



**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****Thirty-seventh session**

Geneva, 21–30 June 2010

Item 2 of the provisional agenda

Explosives and related matters**Division 1.4S limited quantities****Transmitted by the Sporting Arms & Ammunition Manufacturers'
Institute (SAAMI)¹****Introduction**

1. At the thirty-sixth session of the Sub-Committee, discussions were held on the proposals from SAAMI (ST/SG/AC.10/C3/2009/38 and informal document INF.9) regarding the transport of UN 0012, CARTRIDGES FOR WEAPONS, INERT PROJECTILE or CARTRIDGES, SMALL ARMS, UN 0014, CARTRIDGES FOR WEAPONS, BLANK or CARTRIDGES, SMALL ARMS, BLANK or CARTRIDGES FOR TOOLS, BLANK, and UN 0055, CASES, CARTRIDGE, EMPTY, WITH PRIMER, as limited quantities.

2. The discussion raised the following issues:

- (a) The perception of risk versus real risk regarding substances and articles included in Class 1;
- (b) The classification of these articles (UN 0012, UN 0014, UN 0055);
- (c) The scope of the proposal in that only three UN numbers were included;
- (d) The introduction of a different packaging regime within limited quantities;
and
- (e) The lack of documentation for limited quantities in land transport.

¹ In accordance with the programme of work of the Sub-Committee for 2009–2010 approved by the Committee at its fourth session (refer to ST/SG/AC.10/C.3/68, para. 118 (d) and ST/SG/AC.10/36, para. 14).

3. The discussion was summarized by the Chairman as being more an issue of risk perception than a technical issue. SAAMI was encouraged to submit a revised proposal to the June meeting of the Committee to clarify the actual risk in transport associated with UN 0012, UN 0014 and UN 0055. This paper includes responses to the five main issues raised at the thirty-sixth session of the Sub-Committee and a new proposal.

I. Effect of the proposal

4. This revised proposal will eliminate the shipping paper requirement for land transport only, and alter but not eliminate the package markings. Assignment of UN number based on end use would be eliminated for small power device cartridges, which would be classified with identical products as UN0014 with a new proper shipping name. This proposal does not alter the current 1.4S classification or the requirements for classification testing and package specification testing. Labels for these products are already waived by the Model Regulations and the International Maritime Dangerous Goods Code, and would remain in the air mode.

II. Underlying principles

5. The text of the Guiding Principles regarding Chapter 3.4, Limited Quantities states: "The rationale behind limited quantity provisions is that selected dangerous goods packed in small quantities and in good, robust packaging pose a lesser hazard in transport than do the same goods packed in larger volumes, and on this basis some relief from the requirements may be accepted."

6. It is to be noted that sporting ammunition and cartridges for tools are commodities that are sold to the general public and to small enterprises all over the world, often in small quantities. They are shipped out to dealers and warehouses of varying sizes, often in small packages. It is therefore in SAAMI's opinion only a logical step to facilitate for the transport of these articles under the limited quantities provisions the same way as for other dangerous goods used by the same end user.

III. Risk perception

7. Substances and articles included in Division 1.4S pose a low level of hazard in transport, however they do not benefit from the limited quantity provisions of Chapter 3.4. These products are subject to a much stricter regime of testing and certification than most substances included in other classes. The Series 6(c) and 6(d) tests, unlike most other tests for classifying dangerous goods, directly test the behaviour in an accident of the packaging **and** its contents (explosives). It is also worthwhile mentioning that explosives, in addition to the normal drop test required for the packaging, also undergo a 12 m drop test as packaged for transport, where initiation is not allowed.

8. Consequently, the hazards associated with transporting ammunition that is properly classified in Division 1.4S are even better understood than the risks associated with other dangerous goods currently transported as limited quantities.

9. It should be noted that all substances and articles in Division 1.4S are allowed to be transported in passenger aircraft to a maximum of 25 kg per package and in cargo aircraft to a maximum of 75 kg per package. There is no limit on the number of packages that may be transported. In addition, 5 kg of ammunition per passenger may be transported by air in checked luggage.

IV. Classification

10. Division 1.4S is defined as those products which present “no significant hazard” and are “so packed or designed that any hazardous effects arising from accidental functioning are confined within the package unless the package has been degraded by fire, in which case all blast or projection effects are limited to the extent that they do not significantly hinder or prohibit fire fighting or other emergency response efforts in the immediate vicinity of the package”. This is a very strenuous requirement that other Limited Quantities do not always meet. From a technical and safety point of view, there should be no reason why the provisions for Limited Quantities could not be applicable to sporting ammunition and ammunition for tools included in Division 1.4S based on extensive experience.

