



**INF. 18**

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## **RID/ADR/ADN**

Joint Meeting of the RID Committee of Experts and the  
Working Party on the Transport of Dangerous Goods  
(Geneva, 15 - 25 September 2015)

### **Item 3 (b) of the agenda: Proposals for amendments to RID/ADR/ADN – new proposals**

#### **Replacement of the term "boiling point" with the term "initial boiling point"**

#### **Proposal transmitted by Germany**

1. In the German version of ADN, the outdated term "Siedepunkt" (English: "boiling point", French: "point d'ébullition") is still used in numerous places. Other instances of this term have already been replaced with the term "Siedebeginn" (English: "initial boiling point", French: "point d'ébullition initiale") that is commonly used today. Therefore, an informal working group has suggested to the ADN Safety Committee that the terminology of ADN be harmonized to read "Siedebeginn" (English: "initial boiling point", French: "point d'ébullition initiale").
2. In doing so, it was noticed that some of the concerned text passages are from text taken from RID/ADR. With a view to harmonisation, the ADN Safety Committee decided to submit this matter to the Joint Meeting. Germany does so by way of this paper and at the same time agrees to also bring this update to the attention of the UN Sub-Committee of Experts on the Transport of Dangerous Goods, if necessary.
3. In the current version of RID/ADR, the term "boiling point" is used in the following places (the underlined instances of use of the term can also be found in ADN): 2.2.41.1.16 of ADR (twice), 2.2.41.4 of RID/ADR (once), 2.2.52.1.11 of RID/ADR (thrice), 2.2.52.4 of RID/ADR (four times), Chapter 3.2 Table A of RID/ADR UN 1973 (once), Chapter 3.2 Table B of RID/ADR UN 1973 (once), 4.1.1.4 (a) of RID/ADR (once), 4.1.4.1 P200 (5) (c) of RID/ADR (twice), 4.1.4.1 P200 Table 2 of RID/ADR UN 1973 (once), 4.2.5.2.6 T50 of RID/ADR UN 1973 (once), 4.3.3.2.5 of RID/ADR UN 1973 (once), 4.3.4.1.2 of RID/ADR (twice), 6.2.1.1.8.3 of RID/ADR

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(once), 6.7.4.2.6 of RID/ADR (once), 6.8.2.1.14 (c) of RID/ADR (once), 6.8.2.1.14 (d) of RID/ADR (once), 6.8.2.2.7 of RID/ADR (once) and 6.8.2.2.8 of RID/ADR (once).

4. It is proposed to replace the above mentioned instances of the term "boiling point" with the term "initial boiling point" (in sub-section 4.1.1.4 (a), amend "Boiling point (initial boiling point)" to read "Initial boiling point"). The instances of use in question are listed in the Annex. Germany intends to also submit a proposal for the corresponding amendments to ADN to the ADN Safety Committee.

**2.2.41.1.16****ADR**

Liquid diluents in formulations requiring temperature control (see 2.2.41.1.14) shall have a **boiling point** of at least 60 °C and a flash-point not less than 5 °C. The **boiling point** of the liquid shall be at least 50 °C higher than the control temperature of the self-reactive substance.

**2.2.41.4**

## NOTE 7:

**RID/ADR**

With a compatible diluent having a **boiling point** of not less than 150 °C.

**2.2.52.1.11****RID/ADR**

Unless otherwise stated for the individual organic peroxide formulation, the following definition(s) shall apply to diluents used for desensitization:

- diluents type A are organic liquids which are compatible with the organic peroxide and which have a **boiling point** of not less than 150 °C. Type A diluents may be used for desensitizing all organic peroxides;
- diluents type B are organic liquids which are compatible with the organic peroxide and which have a **boiling point** of less than 150 °C but not less than 60 °C and a flashpoint of not less than 5 °C.

Type B diluents may be used for desensitization of all organic peroxides provided that the **boiling point** of the liquid is at least 60 °C higher than the SADT in a 50 kg package.

**2.2.52.4****RID/ADR**

## NOTE 1:

Diluent type B may always be replaced by diluent type A. The **boiling point** of diluent type B shall be at least 60 °C higher than the SADT of the organic peroxide.

## NOTE 25:

Diluent type B with **boiling point** > 110 °C.

