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Sub-Committee of Experts on the Transport of Dangerous Goods
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Sub-Committee of Experts on the Globally Harmonized System of Classification and Labelling of Chemicals
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GLOBAL HARMONIZATION OF SYSTEMS OF CLASSIFICATION AND LABELLING OF CHEMICALS

GHS symbol for serious health effects

Transmitted by the expert from Sweden

After the UN Subcommittee meeting on Global Harmonisation System of Classification and Labelling (UN GHS SC) in July 2001, the development of a new health hazard symbol for serious health effects, to be included in the Final GHS document, was brought up to date. The symbol is intended for serious hazards like cancer, mutagenicity and reproduction toxicity (Categories 1 and 2), respiratory sensitisation (Category 1) and Target Organ Toxicity (single and repeated exposure) (Categories 1 and 2).

This work was co-ordinated by the IOMC Co-ordinating group (IOMC CG). The chairperson of IOMC CG suggested that the symbol should have the following features:

- abstract i.e. not to indicate a specific hazard (since this was considered impossible)
- capable of attracting attention
- clear even when displayed in a small size.

It has also been mentioned that, in order to draw attention to the more significant effects, it should be more dramatic or forceful than “Single Exclamation Mark” (SEM) symbol covering less severe health effects. In September the IOMC CG proposed the “Double Exclamation Marks” (DEM) to be included in the Final GHS Document as a new health hazard symbol for the above-mentioned severe effects.

Although we are not aware of the degree of support for DEM, we do know that support for the introduction of the DEM in the integrated GHS document has not been unanimous. Several countries have expressed the opinion that the DEM symbol does not provide an appropriate warning for the severe effects that this symbol will cover, i.e. effects that could result in death. Thus, the difference in warning between the SEM for mild health effects like irritation, and the DEM for effects that may lead to death, is not sufficient. The new health hazard symbol for serious effects is primarily intended for supply and use purpose. Consequently, workers as well as consumers will be exposed to chemical products labelled with the new symbol. Whatever symbol is chosen, education and training will be required. It should however be emphasised, as stated in the Final GHS document (Chapter 3.1, paragraph 10), that “Consumer education is more difficult and less efficient than education for other audiences. Providing sufficient information to consumers in the simplest and the most easily understandable terms presents a considerable challenge. The issue of comprehensibility is of particular importance for this target audience, since consumers may rely on label information”. To conclude, the more the symbol is immediately comprehensible, the better.

As a Nordic initiative, supported by Nordic Council of Ministers, an international advertising company has developed a set of symbols from which three have been selected (see symbols attached). These symbols:

- 1) give a warning signal,
- 2) attract attention,
- 3) are abstract, in that they do not indicate a specific hazard but clearly indicate a danger for human health, i.e. convey a useful message.
- 4) give sharp pictures in small format
- 5) function in black and white.

These symbols are as abstract as several of the present symbols of the GHS e.g. flame, explosives, corrosion, skull and crossbones, which are all easily comprehensible without extensive training.

Upon a request (e-mail, November 7, 2001) some members of the UN GHS SC have expressed support for a symbol that has a stronger warning effect than the DEM (including EU and non-EU members). However some countries do not yet find the proposed alternative symbols optimal in the design: some have preferred the “dissolved full-size person”, while others have preferred the “half-size person with crack” to the DEM. There have been proposals to modify “half-size person with crack” to avoid the association with “lightening and electricity”. For practical reasons, some UN member states have not yet given their opinion on the symbols.

Members and observers of the UN GHS Subcommittee are hereby invited to give their opinion on the continued work for development of a more comprehensible symbol than the DEM, and in particular on the three presented alternatives, so that a proposal for a new symbol could be presented at the UN GHS SC meeting in July 2002.

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“The symbol is meant to communicate danger, something to be avoided. It is also meant to alert attention and illustrate an insidious substance that destroys something within us – an agent making its way into our body without our awareness and causing effects that may not be observed immediately.”

Version 1



Version 1 was developed to reflect a feeling of a long-term effect of a substance. The symbol shows how the substance works its way from the inside and out and dissolves the body.

Since the symbol sometimes has to be used in a small format, it was important to keep it simple. Version 1 contains few design items and is distinct also in a small format.

Version 2



The connection between a substance and its effects on a human being is clear. The feeling of a real person is stronger when the figure has a profile in comparison with versions 1 which is very symbolic. Version 2 is a strong graphic symbol, also very distinct in a small size. The feeling of effects of the substance from the inside is strong, as is the feeling of serious harm to the body.



The pattern of version 3, where man is the target, gives a feeling of a longer time perspective before harm arises. The symbol clearly shows how the substance starts having an effect inside the body and its spreading. Even if the pattern has its centre at the area around the heart, it can easily be understood that the substance is spread to the whole body, symbolised by the circles breaking the outline of the torso.

This symbol too is a clean and uncomplicated symbol, keeping its distinctness also when used in a very small size.

