



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

Fifty-seventh session

Geneva, 29 June-8 July 2020

Item 2 (1) of the provisional agenda

Explosives and related matters: miscellaneous

Terms of Reference for the work on “Exclusion from Class 1” within the Explosives Working Group

Transmitted by the experts from France and the Council on Safe Transportation of Hazardous Articles (France, COSTHA)*

1. Based on discussion of ST/SG/AC.10/C.3/2019/61 (COSTHA) and informal document INF.28 (56th session) (France) during the fifty-sixth session of the Sub-Committee it was agreed to request that the Explosives Working Group be asked to respond to a number of questions related to how to address the assignment of certain fire suppression dispersion devices to Class 9. An informal discussion was held by interested delegates to develop an approach to present to the Explosives Working Group for technical considerations that might assist the Sub-Committee in determining a specific path forward.
2. The informal discussion was based on the documents from France and COSTHA stating that fire suppression dispersing devices are articles that are designed to disperse a fire extinguishing medium which may be a solid or liquid fire suppressing material. The fire suppression dispersing devices are not manufactured with a view to producing a practical or pyrotechnic effect consistent with the exclusion criteria in 16.6.1.4.7 of the Manual of Tests and Criteria. They are articles that do not cause any effect external to the device by projection, fire, smoke, heat or loud noise when packaged for transport. They are designed or offered for transport in such a way that they will not inadvertently or accidentally initiate. It was also stated the articles provide a safety function.
3. The proposal from the expert from France offered two options one to recognize fire suppression dispersing devices as “Safety Devices, UN 3268” or to create a specific entry with appropriate requirements in a special provision similar to special provision (SP) 280 but tailored to the unique characteristics of these articles.
4. The Explosives Working Group is requested to consider the following:
 - (a) Taking into account the current classification scheme, under what conditions can an article containing an explosive material be tested out of Class 1 and into Class 9? What testing could demonstrate that article(s) that do not meet the exclusion for Class 1 criteria are less hazardous in transport than 1.4S, thus

* 2020 (A/74/6 (Sect.20) and Supplementary, Subprogramme 2).

being appropriately considered for classification as Class 9? What additional testing could be considered to appropriately identify the inherent hazard of the article?

- (b) SP280 includes conditions whereby articles may be assigned to Class 9 based on meeting Test Series 6 (c). These provisions were based on testing experience with items that were similar to airbags, inflators, and safety belt pre-tensioners for the automobile industry. That experience considered recognized design perimeters for these articles and a stream-lined testing regime that had proven acceptable over many years for these articles. How could articles that are not strictly used in vehicles also be addressed in a similar fashion? The intention is not to impact existing provisions for safety devices (UN 3268 or UN 0503) based on years of positive safety experience. Instead, the effort is to determine if the UN 3268 entry be limited to automotive applications only. Fire suppression dispersing devices generally have vehicle applications but can be used for other purposes (e.g. for suppressing fires in wind turbines or energy storage systems). Should they be considered in a similar but separate entry/testing scheme?
 - (c) Some fire suppression devices intentionally expel fine particulate to suppress fire. The expelled particles are not combustible smoke but a condensed aerosolized suppressant agent. The fine particulate cloud generated is intentional and suppresses fires. How would the expelling of this material impact the classification?
 - (d) When considering the option of creating a specific entry for fire suppression devices some experts indicated support for this approach because the proper shipping name would more efficiently describe the articles as opposed to referring to them as safety devices. What if any criteria would be appropriate to apply to fire suppression dispersing devices? What additional testing or performance requirements could be required (e.g. demonstrating that when an article is initiated in a package the thermal effects are contained and would not present a hazard to adjacent packages)? If the articles are not capable of being initiated in transport or are designed to prevent in advertent activation, would this make Class 9 assignment more acceptable?
 - (e) Recognizing there are additional articles that utilize similar technology as safety devices and fire extinguishers (see ST/SG/AC.10/C.3/2018/13 and ST/SG/AC.10/C.3/2018/75), what additional tests may be appropriate to consider such articles for assignment in Class 9? Would the same tests identified above be appropriate for articles that are not intended as airbags, seat belt pretensioners or fire extinguishers? Are there additional parameters that should be applied when considering assignment to current or future entries in the dangerous goods list?
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