

**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 3 (b) of the provisional agenda

**Listing, classification and packing: miscellaneous**

**Corrosive subsidiary risk of peroxyacetic acid, 41% with water**

**Transmitted by the expert from Finland**

**Introduction**

1. Formulation of a stabilized distilled peroxyacetic acid that is derived from distillation of peroxyacetic acid originating from peroxyacetic acid in concentration of not more than 41% with water, total active oxygen (peroxyacetic acid+H<sub>2</sub>O<sub>2</sub>) ≤ 9.5%, which fulfills the criteria of 2.5.3.3.2 (f) is an organic peroxide of Division 5.2 with a subsidiary risk of Class 8 (corrosive). It is assigned to UN 3119.

2. The entry for UN 3119 in the Dangerous Goods List reads:

UN no.	Name and description	Class and Div.	Subsidiary risk	UN pack. group	Special provision	LQ /EQ	Packagings and IBCs		Portable tanks and bulk containers	
							Packing inst.	Special pack. provision	Instruction	Special provision
3119	ORGANIC PEROXIDE TYPE F, LIQUID, TEMP. CONTROLLED	5.2			122 274 323	0 / E0	P520 IBC520		T23	

3. With regard to subsidiary risks of UN 3119, only 2.5.3.2.4 list of organic peroxides is referred to in special provision 122:

122 The subsidiary risks, control and emergency temperatures if any, and the generic entry number for each of the currently assigned organic peroxide formulations are given in 2.5.3.2.4.

4. As the above mentioned formulation of peroxyacetic acid assigned to UN 3119 is allowed to be transported in tanks only, it is not mentioned in 2.5.3.2.4. It is mentioned only in 4.2.5.2.6 tank instruction T23 (footnote d):

T23 PORTABLE TANK INSTRUCTION T23								
...								
UN No.	Substance	Min. test pressure (bar)	Min. shell thickness (mm-reference steel)	Bottom opening requirements	Pressure-relief requirements	Degree of filling	Control temperature	Emergency temperature
3119	ORGANIC PEROXIDE, TYPE F, LIQUID, TEMPERATURE CONTROLLED	4	See 6.7.2.4.2	See 6.7.2.6.3	See 6.7.2.8.2 4.2.1.13.6 4.2.1.13.7 4.2.1.13.8	See 4.2.1.13.13	<sup>c</sup>	<sup>c</sup>
	Peroxyacetic acid, distilled, type F, stabilized <sup>d</sup>						+30 °C	+35 °C

<sup>c</sup> As approved by the competent authority.

<sup>d</sup> Formulation derived from distillation of peroxyacetic acid originating from peroxyacetic acid in concentration of not more than 41% with water, total active oxygen (peroxyacetic acid+H<sub>2</sub>O<sub>2</sub>) ≤ 9.5%, which fulfils the criteria of 2.5.3.3.2 (f).

5. During the course of developing the Model Regulations, the information on the corrosive subsidiary risk of that substance has been missed. See annex (Background Information).

6. Finland proposes to add the information on the corrosive subsidiary risk for the above mentioned formulation of stabilized distilled peroxyacetic acid by adding a requirement to affix a Class 8 placard to transport units carrying that substance.

## Proposal

7. In 4.2.5.2.6 tank instruction T23, add new sentence at the end of footnote d as follows (new text underlined):

<sup>d</sup> Formulation derived from distillation of peroxyacetic acid originating from peroxyacetic acid in concentration of not more than 41% with water, total active oxygen (peroxyacetic acid+H<sub>2</sub>O<sub>2</sub>) ≤ 9.5%, which fulfils the criteria of 2.5.3.3.2 (f). "CORROSIVE" subsidiary risk placard required (Model No 8, see 5.2.2.2.2).

8. In 3.3.1 special provision 122, add a reference to tank instruction T23 as follows (new text underlined):

122 The subsidiary risks, control and emergency temperatures if any, and the generic entry number for each of the currently assigned organic peroxide formulations are given in 2.5.3.2.4 and 4.2.5.2.6 portable tank instruction T23.

## Justification

9. The organic peroxide in question is corrosive. The corrosive subsidiary risk shall be informed by affixing subsidiary risk Class 8 placard to transport units.

