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**COMMITTEE OF EXPERTS ON THE TRANSPORT  
OF DANGEROUS GOODS**

(Twenty-first session,  
4-13 December 2000,  
agenda item 5)

**PROGRAMME OF WORK**

**Programme of work for the 2001/2002 biennium and related proposals**

**Transmitted by the expert from The Netherlands**

**Introduction**

1. In the process of Reformatting the UN Recommendations, the IMDG Code and the restructuring the RID/ADR several discrepancies in the area of classification have been identified. For example it is not clear how to classify solid substances and their solutions. On one hand there is the general rule that if the aggregation changes, the UN Number should change as well, as laid down in 2.0.2.5 and 2.0.2.6.

This principle can be found in the present UN Recommendations; in a lot of cases the solid substance has an entry different for its solution for example in Class 5.1, e.g.

UN 1485 POTASSIUM CHLORATE  
UN 2427 POTASSIUM CHLORATE, AQUEOUS SOLUTION.

On the other hand several entries have been split up (at least for the time being) in solid-and liquid entry or in solid-and solution entry.

3053 ALUMINIUM ALKYL HALIDES. LIQUID or  
3053 ALUMINIUM ALKYL HALIDES, SOLID

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2. Several entries however remain as a solid entry in the UN Recommendations, but are amended by the IMDG Code in this respect, resulting in differences in the classification. An example is the classification of sodium cyanide in solution.

For the solid the situation it is clear: UN 1689 SODIUM CYANIDE, but for the solution there are different interpretations:

In the IMDG Code it is classified under UN 1689 SODIUM CYANIDE, SOLUTION.

However, neither in the UN Recommendations nor in RID/ADR has this splitting up been done and as a (logical) result the sodium cyanide solution should be classified under UN 1935 CYANIDE SOLUTIONS, N.O.S. in accordance with the general principles as pointed out in 2.0.2.5 and 2.0.2.6.

3. It is also noted that as a general rule the molten substances may be carried under the same UN number as the solid substance with the addition to the proper shipping name: MOLTEN, unless there is a specific entry for the molten substance for example UN 2447 PHOSPHOROUS, WHITE, MOLTEN.

In Class 4.1 there is even a general N.O.S. entry for molten substances:  
UN 3176 FLAMMABLE SOLID, ORGANIC, MOLTEN.

4. In Class 6.1 there are several entries which cover several isomers, which might be either liquid or solid for example:

1597 DINITROBENZENES, LIQUID or  
1597 DINITROBENZENES, SOLID

Two rows have been allocated in the list of dangerous substances in order to deal with the transport conditions for the solid and the liquid isomers (mixtures).

In addition the IMDG Code has identified other UN numbers for which the same is valid.

Some other discrepancies have been identified between the UN Recommendations (Model Regulations) and the modal regulation. The Model Regulation indicate P002 as a packing instructions, but the substance appears to be a liquid as indicated in the column 17 "Properties and

For example:

UN 1793 ISOPROPYL ACID PHOSPHATE is assigned to packing instruction P002 (for solids), however in the IMDG Code in the column 17 "Properties and Observations" it is stated it concerns an oily liquid, that is to say a liquid and P001 (for liquids) should be assigned!

There are several other examples in this area.

5. In the view of the Netherlands the above mentioned observations and inconsistencies are not only a matter of classifications (assignment to the correct UN number) but also concerns downstream consequences such as the transport conditions as laid down in the Dangerous Goods List (DGL).

It is clear that the transport conditions laid down in the DGL for substances in a solid states should be different from transport conditions for such substances in a liquid state (molten or solution).

For example for the solid state a reference should be made in the DGL in column "Packing Instructions" to P002 and in column "Portable Tank Instructions" to a portable tank constructed for solid substances. For this substance in a liquid state therefor a reference should be made to P001 and a portable tank constructed for liquids.

However if the same UN number is used for the solid substance as well as for the substance in the liquid state, but only the conditions of transport for the solid substance are indicated there will be a problem for the user as well as for the enforcement agencies and also from the legal point of view.

Other transport conditions like segregation requirements in the sea mode should also be considered .

Also the emergency response is an important element in this discussion.

6. In our view the UN should give guidance in this area. The assignment to the correct UN number is essential for the downstream consequences, among them the transport conditions. Therefore it should be very clear which principles should be followed in the area of classification. We feel that this is an essential task for the UN Committee in order to avoid different interpretations in transport and in other related areas.

### **Proposal**

7. The Netherlands propose that the UN (Sub-)Committee will developed guiding principles to assign the correct UN number to a certain substance, mixture or solution. It is proposed to have this issue on the work programme for the 2001/2002 biennium.

### **Action requested of the Sub-Committee:**

8. The Sub-Committee is invited to consider this proposal and take action as deemed appropriate.

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