## NOTE 28:

Available active oxygen ≤ 7.6 % in diluent type A having a 95 % **boil-off point** in the range of 200 - 260 °C.

## NOTE 30:

Diluent type B with **boiling point** > 130 °C.

**CHAPTER 3.2****Table A:****RID/ADR**

UN 1973 CHLORODIFLUOROMETHANE AND CHLOROPENTAFLUOROETHANE MIXTURE with fixed **boiling point**, with approximately 49% chlorodifluoromethane (REFRIGERANT GAS R502)

**CHAPTER 3.2****Table B****RID/ADR**

UN 1973 CHLORODIFLUOROMETHANE AND CHLOROPENTAFLUOROETHANE MIXTURE with fixed **boiling point**, with approximately 49% chlorodifluoromethane

**4.1.1.4 (a)****RID/ADR**

**Boiling point** (initial boiling point) of the substance in °C

## 4.1.4.1

## P200 (5) (c)

## RID/ADR

BP = **boiling point** (in Kelvin)dl = density of the liquid at **boiling point** (in kg/l).

## 4.1.4.1

## P200 Table 2

## RID/ADR

UN 1973 CHLORODIFLUOROMETHANE AND CHLOROPENTAFLUOROETHANE MIXTURE with fixed **boiling point**, with approximately 49% chlorodifluoromethane (REFRIGERANT GAS R502)

## 4.2.5.2.6

## T50

## RID/ADR

UN 1973 Chlorodifluoromethane and chloropentafluoroethane mixture with fixed **boiling point**, with approximately 49 % chlorodifluoromethane (Refrigerant gas R502)

## 4.3.3.2.5

UN 1973 Chlorodifluoromethane and chloropentafluoroethane mixture with fixed **boiling point**, with approximately 49% chlorodifluoromethane (Refrigerant gas R502)

## 4.3.4.1.2

## RID/ADR

L1.5BN: (...) III, flash-point < 23 °C, viscous, vapour pressure at 50 °C > 1.1 bar **boiling point** > 35 °CL4BN: (...) III **boiling point** ≤ 35 °C

## 6.2.1.1.8.3

## RID/ADR

Closed cryogenic receptacles intended for the carriage of refrigerated liquefied gases having a **boiling point** below -182 °C at atmospheric pressure shall not include materials which may react with oxygen or oxygen enriched atmospheres in a dangerous manner, when located in parts of the thermal insulation where there is a risk of contact with oxygen or with oxygen enriched liquid.

## 6.7.4.2.6

## RID/ADR

Portable tanks intended for the carriage of refrigerated liquefied gases having a **boiling point** below minus (-) 182 °C at atmospheric pressure shall not include materials which may react with oxygen or oxygen enriched atmospheres in a dangerous manner, when located in parts of the thermal insulation when there is a risk of contact with oxygen or with oxygen enriched fluid.

## 6.8.2.1.14 (c)

## RID/ADR

Shells intended for the carriage of substances having a vapour pressure of more than 110 kPa (1.1 bar) at 50 °C and a **boiling point** of more than 35 °C shall, whatever their filling or discharge system, be designed for a calculation pressure of not less than 150 kPa (1.5 bar) gauge pressure or 1.3 times the filling or discharge pressure, whichever is the higher;

6.8.2.1.14 (d) Shells intended for the carriage of substances having a **boiling point** of not more than 35 °C shall, whatever their filling or discharge system, be designed for a calculation pressure equal to 1.3 times the filling or discharge pressure but not less than 0.4 MPa (4 bar) (gauge pressure).

## 6.8.2.2.7

Tanks intended for the carriage of liquids having a vapour pressure of more than 110 kPa (1.1 bar) at 50 °C and a **boiling point** of more than 35 °C shall have a safety valve set at not less than 150 kPa (1.5 bar) (gauge pressure) and which shall be fully open at a pressure not exceeding the test pressure; otherwise they shall conform to 6.8.2.2.8.

- 6.8.2.2.8** Tanks intended for the carriage of liquids having a **boiling point** of not more than 35 °C shall have a safety valve set at not less than 300 kPa (3 bar) gauge pressure and which shall be fully open at a pressure not exceeding the test pressure; otherwise they shall be hermetically closed<sup>7</sup>.
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