## Annex

### Background Information

1. At the eighteenth session (3-14 July 2000) of the Sub-Committee the observer from Finland and the European Chemical Industry Council (CEFIC) presented document ST/SG/AC.10/C.3/2000/10. They proposed to add a new entry for Peroxyacetic Acid originating from  $\leq 41\%$  with water, total active oxygen (Peroxyacetic Acid+H<sub>2</sub>O<sub>2</sub>)  $\leq 9.5\%$  (PAA) under UN 3119 (ORGANIC PEROXIDE TYPE F, LIQUID, TEMPERATURE CONTROLLED) to the list of currently assigned organic peroxides and to the portable tank instruction T23. Thus allowing transport of PAA in tanks.

2. The proposal was adopted. The report of the Sub-Committee of Experts on its eighteenth session states (ST/SG/AC.10/C.3/36, para 105): "The proposal to authorize the temperature-controlled carriage in tanks of peroxyacetic acid with not more than 41% peroxyacetic acid, obtained from distillation, was adopted (see annex 2)."

3. The following adopted amendments to 2.5.3.2.4 and 4.2.4.2.6 are in Annex 2 of the report (ST/SG/AC.10/C.3/36/Add.1). Accordingly, these amendments were included in the 12th revised edition of the UN Recommendations on the Transport of Dangerous Goods, Model Regulations (2001).

#### 2.5.3.2.4 The list of Organic Peroxides, new entry was adopted as follows:

ORGANIC PEROXIDE	Conc (%)	Diluent type A (%)	Diluent type B (%) 1)	Inert solid (%)	Water (%)	Packing Method	Control Temp. (°C)	Emerg. Temp. (°C)	Number (Generic entry)	Subsidiary risks and remarks
PEROXYACETIC ACID, DISTILLED, TYPE F, stabilized	$\leq 41$					M	+ 30	+ 35	3119	<b>13)</b> 30)

A new remark at the end of the table was added to read as follows:

30) *Formulation derived from distillation of peroxyacetic acid originating from peroxyacetic acid in concentration of not more than 41% with water, total active oxygen (Peroxyacetic Acid+H<sub>2</sub>O<sub>2</sub>)  $\leq 9.5\%$ , which fulfills the criteria of 2.5.3.3.2 (f).*

**[13) "CORROSIVE" subsidiary risk label required (Model No 8, see 5.2.2.2.2).]**

[Code "M" indicated that the substance is permitted in tanks (see T23).]

4.2.4.2.6 The table of portable tank instruction T23: the following entry was added under UN 3119:

UN No	Substance	Minimum test pressure (bar)	Minimum shell thickness (mm-reference steel)	Bottom opening requirements	Pressure relief requirements	Degree of filling	Contr. temp.	Emerg temp.
	PEROXYACETIC ACID, DISTILLED, TYPE F, stabilized **/						+ 30°C	+ 35°C

A new footnote was added to read as follows:

*\*\*/ Formulation derived from distillation of peroxyacetic acid originating from peroxyacetic acid in concentration of not more than 41% with water, total active oxygen (peroxyacetic acid+H<sub>2</sub>O<sub>2</sub>) ≤ 9.5%, which fulfills the criteria of 2.5.3.3.2 (f).*

4. Special provision 122 of column (6) against UN 3119 reads:

122 The subsidiary risks, control and emergency temperatures if any, and the generic entry number for each of the currently assigned organic peroxide formulations are given in 2.5.3.2.4.

This meant that the corrosive subsidiary risk label mentioned in 2.5.3.2.4 for PAA had to be affixed. And also that in tank transport the corrosive placard was required.

5. Later, in the 21st session, 1-10 July 2002, the International Council of Chemical Associations (ICCA) presented document ST/SG/AC.10/C.3/2002/27. In the document it was explained that the table for organic peroxides has grown over the years and Industry offered to rationalize this list and to reduce the number of listed products as much as possible.

6. Consequently all organic peroxides which are allowed in tanks (indicated by packing method M) were deleted in 2.5.3.2.4. It was justified by the fact that organic peroxides allowed in tanks are already listed in T23 (report of the 21st session: ST/SG/AC.10/C.3/42).

7. With this amendment the information of corrosive subsidiary risk of PAA was lost because PAA was not included any more in the list of 2.5.3.2.4 where corrosiveness was indicated. Special provision 122 refers to 2.5.3.2.4 only. PAA is still in portable tank instruction T23 but without the information of its subsidiary risk.

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