



**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****Sixty-second session**

Geneva, 3-7 July 2023

Item 2 (h) of the provisional agenda

Explosives and related matters: miscellaneous**Packing instruction P130 and metal on metal contact between
explosives and packaging****Transmitted by the Sporting Arms and Ammunition Manufacturers'
Institute (SAAMI)*.******I. Introduction**

1. SAAMI requests clarifying edits to the *Model Regulations* with respect to the filling of metal packagings with explosives articles made of metal.
2. Specifically, we question whether plastic bags or other inner packagings should be required to prevent contact between metal packagings and metal explosive articles when the metal explosive articles are allowed to be in contact with each other in large quantities without cushioning.

II. Background

3. In section 4.1.5, "Special packing provisions for goods of Class 1", paragraph 4.1.5.11 states: "Metallic components of articles shall be prevented from making contact with metal packagings ..."
4. Packing instructions P130 and P132(a) would seem to facilitate metal on metal contact between articles and their packaging:
 - (a) These packing instructions do not require inner or intermediate packagings.
 - (b) Outer packaging options include drums and boxes made of steel, aluminium and other metals.
 - (c) P130 is often specified for explosives which are generally made of metal. This includes UN 0012, cartridges, small arms and other articles comprised of metal

* A/77/6 (Sect. 20), table 20.6

** This document was scheduled for publication after the standard publication date owing to circumstances beyond the submitter's control.



including other ammunition more hazardous than UN 0012: mines, exploding projectiles, tracer projectiles, release devices, rockets, propelling charges, bombs, torpedoes and warheads. In addition, per special packing provision PP67, many large, high hazard explosive articles comprised of metal do not require dangerous goods packaging.

5. Such configurations have commonly existed in high shipping volumes for a long period of time. To our knowledge, this is not causing incidents.

III. Issue

6. The special packing provision against metal on metal contact may supersede individual configurations which are otherwise possible within the packing instruction. However, this creates an inconsistency, as the metal articles are still allowed to be in contact with each other in large quantities, for example, in non-metallic outer packagings.

7. There is no reason to believe that the metal of an outer packaging delivers more potential ignition energy than article-to-article friction and impact.

8. When outer packagings are made of metal a thin plastic bag inner packaging could be used to achieve compliance. However, this is an insignificant solution in terms of effectiveness or durability, and may create waste and inefficiency in packing and unpacking operations.

9. The potential hazard of metal-on-metal contact is already evaluated, for example in test 4 (b) (ii), which is the 12 m drop test to preclude fire or explosion. This control may be more robust than the use of a potentially superfluous inner packaging.

IV. Proposal

10. SAAMI proposes that a technical discussion ensue to answer the following questions:

(a) Have any members experienced the need to protect against contact between metal packagings and metallic explosive articles for those UN numbers assigned to packing instructions which do not require inner packagings?

(b) Would it be appropriate in some cases to establish a packing provision inside P130 and P132(a) to allow metal articles in metal packagings?

(c) Would such a provision be applicable to an entire packing instruction, or limited to certain UN numbers?
