

**ECONOMIC COMMISSION FOR EUROPE**

**INLAND TRANSPORT COMMITTEE**

Working Party on the Transport of Dangerous Goods

Joint Meeting of the RID Committee of Experts and the  
Working Party on the Transport of Dangerous Goods

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Item 5 (a) of the agenda

**PROPOSALS FOR AMENDMENTS TO RID/ADR/ADN**

Avalanche Air Bag Cylinders

Transmitted by the European Industrial Gases Association

**Introduction**

There have been a number of fatalities when people have been trapped and crushed by avalanches. To avoid the risk of a fatality, the avalanche “air-bag” has been developed. The unit is a backpack, worn by a person who is in an area where there is a risk of an avalanche. The unit consists of a compressed nitrogen gas cylinder and two air-bags, (one on either side of the backpack), which are inflated manually by the wearer by pulling a handle. The nitrogen cylinder has a volume of 0.22 litres and a pressure of 300 bar.

In the event of an avalanche the wearer pulls the handle causing the air bags to inflate. This increases the volume of the wearer and in the first few seconds of an avalanche, when the snow behaves as a liquid, the wearer will “float” to the surface of the snow, thus avoiding crushing and subsequent death. These devices have been proved as effective in both civilian and military use.

Replacement cylinders, which are an integral part of this item of safety equipment, are required to be transported from the supplier to the user to ensure the units remain operational.

**Proposal**

- 1) Add “653” to column 6, Special Provisions, of UN 1066 Nitrogen, Compressed of Table A of Chapter 3.2
- 2) Modify the wording of SP 653 in Chapter 3.3

- 653 The carriage of this gas in cylinders with a maximum capacity of 0.5 litres, is not subject to the other provisions of ADR if the following conditions are met:
- The provisions for construction and testing of cylinders are observed;
  - The cylinders are contained in outer packagings which at least meet the requirements of Part 4 for combination packagings. The general provisions of packing of 4.1.1.1, 4.1.1.2 and 4.1.1.5 to 4.1.1.7 shall be observed;
  - The cylinders are not packed together with other dangerous goods;
  - The total gross mass of a package does not exceed 30 kg; and
  - Each package is clearly and durably marked with "UN 1013" *for carbon dioxide or "UN 1066" for nitrogen, compressed.* This marking is displayed within a diamond-shaped area surrounded by a line that measures at least 100 mm by 100 mm.

### **Justification**

This will allow these cylinders, which are used in this life saving item of equipment, to be transported safely using Special Provision 653.

### **Safety**

EIGA considers that this proposal will maintain the existing level of safety for the transport of these cylinders for this application.

### **Feasibility**

No difficulties are foreseen.

### **Enforceability**

No difficulties are foreseen.

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