

## 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

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Item 5 (b) of the provisional agenda

Transport of gases: Miscellaneous

## Chemicals under pressure: UN No. 3500, amendment to packing instruction P206 for gas based suppression systems

Transmitted by the European Chemical Industry Council (CEFIC)

### Situation

1. Chemicals under pressure without any subsidiary risks (UN No. 3500) are widely used in the area of gas based suppression systems (see Annex I), and other terms connected to fire control. UN No.1044 FIRE EXTINGUISHERS was initially considered to be assigned to this product. Nevertheless, this UN number cannot be used for this type of extinguishing media because they are carried separately and meet the Note of SP225:

“Pressure receptacles which contain gases for the use in the above-mentioned fire extinguishers or for use in stationary fire-fighting installations shall meet the requirements of Chapter 6.2 and all requirements applicable to the relevant dangerous goods when these pressure receptacles are carried separately”.

Therefore, they do not meet the definition of a fire extinguisher.

2. Most of the gas based suppression systems products were assigned to UN No. 1956 compressed gas, as they are gas/gas mixtures. These have a maximum test period for periodic inspection of 10 years, whereas the liquid/gas system must be assigned to UN No. 3500 and therefore has a maximum test period for periodic inspection of 5 years, although the pressure in the receptacle with the liquid/gas mixture is less.

3. Besides, these applications are not considered to be transported on a regular basis. On the contrary they are normally delivered to the customer and stay at the customer's side until they are used and need to be refilled (in case of a fire) or until they need to be replaced.

4. When the UN numbers for chemicals under pressure were implemented, the maximum test period for periodic inspection for compressed gas cylinders (UN pressure receptacles, pressure drums, tubes) was reduced from 10 years (for UN No. 1956 liquified gases; which was the UN number used for most of these products) to 5 years. This leads to prohibit transportation of tubes and the maximum test period for periodic inspection will be 5 years. The test period for periodic inspection also affects the gas based suppression system at the customer sites, as the inspection periods refer to the transport regulations.

5. Besides, these products are generally of inert nature and the generally accepted practice of these devices is that they are used in protected storage with minimal handling.
6. These two factors work in combination to profoundly reduce:
  - (a) internal corrosion, and degradation of “wetted component” of the units;
  - (b) internal mechanical wear of valves; and
  - (c) external damage from nicks, scuffs and abrasion of receptacle
7. For fire extinguishing agents there are also huge pressure receptacles used. Therefore, we also ask to allow tubes of a maximum water capacity of 450 l.
8. Therefore, especially for UN No. 3500 an extension of the retest period to 10 years is proposed.

## Proposal

9. Amend P206 as follows (*deleted text is struck through; new text is underlined*):

### Option 1:

P206	PACKING INSTRUCTION	P206
This instruction applies to UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505		
Unless otherwise indicated in these Regulations, cylinders, <del>and</del> pressure drums <u>and tubes of a maximum water capacity of 450 l</u> , conforming to the applicable requirements of Chapter 6.2 are authorized.		
<ol style="list-style-type: none"> <li>(1) The general packing requirements of <b>4.1.6.1</b> shall be met.</li> <li>(2) The maximum test period for periodic inspection shall be <u>10 years for UN No. 3500</u> and 5 years <u>for UN Nos. 3501, 3502, 3503, 3504 and 3505.</u></li> <li>(3) ....</li> </ol>		

### Option 2:

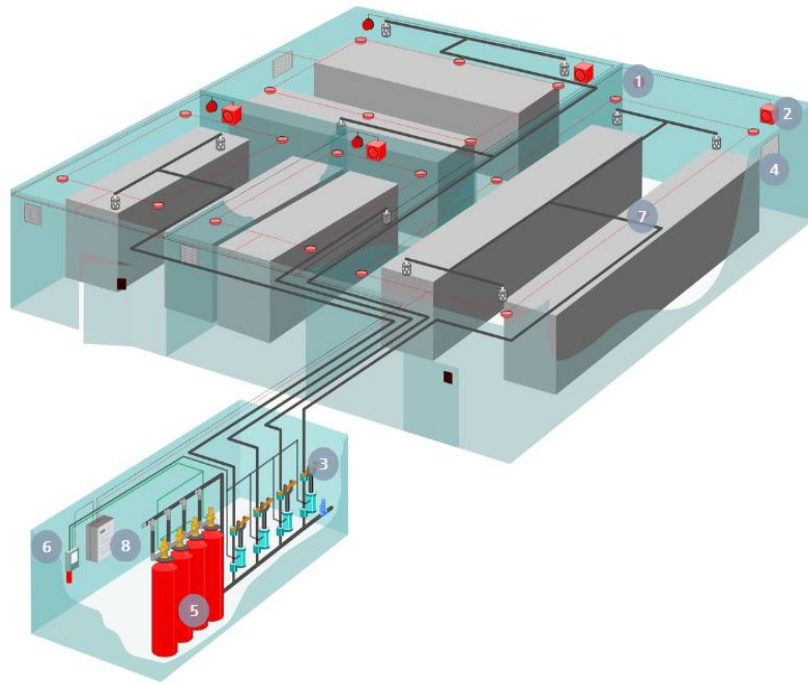
P206	PACKING INSTRUCTION	P206
This instruction applies to UN Nos. 3500, 3501, 3502, 3503, 3504 and 3505		
Unless otherwise indicated in these Regulations, cylinders and pressure drums conforming to the applicable requirements of Chapter 6.2 are authorized.		
<ol style="list-style-type: none"> <li>(1) The general packing requirements of <b>4.1.6.1</b> shall be met.</li> <li>(2) The maximum test period for periodic inspection shall be 5 years <u>if PPXX doesn't apply.</u></li> <li>(3) ....</li> </ol>		
<b>Special packing provisions:</b>		
<b>PP89</b> ....		
<b>PPXX</b> <u>For fire extinguishing agents assigned to UN No. 3500 the maximum test period for periodic inspection shall be 10 years and the following packing should be allowed: tubes of a maximum water capacity of 450 l.</u>		

## Annex I

### Example of a gas based suppression system



# Design



1	Flash	2	Electric horn	3	Selector valve
4	Extinguishing nozzle	5	Extinguishing agent cylinder	6	Pneumatic control device
7	Fire detector	8	Fire detection and extinguishing control panel		