



**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****Forty-eight session**

Geneva, 30 November – 9 December 2015

Item 2 (i) of the provisional agenda

Explosives and related matters: miscellaneous**Additional entries for SP 347****Transmitted by the expert from Canada¹****Introduction**

1. At the twenty-ninth session of the Sub-Committee, the expert from Canada made a proposal for an additional test for determining 1.4S classification (ST/SG/AC.10/C.3/2006/62). The Working Group on Explosives reviewed and supported the proposal. It was requested that the expert from Canada prepare a new proposal, including additional text to be inserted in the Manual of Tests and Criteria (informal document INF.65 (29th session)). At the thirty-first session of the Sub-Committee, the expert from Canada submitted (a) an information paper containing a detailed example of the application of the proposed test to perforating charges (informal document INF.43 (31st session)) and (b) a working paper containing new text for Section 16 (ST/SG/AC.10/C.3/2007/29). The majority of the Working Group was in favour of provisional acceptance of the proposal from Canada. At the thirty-fourth session of the Sub-Committee, the expert from Canada submitted a revised proposal based on the comments received at the twenty-third session (ST/SG/AC.10/C.3/2008/89) which was accepted by the Sub-Committee as the new Test Series 6(d). An amendment to box 33 of Figures 10.3 and 10.8 was consequently adopted in Revision 5 of the Manual of Tests and Criteria to ensure that “hazardous effects outside the package” in case of an accidental initiation be taken into consideration for a Compatibility Group S.

¹ In accordance with the programme of work of the Sub-Committee for 2015-2016 approved by the Committee at its seventh session (refer to ST/SG/AC.10/C.3/92, paragraph 95 and ST/SG/AC.10/42, para. 15).

2. At the thirty-first session of the Sub-Committee, the report of the Working Group on Explosives (informal document INF.45 (31st session)) included a clarification that the proposal was not only for shaped charges, items like detonators, commercial charges, bursting charges, etc. should also be subjected to the new test. Several experts of the Working Group also commented that the proposal from Canada would fill a gap in the regulations since only half of the definition for Compatibility Group S was being addressed. At the thirty-third session, the expert from Canada included a series of test results as part of its proposal (ST/SG/AC.10/C.3/2008/11) which was used to establish a list of UN entries for which the proposed test had to be conducted.

3. At the forty-fifth session of the Sub-Committee, the Institute of Makers of Explosives and the Sporting Arms & Ammunition Manufacturers' Institute proposed an amendment to Figures 10.3 and 10.8 to limit box 33 which asks the question, "Are there hazardous effects outside the package" to the 8 UN entries of SP 347.

Discussion

4. The amendment made to Figure 10.3 may lead to creating a gap once again in the regulations since, other than for the current 8 UN entries, only half of the definition for Compatibility Group S is being addressed. Conducting a Test Series 6 (c) does not allow to assess the behaviour of some substances or articles when their initiation is a fire source rather than their normal means of initiation, nor does it allow to assess the effectiveness of a package to contain hazardous effects in situations where the package is degraded by fire.

5. The expert from Canada recommends reviewing the list of UN entries for articles and substances whose classification as 1.4S is normally package dependant or that are generic, and to apply SP 347 to those entries as well. Generic entries normally warrant more systematic testing.

Proposal

6. The expert of Canada recommends to apply SP 347 to the following UN entries:

UN 0337 (FIREWORKS); there is no default classification of 1.4S in the table of section 2.1.3.5.5;

UN 0349 (ARTICLES, EXPLOSIVE, N.O.S.);

UN 0367 (FUZES, DETONATING); these articles contain detonating substance(s) and their classification is packaging dependant;

UN 0376 (PRIMERS, TUBULAR); these are normally large size primers and their classification is packaging dependant;

UN 0384 (COMPONENTS, EXPLOSIVE TRAIN, N.O.S.);

UN 0404 (FLARES, AERIAL); their classification is packaging dependant;

UN 0432 (ARTICLES, PYROTECHNIC for technical purposes); some of these articles are packaging dependant to contain pyrotechnic effects;

UN 0460 (CHARGES, BURSTING, PLASTIC BONDED); their classification is packaging dependant;

UN 0481 (SUBSTANCES, EXPLOSIVE, N.O.S.);

UN 0506 (SIGNALS, DISTRESS, ship); their classification is packaging dependant.