

# UN/SCETDG/25/INF.33

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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  
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Item 2 of the provisional agenda

### TRANSPORT OF GASES

Proposal to amend Packing Instruction P200, Table 3, UN 2495 IODINE PENTAFLUORIDE

Transmitted by the International Council of Chemical Associations (ICCA)

#### **Introduction**

1. In the packing instruction P200 of the current Model Regulations (13<sup>th</sup> edition) altogether 25 toxic substances with an LC<sub>50</sub> less than or equal to 200 ml/m<sup>3</sup> (ppm) are affected by the special packing provision “k”: Three toxic substances of Table 1 (compressed gases), 18 toxic substances of Table 2 (liquefied gases and dissolved gases) and four toxic substances of Table 3 (substances not in Class 2).
2. A draft amendment of the special packing provision “k” has been adopted by the UN/SCETDG for the revised Model Regulations (14<sup>th</sup> edition) so that pressure drums don't need any outer packaging (**Report ST/SG/AC.10/C.3/46, Annex 1**). The minimum wall thickness for pressure drums will have to be further discussed, e.g. in relation to the diameter of the pressure drums, and therefore the provisional numbers [3.5] mm for aluminium alloy or [2] mm for steel remain between square brackets (**Report ST/SG/AC.10/C.3/46, para. 13**).
3. Only four toxic substances with an LC<sub>50</sub> less than or equal to 200 ml/m<sup>3</sup> (ppm), however, are allowed to be transported in pressure drums, namely the following four substances only of Table 2 (liquefied gases and dissolved gases) all having LC<sub>50</sub> in the range between 5 and 115 ml/m<sup>3</sup> (ppm) and minimum test pressures in the range between 10 and 20 bar: “UN 1067 Dinitrogen Tetroxide 2.3 (5.1, 8)”, “UN 1076 Phosgene 2.3 (8)”, “UN 1975 Nitric Oxide and Dinitrogen Tetroxide Mixture 2.3 (5.1, 8)” and “UN 3057 Trifluoroacetyl Chloride 2.3 (8)”.

#### **Proposal**

4. Add a cross in the column “Pressure drums” of Table 3 (substances not in Class 2) of P200 for UN 2495, Iodine Pentafluoride, 5.1 (6.1, 8), I, with an LC<sub>50</sub> of 120 ml/m<sup>3</sup> (ppm) and with a minimum test pressure of 10 bar, so that its transport in pressure drums is allowed.

## **Justification**

5. UN 2495 IODINE PENTAFLUORIDE is not more dangerous concerning corrosive and/or oxidizing properties and even less toxic than the above mentioned four toxic substances which are allowed to be transported in pressure drums. Furthermore it is not a liquefied gas like those above mentioned four toxic substances, but a liquid with a boiling point of more than 100 °C at atmospheric pressure.
  6. The transportation of UN 2495 IODINE PENTAFLUORIDE in pressure drums has been allowed in the past according to the 11<sup>th</sup> edition of the Model Regulations and the Amendment 30-00 of the IMDG Code and is at present allowed at land transport in Europe and USA (according to the current ADR/RID and 49 CFR, respectively) and also in other countries. Transportations of UN 2495 IODINE PENTAFLUORIDE in pressure drums at sea or land transport always have been and are carried out also nowadays without any problems.
  7. In practice UN 2495 IODINE PENTAFLUORIDE has been and is mostly transported in pressure drums which are made of stainless steel and are tested at pressures of more than 30 bar according to the current USA exemption DOT-E 7823 (use of non-DOT specification cylinders conforming to DOT specification 4BW). These pressure drums have a capacity of less than 500 liters only (i.e. the half of the maximum capacity of pressure drums) and an outside diameter of 762 mm. The wall thickness of new manufactured pressure drums is at least 6.4 mm and even after use during five years it is more than 6 mm on an average, as the obligatory re-inspections show.
  8. The competent German authority, the Federal Institute for Materials Research and Testing (BAM), already granted an approval for the transport Nr. III.12/100 872 according to chapter 7.9 of the International Maritime Dangerous Goods Code (IMDG Code, Amendment 31-02) which allows the use of 60 pressure drums made and tested according to the above mentioned DOT-E 7823 at sea transport.
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