

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

28 April 2016

**Sub-Committee of Experts on the  
Transport of Dangerous Goods**

**Forty-ninth session**

Geneva, 27 June – 6 July 2016

Item 10 (c) of the provisional agenda

**Issues relating to the Globally Harmonized System  
of Classification and Labelling of Chemicals:  
classification criteria for flammable gases**

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

**Thirty-first session**

Geneva, 5 – 8 July 2016

Item 2 of the provisional agenda

**Joint work with the Sub-Committee of Experts on the  
Transport of Dangerous Goods (TDG Sub-Committee)**

**Comments on classification criteria for flammable gases –  
comments on INF.26 (TDG, 48th session) – INF.8 (GHS, 30th  
session)**

**Transmitted by the Compressed Gas Association (CGA)**

**Background**

1. During their twenty-eighth session in December 2014, the GHS Sub-Committee endorsed the decision of the TDG Sub-Committee to accept the proposal from the experts of Belgium and Japan (informal documents INF.10/Rev.1, Para.6 (46th session) and INF.5/Rev.1 (28th session)) with but one exception; the mandate was to be limited to category 1, category 2 was not to be touched (ST/SG/AC.10/C.4/56, para 14).
2. The IWG met twice in Brussels; March 2015 and September 2015. The results of each meeting was reported to both sub-committees.
3. During the first meeting (informal documents INF.5 (47th session) and INF.3 (29th session)) three classification options were identified along with the criteria to be used to perform the classification. Agreement could not be reached on hazard communication and remained as a topic for future discussion.
4. During the second meeting (informal documents INF.15 (48th session) and INF.4 (30th session)), Option 3 was chosen by consensus agreement. Hazard communication remained a subject for discussion. It should be noted that during the two meetings of the IWG, the Chair had to remind the IWG of the bounds of the mandate as some delegations sought to expand category 2 into category 1. Nonetheless, all delegations fully supported Option 3 and reached consensus agreement.

As agreed by the IWG, *Option 3* provided:

Test conditions: 20°C, 101 kPa

- Category 1a: flammable ignitable in a mixture of 13% or less by volume in air or a UFL – LFL  $\geq$  12% [**Default**]
- Category 1b: gases from 1a with 1) LFL > 6% OR 2) FBV < 10 cm/s [**New and Optional**]

- Category 2: gases with LFL > 13% and a UFL – LFL < 12% **[Remains as is]**

5. Thus the remit of the IWG was achieved and within the bounds of the mandate. This provided, based on sound engineering methodology, data, impact evaluations, and global common practice, for the classification criteria that had been requested by Belgium and Japan and to everyone's satisfaction.

6. Notwithstanding the consensus agreement to use Option 3, informal documents INF.26 (48th session) and INF.8 (30th session) was submitted by Germany, EIGA, and CEFIC introducing an argument and proposal to include category 2 in the new classification criteria. The argument advanced was a simplification of the hazard class flammable gases, and more consistency with the way other physical hazard classes are organized.

7. During their 30th session in December 2015 (ST/SG/AC.10/C.4/60) the Sub-Committee GHS considered the recommendations of the IWG to adopt Option 3 classification criteria, and the proposal and rationale provided in informal documents INF.15 (48th session) and INF.4 (30th session). The Sub-Committee GHS decided to accept Option 3 classification criteria, however in addition to provide for another IWG to pursue the proposal in informal documents INF.26 (48th session) and INF.8 (30th session) submitted by Germany, EIGA, and CEFIC. See the note by the Secretariat in informal document INF.30 (30th session), paras 111 and 112.

## Discussion

8. The first IWG was given a remit to provide for a category of flammable gases that were not as energetic in their combustion to accommodate new flammable refrigerants coming into use. The justification for this change is that the industry is being driven to use these new flammable refrigerants to replace hydrofluorocarbons to remain compliant with the Montreal and Kyoto protocols for reducing the global warming footprint. The concept of the new category was to align the classification, storage and handling of these gases in a manner that would be commensurate with the various fire codes around the world.

9. The second IWG has not provided adequate justification the need for their proposal to expand flammable gases category 2 to include the subcategory 1b gases, the new category just created for Belgium and Japan. The justification provided in informal documents INF.26 (48th session) and INF.8 (30th session) para 2 is the "...simplification of the hazard class flammable gases...", and to provide for "...more consistency with the way in which other physical hazard classes are organized and divided into categories within the GHS." The IWG does not provide an assessment of the impact of the proposed changes in areas such as transport regulations and building codes.

## Conclusion

10. CGA fully supports the proposal of the original IWG to use Option 3 and to work towards a consensus agreement on the hazard communication for Option 3. CGA does not support the re-organization of the classification of flammable gases any further.

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