

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

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EXPLOSIVES AND RELATED MATTERS

Additional test for 1.4S classification

Comments on ST/SG/AC.10/C.3/2008/11 and UN/SCETDG/33/INF.13 (Canada)

Transmitted by the Institute of Makers of Explosives (IME)

In ST/SG/AC.10/C.3/2008/10, the IME discussed its reasons for opposing the proposal from Canada¹ for a new test to evaluate candidates for Compatibility Group S of Division 1.4. This opposition was primarily based upon IME's opinion that the proposed test was incomplete and that more test data was needed. In a new working paper, ST/SG/AC.10/C.3/2008/11, Canada has provided a more complete test specification and, in UN/SCETDG/33/INF.13, has replied to many of the other concerns IME raised in ...C.3/2008/10.

IME is the safety association of the commercial explosives industry in the United States and Canada. Our primary concern is the safety and security of employees, users, the public, and the environment in the manufacture, transportation, storage, handling, use, and disposal of explosive materials. IME encourages and supports the development of policies, procedures, guidelines, and regulations that further this cause.

Canada has pointed out that there is a requirement related to Compatibility Group S of Division 1.4 that "...any hazardous effects arising from accidental functioning are confined within the package unless the package has been degraded by fire..."² Competent authorities should consider this requirement when making assignments of products to Compatibility Group S of Division 1.4 and test data should be available for that purpose. IME is of the opinion that, although intended to test for mass-explosion properties, observations made in the 6(a) test can provide competent authorities with the information they need to determine if there are hazardous

¹ ST/SG/AC.10/C.3/2007/29

² UN Model Regulations, the Note to Section 2.1.1.4(d)

blast effects outside of the package. Some amendments to the 6(a) test may be needed to clarify that any effects observed outside of the package should be evaluated to determine if they are hazardous, and thus exclusionary for 1.4S classification.

Although the 6(a) test may be sufficient to provide the required data for evaluation of hazardous effects outside of the package, we understand that members of the explosives working group desire a more specific test. IME does not oppose development of such a test, but did not feel that the test proposed in ...C.3/2007/29 was ready for adoption. In ...C.3/2008/11, Canada has provided a new proposal. Additionally, the USA has proposed an alternate approach in ...C.3/2008/55. Thus, there are several options available to the sub-committee for resolving this issue.

In ...C.3/2008/11, Canada has proposed a test to be used for the purpose of evaluating the effects arising from accidental functioning of 1.4S devices, which has addressed most of IME's concerns. Canada has provided test data for a select few 1.4S devices including detonators, power device cartridges, detonator assemblies, igniters, and shaped charges. IME commends Canada for its work and for providing this data, but there are many other devices, such as cutter and release devices, rocket motors, weapons and small arms cartridges, propellant charges, and many N.O.S. articles within Compatibility Group S for which data is not available. Because of the wide diversity of effects 1.4S articles can produce, IME believes that a broader set of example data is needed to fully evaluate the adequacy of the proposed test.

Therefore, IME encourages the sub-committee to commission a more thorough review of this test and other options for evaluating the effects resulting from accidental initiation and agrees with the USA³ that the sub-committee should move "... carefully and incrementally when adopting new explosive testing methodology and criteria..." and should only adopt new tests "... after a number of corroborative experiments on reproducible samples ..." have been conducted in several countries.

³ ST/SG/AC.10/C.3/2008/55, para. 1