

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

28 November 2016

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

#### Fiftieth session

Geneva, 28 November – 6 December 2016

Item 2(b) of the provisional agenda

#### Recommendations made by the Sub-Committee on its forty-seventh, forty-eighth and forty-ninth sessions and pending issues: explosives and related matters

### Comments on the proposed section 39 in the Manual of Tests and Criteria, for ammonium nitrate based fertilizers

#### Transmitted by the Institute of Makers of Explosives

#### Background

1. The expert from Sweden has presented a working paper ST/SG/AC.10/C.3/2016/66 proposing that a new section 39 be added to clarify the classification criteria for ammonium nitrate (AN) based fertilizers. This paper provides a flowchart to guide users in the classification of AN based fertilizers.
2. In Annex III of the paper, it is proposed to delete special provisions (SP) 306 and 186 for UN2067.

#### Discussion

3. A summary of the substances in the UN Model Regulations is provided in the Dangerous Goods List (DGL) in Chapter 3.2.
4. Presently, the DGL lists UN2067 as requiring three SPs: 186, 306, 307.
5. SP306, which states, “This entry may only be used for substances that are too insensitive for acceptance into Class 1 when tested in accordance with Test Series 2 (see Manual of Tests and Criteria, Part I)”, is intended to verify that the substance is not a Class 1 explosive.
6. ST/SG/AC.10/C.3/2016/66 proposes to remove SP306 from the DGL entry for UN 2067.
7. ST/SG/AC.10/C.3/2016/66 attempts to compensate for the removal of SP306 by adding 39.4.2, and referencing this section in the proposed flow chart through the reworded SP307.
8. Removal of SP306 from the UN2067 DGL entry may lead to misinterpretation that Test Series 2 is no longer required for that entry, even though the flow chart will eventually lead the user to the test series 2 requirements.
9. It will be more informative to the user to retain SP306 in the UN2067 DGL entry. If retained, 39.4.2 will not be necessary in the proposed new section 39.

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10. The flowchart permits manufacturers of "pure" AN to classify their products as either UN2067 or UN1942 since there is no technical reason to restrict the use of either type of AN to agriculture or explosives precursor applications only. One of the main transportation hazards presented by AN is exposure to fire. If the AN is exposed to substantial and sustained heat it will melt. Once AN is in a melt state, it can begin subsequent decomposition. This melt state will be independent of the "type" of AN, namely whether it was intended as a "fertilizer" or for the manufacture of explosives.

11. The sensitivity to shock, while a potential transport hazard, is also a security concern. As such, the product being transported, whatever its intended end use, must be established to be a bona fide Division 5.1 substance.

12. The proposal, at new 39.4.3 and 39.4.4, may mislead the user with regard to procedures for explosives classification. Class 1 explosives may not be self-classified. Competent authorities classify Class 1 materials, including the explosive form of ammonium nitrate (UN0222), based on a review of established tests performed on the material being manufactured for transport, not on ammonium nitrate prill in Division 5.1 or Class 9 based on contamination that may occur post-accident or post-spill. There are a myriad safety and security requirements that would be triggered if removal of spilled product is prevented because of the requisite time for testing with this requirement of reclassification by the competent authority.

13. IME supports the intended clarification for AN based fertilizers, but does not support the proposal as written for the reasons expressed above.

## **Proposal**

14. Retain SP306 in the DGL against the UN2067 entry in Chapter 3.2, and delete 39.4.2 in the proposed new section, including the reference to 39.4.2 from the flow chart.

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