



Secretariat

Distr.
GENERAL

ST/SG/AC.10/C.3/2006/61
ST/SG/AC.10/C.4/2006/7
19 April 2006

Original: ENGLISH

**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

Twenty-ninth session
Geneva, 3-12 (a.m.) July 2006
Item 12 of the provisional agenda

Sub-Committee of Experts on the Globally
Harmonized System of Classification and
Labelling of Chemicals

Eleventh session
Geneva, 12 (p.m.)-14 July 2006
Item 2 (a) of the provisional agenda

**UPDATING OF THE GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION
AND LABELLING OF CHEMICALS (GHS)**

Physical Hazards

Amendments to Chapter 2.1 of the GHS (Explosives)

Transmitted by the Sporting Arms and Ammunition Manufacturers Institute (SAAMI)

Introduction

1. The Sporting Arms and Ammunition Manufacturers Institute (SAAMI) asks that the GHS Sub-Committee reconsider its decision of the eighth session where the pictogram for 1.4 explosives was changed to an exploding bomb on the basis of a proposal submitted by Norway in document ST/SG/AC.10/C.4/2004/12, particularly as it relates to 1.4S explosives such as small arms ammunition. Previously the symbol for such explosives was the number "1.4" consistent with the marking used in the UN Model Regulations on the Transport of Dangerous Goods. No pictogram or label is generally required for ground transport of sporting ammunition.
2. The proposal by Norway was based on the concern that the "1.4" symbol may understate the risk of 1.4 explosives when in the hands of workers and consumers while recognizing that the

“1.4” symbol has been effective for transport purposes. Norway noted that classification of articles in Division 1.4 takes into account the packaging used in transport. Norway proposed that the “1.4” symbol be replaced by the exploding bomb symbol as an interim step and proposed that the Sub-Committee include on its work plan development of a classification system for explosives for workplace and consumer safety.

Norway's view is that the product classification is based on transport needs and is not working well when applied to workplace and consumer safety. However, the changes to the GHS made on the basis of the Norwegian paper create other problems, particularly if two symbols are required to appear on a single package such as a shipping container which may be subject to transport hazard communication requirements as well as worker safety requirements when the package is stored in a warehouse. In other cases, workers or consumers opening outer shipping cases without exploding bomb pictograms may be alarmed and confused upon encountering exploding bomb pictograms on inner packages containing articles such as cartridges for small arms. This would lead to the view that government authorities believe that once cartridges for small arms are removed from their "transport packagings" they might become more explosive and dangerous than during transport. Testing conducted by SAAMI and others over the past 75 years has concluded that this is not the case. This testing has included "ammunition" that is packaged for retail sale (no outer shipping packaging) as well as individual shells without any packaging. The results of all these tests indicated that there is no danger of mass explosion hazard.

3. The use of the exploding bomb for purposes of warning workers and consumers while retaining the “1.4” symbol for transport is contrary to the GHS guiding principles. A goal of the GHS was to consistently communicate hazards through a system of pictograms assigned on the basis of hazard levels. The same pictogram was to be used to consistently communicate a given hazard and hazard level to all workers and consumers. Applying different pictograms to the same material in different settings causes confusion – confusion that the GHS seeks to eliminate. Based on the changes adopted at the Subcommittee’s eighth session, a package of small arms ammunition will require a “1.4” marking to communicate the hazard for transport workers while the same package will require an exploding bomb to communicate the hazard to workers and consumers. Depicting the same hazard and hazard level with two different pictograms will cause confusion among different groups of workers and is likely to increase costs to industry.

4. More importantly the use of the exploding bomb for 1.4 explosives such as small arms ammunition-miscommunicates the hazard that these materials pose. Emergency responders in North America are advised by the North American Emergency Response Guidebook. The exploding bomb used for 1.1, 1.2 and 1.3 explosives sends a clear message to emergency responders. These types of explosives pose a mass explosion hazard, a projection hazard or pose an extreme radiant heat hazard. For these types of explosives, emergency responders are advised to evacuate for distances up to one mile and not to attempt to fight a fire involving these materials. Such severe precautions are inappropriate for 1.4S materials for which emergency responders are advised to consider isolating the area for at least **50 feet** and to **fight** fires. Paragraph 2.1.2.1(d) describes 1.4 explosives as:

“Substances, mixtures and articles which present no significant hazard: substances, mixtures and articles which present only a small hazard in the event of ignition or initiation. The effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire shall not cause virtually instantaneous explosion of almost the entire contents of the package.”

The level of hazard is even less severe in the case of 1.4S explosives. The UN Model Regulation states that these explosives when involved in a fire “do not significantly hinder fire-fighting or other emergency response efforts in the immediate vicinity of the package.” Due to their low degree of danger, the UN Model Regulation in paragraph 5.2.2.2.1.4 states that for these materials “no label is generally required” at any weight or quantity. Applying an exploding bomb to 1.4S small arms ammunition could lead to overly conservative firefighting precautions in the event of a fire, resulting in needless destruction of property.

5. SAAMI and its member companies have on numerous occasions subjected sporting ammunition to fire tests finding them to not significantly hinder firefighting or other emergency response efforts in the immediate vicinity of the package. SAAMI is prepared to provide videos of such testing should the Sub-Committee be interested. The results are in sharp contrast to fire tests on other items such as aerosols which bear no explosive label but where the results are far more severe. Transport regulations acknowledge the low level of risk posed by small arms ammunition. In the United States of America, 1.4S ammunition may be reclassified and shipped under requirements similar to those granted to consumer commodity, provided packages do not exceed 30 kg.

Ammunition may be transported onboard aircraft in checked baggage by passengers and may be transported as cargo on passenger aircraft in accordance with international regulations by ICAO. Packages displaying an exploding bomb could prove confusing to airline transport workers (as well as security personnel) as packages bearing an exploding bomb pictogram are normally banned from air transport.

6. While Norway is correct that some explosive articles are transported in packages designed to contain or reduce explosive effects most are not and it is clearly not the case for small arms ammunition. Ammunition for small arms is perhaps the most common 1.4S explosive used by consumers. It is normally packaged in fibreboard cartons. These cartons rapidly degrade in a fire situation and have little to no effect on the outcome of fire tests and any of the other UN test methods for classifying explosives.

Proposal

7. To resolve the difficulties that will be encountered by using the exploding bomb for 1.4 explosives, SAAMI recommends that the Subcommittee adopt the “1.4” pictogram for cartridges, small arms (UN 0012 and UN 0014) and cartridges, power device (UN 0323). This could be accomplished through a note in Chapter 2.1 (Table 2.1.2) and in Annex 1 under Division 1.4, as follows:

“Small arms ammunition (cartridges for weapons and cartridges, power device) classified as Division 1.4S UN 0012, UN 0014 and UN 0323 in accordance with the UN Recommendations on the Transport of Dangerous Goods, Model Regulations are assigned the “1.4S” marking.”
