



**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-first session**

Geneva, 25 June – 4 July 2012

Item 2 (f) of the provisional agenda

Explosives and related matters: miscellaneous**Classification of ammonium nitrate****Transmitted by the Australian Explosives Industry Safety Group
(AEISG)¹****Introduction**

1. The purpose of this paper is to ensure ammonium nitrate, which does not meet one or more of the existing classification criteria, is covered by the Model Regulations on the Transport of Dangerous Goods, and handled accordingly.
2. There are two entries for ammonium nitrate in the Dangerous Goods List in Chapter 3.2 of the Model Regulations, namely,

¹ In accordance with the programme of work of the Sub-Committee for 2011-2012 approved by the Committee at its fifth session (refer to ST/SG/AC.10/C.3/76, para. 116 and ST/SG/AC.10/38, para. 16).

UN No.	Name and description	Class or division	Subsidiary risk	UN packing group	Special provisions	Limited and excepted quantities	Packagings and IBCs		Portable tanks and bulk containers	
							Packing instruction	Special packing provisions	Instructions	Special provisions
1942	AMMONIUM NITRATE, with not more than 0.2% total combustible material, including any organic substance, calculated as carbon to the exclusion of any other added substance	5.1		III	306	5 Kg EI	P002 IBC08 LP02	B3	TI BK1 BK2 BK3	TP33
0222	AMMONIUM NITRATE with more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance	1.1D				0 E0	P112(b) P112(c)	PP47		

3. As defined above, UN1942 is used for Ammonium Nitrate with not more than 0.2% carbon, **and** which does not exhibit explosive properties when tested in accordance with Test Series 1 and 2 (refer SP306).

4. UN0222 is used for Ammonium Nitrate with more than 0.2% carbon, regardless of its behaviour in Test Series 1 and 2.

Discussion

5. While the determining factor for classification with entry UN0222 is the carbon content alone, there are two factors for the entry UN1942 - both the carbon content and the satisfactory performance in Test Series 2.

6. This raises a potential, and not unlikely, situation where Ammonium Nitrate, with not more than 0.2% carbon, does not satisfy Test Series 2 and therefore cannot be accommodated within existing entries (refer table below).

<i>Ammonium Nitrate carbon content</i>	<i>UN TEST SERIES 2</i>	
	SATISFY	NOT SATISFY
Not more than 0.2% C	UN1942	????
More than 0.2% C	UN0222	UN0222

7. The potential for Ammonium Nitrate, of various types or from various sources, to fail Test Series 2 is not unlikely as shown by example results in Test Series 2 of the Manual of Tests and Criteria (e.g low density).

8. Should manufactured or imported Ammonium Nitrate not satisfy Test Series 2, but contain not more than 0.2% carbon as confirmed by analysis, there would remain a need to classify and appropriately handle such material.

Proposal

9. It is proposed to amend the entry for Ammonium Nitrate, UN0222, in Column 2 of the Dangerous Goods List to read:

“AMMONIUM NITRATE with more than 0.2% combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance

or

AMMONIUM NITRATE which has not satisfied Test Series 2”.

Alternative proposal

10. Alternatively, a Special Provision SPXXX could be added to Column 6 of the entry for UN0222. Such Special Provision to be added to Chapter 3.3 would read:

“This entry may also be used for Ammonium Nitrate which has not satisfied Test Series 2, regardless of carbon content.”
