



**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****Sixty-third session**

Geneva, 27 November–6 December 2023

Item 10 (c) of the provisional agenda

**Issues relating to the Globally Harmonized System:
Miscellaneous****Sub-Committee of Experts on the Globally Harmonized
System of Classification and Labelling of Chemicals****Forty-fifth session**

Geneva, 6–8 December 2023

Item 2 (j) of the provisional agenda

**Work on the Globally Harmonized System of
Classification and Labelling of Chemicals:
Other matters****Proposal to add hazard communication for substances or
mixtures evolving flammable vapours in annex 4 of the
Globally Harmonized System “Guidance on the preparation
of Safety Data Sheets (SDS)”****Submitted by the expert from China*****Introduction**

1. In the current version of the Globally Harmonized System (GHS), no hazard communication is required for substances or mixtures that can evolve flammable vapours but do not themselves meet any physical hazard classification criteria (e.g. expandable polymer beads and plastic moulding compounds in dough form containing foaming agents which are classified as UN 2211 and UN 3314 in transport).
2. At the last session, the expert from China submitted informal document INF.16 (forty-fourth session, GHS Sub-Committee) - INF.34 (sixty-second session, TDG Sub-Committee) proposing to add hazard communication in the safety data sheet for those substances or mixtures that do not meet the criteria to be classified as flammable solids or flammable liquids but capable of evolving flammable vapours. Although the substances and mixtures fail to meet the classification criteria for any physical hazard class listed in part 2 of the GHS, a fire can arise and result in injuries or deaths of human, loss in property, and damage to the environment, if the evolved flammable vapours accumulate and encounter with a potential ignition source (including electrical equipment, electrostatic discharge, hot working such as grinding and welding, etc.).
3. Experts who spoke during the last session shared their experiences and expressed general support on the intention of the document. Some editorial comments were given on

* A/77/6 (Sect. 20), table 20.6



the wording of the proposed amendments, including reconsideration of the appropriateness of the expression “explosive vapour” and improving the comprehensibility of the text by splitting A4.3.2.3 into two paragraphs. The proposal below takes account of the comments received.

Proposal

4. The expert from China would like to propose the following amendments to annex 4 of the GHS (deleted text appears in ~~strike through~~ and new text in **bold underlined**):

A4.3.2.3 Split the current paragraph into two paragraphs (A4.3.2.3.1 and A4.3.2.3.2) and add “formation of a flammable /explosive vapour-air mixture” as an example in the new A4.3.2.3.1, as follows:

“A4.3.2.3 *Other hazards which do not result in classification*

A4.3.2.3.1 Provide information on other hazards which do not result in classification **under the GHS**, but may contribute to the overall hazards of the material, for example, formation of air contaminants during hardening or processing, **formation of a flammable /explosive vapour-air mixture**, dust explosion hazards, **risk of** suffocation, freezing ~~or~~ **and** environmental effects such as hazardous to soil-dwelling organisms.

A4.3.2.3.2 To communicate combustible dust hazards, and thus a potential risk of dust explosions under the approach described in annex 11 in a standardized manner, competent authorities may allow the use of the phrases identified in A11.2.7.3 on labels, SDSs and/or in operating instructions or may leave the choice to the manufacturer or supplier.”

A4.3.9.9, table A4.3.9.1 For the “Flammability” entry, amend the third indent in the column “Remarks/Guidance” as follows:

“- if available and appropriate, further information may be indicated in addition, e.g.:

- whether the effect of ignition is other than a normal combustion (e.g. an explosion);
- ignitability under non-standard conditions; **and**
- **whether the substance or mixture can evolve flammable vapour.**

A4.3.10.3 Amend as follows:

“A4.3.10.3 *Possibility of hazardous reactions*

If relevant, state if the substance or mixture will react or polymerize, releasing excess pressure or heat, **evolving flammable vapour (see A4.3.2.3)**, or creating other hazardous conditions. Describe under what conditions the hazardous reactions may occur.”
