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**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-second session**

Geneva, 3–11 December 2012

Item 2(b) of the provisional agenda

**Recommendations made by the Sub-Committee on its  
thirty-ninth, fortieth and forty-first sessions and pending issues:  
listing, classification and packing****Fire extinguishers: assignment to UN 1044 and packaging****Transmitted by the expert of Germany<sup>1</sup>****Introduction**

1. At the last session of the Sub-Committee, the assignment of different types of fire extinguishers to UN 1044 as well as necessary amendments to the packing instructions were addressed based on documents ST/SG/AC.10/C.3/2012/44 and INF.59. The starting point was a discussion during the Joint Meeting in March 2012 as the assignment to UN 1044 is of relevance for the scope of the European Pressure Equipment Directive.
2. The Sub-Committee was in favour of more precisely defining the fire extinguishers covered by UN 1044 and the requirements they had to meet. Taking the comments received on this matter into consideration, it is now proposed to make the below amendments to the UN Model Regulations.
3. Special provision 225 should be supplemented with a description of the types of fire extinguishers that are covered. The following types are to be considered:
  - Portable fire extinguishers for manual handling and operation, transported packaged or with suitable means of protection for valves and other equipment mounted on the fire extinguisher;

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<sup>1</sup> 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.10/38para. 16)

- Fire extinguishers mounted on wheels for manual handling, transported packaged or unpacked with suitable means of protection for valves and other equipment mounted on the fire extinguisher;
- Fire extinguishing equipment/machinery mounted on wheels or wheeled platforms transported unpacked and similar to (small) trailers;
- Fire extinguishers composed of a non-rollable pressure drum and equipment, transported unpacked and handled e.g. by fork lift or crane when loaded or unloaded.
- Fire extinguishers for installation in aircraft, These are designed and manufactured under approvals according to standards for air transport.

4. The entry UN 1044 may also be used for non-operational fire extinguishers or components of fire-fighting installations, e.g. fire extinguishers with demounted hose. However, gas cylinders intended to be transported separately, e.g. for installation in existing local fire-fighting installations or for use as a supply in fire extinguishing operations (see last picture of the Annex, the frame is used as valve protection and to improve the handling) should be transported in accordance with the provisions applicable to the contained gas (e.g. CO<sub>2</sub> or N<sub>2</sub>).

5. A new special provision stipulating the conditions for unpackaged transport of large fire extinguishers should be included in packing provision P 003. As regards stability, the closure and load securing, reference can be made to the criteria for the approval of large unpackaged articles (see 4.1.3.8.1); as regards valve protection, reference can be made to the relevant provisions in the special packing provisions for goods of class 2 (see 4.1.6.1.8).

6. Furthermore, it should be considered if clarification is needed with regard to the classification criteria. In 2.2.2.3 it is stated that gases of Division 2.2 are not subject to the UN Model Regulations if they are transported at a pressure of less than 200 kPa at 20 °C and are not liquefied or refrigerated liquefied gas. This may be the case for some type of fire extinguishers, therefore an explanation could be included in SP 225, if considered as necessary (Refer to proposal 2).

## **Proposal 1:**

7. Amend SP 225 to read:

“225 Fire extinguishers under this entry may include installed actuating cartridges (cartridges, power device of Division 1.4C or 1.4S), without changing the classification of Division 2.2 provided the total quantity of deflagrating (propellant) explosives does not exceed 3.2 g per extinguishing unit. Fire Extinguishers shall be manufactured, tested, approved and labelled according to the provisions of the country of manufacture. Fire extinguishers under this entry comprise:

- (a) portable fire extinguishers for manual handling and operation;
- (b) fire extinguishers for installation in aircraft;
- (c) fire extinguishers mounted on wheels for manual handling;
- (d) fire extinguishing equipment or machinery mounted on wheels or wheeled platforms or units transported similar to (small) trailers, and
- (e) fire extinguishers composed of a non-rollable pressure drum and equipment, and handled e.g. by fork lift or crane when loaded or unloaded

This entry applies also to fire extinguishers not ready for operation and components of fire-fighting equipment. However, gas cylinders and actuating cartridges intended to be transported separately shall be assigned to the entry for the gas contained.”

Add a new Special PPxx to P 003 as follows:

“For UN 1044, large fire extinguishers may also be transported unpackaged provided that the requirements of 4.1.3.8 (a) to (e) are met, the valves are protected by one of the methods in accordance with 4.1.6.1.8 (a) to (d) and other equipment mounted on the fire extinguisher is protected to prevent accidental relief. For the purpose of this special packaging provision “large fire extinguishers” means fire extinguishers as described in letter c to e of special provision 225.”

Insert PPxx in column 9 of the Dangerous Goods list against UN 1044.

## **Proposal 2:**

8. Add the following sentence at the end of SP 225:

“Fire extinguishers charged with a compressed gas with a pressure less than 200 kPa at 20°C and which do not contain any other dangerous goods are not subject to these regulations (see 2.2.2.3).”

## Annex

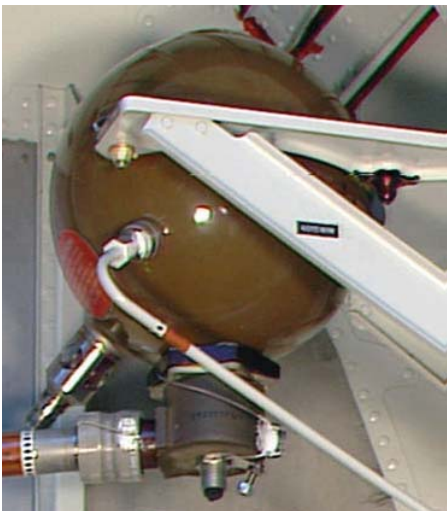
### Examples for types of fire extinguishers to be transported under UN 1044:

#### Complete and ready-to-use equipment

1. Portable manually handled fire extinguishers subdivided into stored-pressure, cartridge-type, and carbon dioxide extinguishers:



2. Fire extinguishers for installation in aircraft:



3. Wheeled fire extinguishers or fire extinguishers permanently mounted on wheeled platforms, subdivision as above (stored-pressure, cartridge-type and carbon dioxide extinguishers):



4. Fire extinguishing equipment/machinery mounted on wheels or wheeled platforms transported unpacked and similar to (small) trailers



5. Fire extinguishers composed of a non-rollable pressure drum and equipment, transported unpacked and handled e.g. by fork lift or crane when loaded or unloaded.



**Pre-installed components for stationary fire-fighting installations**

6. This addresses components which are not complete and cannot immediately be used as fire extinguishers, e.g. extinguishing agent containers with piping, pre-installed in a cabinet.



**Not to be transported under UN 1044**

7 *Note: In the picture on the bottom left, only the red cylinder on the side is the object of carriage; equipment like that shown in the picture on the right is handled like a large packaging or container when carried.*

