamental questions which should be answered in advance of further detailed work.

20. The Sub-Committee GHS is invited to take note of the proposed procedural principle and to act as deemed appropriate.