11. This proposal makes no change to the classification of these articles or to the discretion of the competent authority to require testing. SAAMI notes that competent authorities routinely waive testing of these articles based on experience. We acknowledge that some test data shows stronger reactions with 12.7 mm cartridges. However depending on the packaging these are documented to pass the stringent 1.4S classification tests even in bulk (we understand that bulk packaging is not eligible for LQ). Therefore, in this case the competent authority may choose to exercise their authority to examine the effectiveness of proposed packaging by evaluation or testing.

V. Scope of the proposal

12. SAAMI proposes to introduce a 5 kg limit in Column 7(a) of the Dangerous Goods List in Chapter 3.2 for UN 0012, UN 0014 and UN 0055. SAAMI would like to point out that the weight/size ratio of ammunition is very high so the package size will normally be small.

13. During the discussions at the thirty-sixth Session, the question was raised whether the proposal should also encompass other substances and articles included in Division 1.4S or, indeed, the whole of Division 1.4S.

14. SAAMI has checked the Division 1.4S entries in the Dangerous Goods List of Chapter 3.2 for other possible candidates for Limited Quantities and has included these entries as a separate proposal. The proposal does not include Division 1.4S entries with a generic or n.o.s. entry or that are listed as high consequence dangerous goods in Table 1.4.1 of the Model Regulations. Arguments were raised for including articles such as “Party Poppers” but these are typical examples of articles covered by generic proper shipping names. SAAMI has, therefore, not included these in the proposal.

15. SAAMI proposes to add a new alternative shipping name CARTRIDGES, FOR TOOLS, BLANK, under UN 0014 to allow Competent Authorities to classify cartridges for tools under this UN number. These articles are technically identical products to the ones currently classified under UN 0014 and are manufactured on the same production lines as “ordinary” blank cartridges. Some competent authorities have been classifying these cartridges for tools under UN 0014 for years. SAAMI’s proposal for this alternative shipping name is intended to avoid the selection of UN numbers based on end use, and instead differentiates using an alternative proper shipping name.

VI. Packaging

16. Some delegations at the thirty-sixth session raised concerns that SAAMI's proposal would introduce a variation on the limited quantities packaging regime in Chapter 3.4. SAAMI has taken these comments into account, but since the classification into Division 1.4S may be dependent on packaging and packaging selection is a classification basis noted as a requirement in 1.4S approval documents, allowing the use of non-specification packaging such as shrink-wrapped or stretch-wrapped trays is not feasible. Therefore SAAMI proposes small modifications to existing paragraphs 3.4.2 and 3.4.3 providing for Division 1.4S as Limited Quantities.

17. Some concern was also raised at the thirty-sixth session regarding the use of non-UN certified packagings for ammunition in Division 1.4S under the limited quantity regime. SAAMI is responding to this concern by retaining the requirement for UN certified packaging in the proposal with appropriate text in 3.4.2.

18. SAAMI is of the opinion that packing ammunition included in Division 1.4S with other dangerous goods, as allowed for in paragraph 3.4.5, is not advisable because classification into Division 1.4S, as noted above, is based on testing the packaging and its contents. Therefore SAAMI proposes changes to the text of paragraph 3.4.5.

VII. Documentation

19. Some delegations at the thirty-sixth session noted that there is no requirement for a transport document for land transport under the Limited Quantities provisions. SAAMI acknowledges this, but recalls that this was decided by a majority of the Sub-Committee members in the last biennium. SAAMI does not believe that a transport document would enhance safety. Emergency responders will always wear protective equipment when responding to any accident and the only need for additional information which could be found in a transport document would be to assess a need for chemical suits or special tactical steps for fighting a fire. None of this will be the case for the sporting ammunition addressed in this proposal. SAAMI, therefore, has not included any proposals for introducing the transport document for land transport.

VIII. Proposals

A. Proposed changes specific to Cartridges for tools

20. Change the wording of the entry for *Cartridges, blank* in the glossary of terms in Annex B to add "tools":

“Articles which consist of a cartridge case with a centre or rim fire primer and a confined charge of smokeless or black powder but no projectile. Used for training, saluting or in starter pistols, tools, etc.

21. Make the following changes to the table in Chapter 3.2:

UN No.	Name and description	Class or division	Subsidiary risk	UN packing group	Special provisions	Limited and excepted quantities		Packaging and IBC's	
								Packing Instruction	Special packing provisions
0014	CARTRIDGES FOR WEAPONS, BLANK or CARTRIDGES, SMALL ARMS, BLANK or <u>CARTRIDGES FOR TOOLS, BLANK †</u>	1.4S				<u>5 kg</u>	E0	P130	

B. Proposed changes specific to Sporting ammunition

22. Make the following changes to the table in Chapter 3.2:

UN No.	Name and description	Class or division	Subsidiary risk	UN packing group	Special provisions	Limited and excepted quantities		Packaging and IBC's	
								Packing Instruction	Special packing provisions
0012	CARTRIDGES FOR WEAPONS, INERT PROJECTILE or CARTRIDGES, SMALL ARMS†	1.4S				<u>5 kg</u>	E0	P130	
0055	CASES, CARTRIDGE, EMPTY, WITH PRIMER†	1.4S				<u>5 kg</u>	E0	P136	

C. General changes to Chapter 3.4

23. Change the penultimate sentence of paragraph 3.4.2 to read:

“Except for goods of Division 1.4S, which shall be packed in UN certified packagings in accordance with the packing instructions and special packing provisions shown in columns 8 and 9 of the Dangerous Goods List in Chapter 3.2, the packagings shall meet.”.

24. Change the beginning of paragraph 3.4.3 to read:

“Except for goods of Division 1.4S, shrink wrapped or stretch-wrapped trays”;

25. Change the beginning of paragraph 3.4.5 to read:

“Except for goods of Division 1.4.S, different dangerous goods packed in limited quantities”.

26. As an option, make the following additional changes to the table in Chapter 3.2 to introduce Limited quantities for other 1.4 S articles:

UN No.	Name and description	Class or division	Subsidiary risk	UN packing group	Special provisions	Limited and excepted quantities		Packaging and IBC's	
								Packing Instruction	Special packing provisions
0044	PRIMERS, CAP TYPE†	1.4S				<u>5 kg</u>	E0	P133	
0070	CUTTERS, CABLE, EXPLOSIVE†	1.4S				<u>5 kg</u>	E0	P134 LP102	
0105	FUSE, SAFETY†	1.4S				<u>5 kg</u>	E0	P140	PP73
0110	GRENADERS, PRACTICE, hand or rifle†	1.4S				<u>5 kg</u>	E0	P141	
0131	LIGHTERS, FUSE†	1.4S				<u>5 kg</u>	E0	P142	
0173	RELEASE DEVICES, EXPLOSIVE†	1.4S				<u>5 kg</u>	E0	P134 LP102	
0174	RIVETS, EXPLOSIVE	1.4S				<u>5 kg</u>	E0	P134 LP102	
0193	SIGNALS, RAILWAYTRACK, EXPLOSIVE†	1.4S				<u>5 kg</u>	E0	P135	
0323	CARTRIDGES, POWER DEVICE†	1.4S			347	<u>5 kg</u>	E0	P134 LP102	
0345	PROJECTILES, inert with tracer†	1.4S				<u>5 kg</u>	E0	P130 LP101	PP67 L1
0367	FUZES, DETONATING†	1.4S				<u>5 kg</u>	E0	P141	
0368	FUZES, IGNITING†	1.4S				<u>5 kg</u>	E0	P141	

0373	SIGNAL DEVICES, HAND†	1.4S				<u>5 kg</u>	E0	P135	
0376	PRIMERS, TUBULAR†	1.4S				<u>5 kg</u>	E0	P133	
0404	FLARES, AERIAL†	1.4S				<u>5 kg</u>	E0	P135	
0405	CARTRIDGES, SIGNAL†	1.4S				<u>5 kg</u>	E0	P135	
0431	ARTICLES, PYROTECHNIC for technical purposes†	1.4S				<u>5 kg</u>	E0	P135	
0445	CHARGES, EXPLOSIVE, COMMERCIAL, without detonator†	1.4S			347	<u>5 kg</u>	E0	P137	
0454	IGNITERS†	1.4S				<u>5 kg</u>	E0	P142	
0460	CHARGES, BURSTING, PLASTICS BONDED	1.4S			347	<u>5 kg</u>	E0	P130	
0506	SIGNALS, DISTRESS, ship†	1.4S				<u>5 kg</u>	E0	P135	
0507	SIGNALS, SMOKE	1.4S				<u>5 kg</u>	E0	P135	