Agenda item 2(c)(ii)

UN/CETDG/20/INF.31

COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS

**(Twentieth session,
Geneva, 7-16 December l998,
agenda item 2 (c) (ii))**

WORK OF THE SUB-COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS

Amendments to the Model Regulations on the Transport of Dangerous Goods

Incorporating Packing Instructions in the Dangerous Goods List - Editorial Amendments to Chapter 4

Transmitted by the expert from the United States of America

1. During the Frankfurt Working Group there was a brief discussion on the necessary editorial amendments as a consequence of incorporating the new packing instructions in the Dangerous Goods List. Due to time constraints no final conclusions were reached. The expert from the United States believes that this issue should be considered by the Committee in order to provide guidance to the Secretariat in preparing the eleventh revised edition of the Recommendations and to ensure that the new packing instructions are presented in the Model Regulation in a user friendly form.

Proposal

2. During the process of developing the packing instructions and assigning them to specific substances in the Dangerous Goods List it was realized that certain editorial decisions would need to be considered. The expert from the United States requests that the Committee consider the following proposals relative to the presentation of the packing instructions in the Dangerous Goods List:

a. Entries which may be transported in either a liquid, solid or molten state should be shown on separate lines in the Dangerous Goods List with the appropriate packing instructions and special packing provisions for packagings and IBCs assigned to each respective entry. The following is an example of how such substances would appear in the DGL:

UN No.	Name and Description	Class or division	Subsid-iary risk	UN packing group	Special prov-sion	Ltd Qty	Packagings and IBCs		Portable tanks	
							Packing instruction	Special Prov-isions	Portable Tank instruction	Special Prov-isions
2570	CADMIUM COMPOUND, liquid	6.1		II	109	500ml	P001, IBC02			
2570	CADMIUM COMPOUND, solid	6.1		II	109	500g	P002, IBC05	B1		

***NOTE BY THE SECRETARIAT**:*
The secretariat has tried to identify such entries in classes 6.1 and 8 on the basis of the existing IMDG Code where entries are provided for both the liquid and solid states.
In addition, the secretariat has tentatively filled the portable tank instruction columns for these entries.
The Committee may wish to check whether such entries are needed and whether the suggested tank instructions are correct (see annex).

b. In the report of the Frankfurt Working Group in some cases lines are left blank (e.g. when IBCs are not allowed for a particular substance), in some cases "None" is inserted and in other cases "N/A (Not Applicable) is inserted. The Committee should decide on a consistent method for indicating that packagings or IBCs are not allowed and for indicating that packagings or IBC are not required. The expert from the United States favours indicating "none" when packagings are not allowed (e.g. for molten substances or PG I liquids in IBCs). For substances which are not required to be packaged (e.g. magnetized material, sulphur) use of blank space is favoured.

c. The descriptions for columns 8 and 9 in paragraph 3.2.1 will need to be amended to take into account that packing instructions may be preceded by a "P" or "IBC" and special packing provisions may be preceded with a "P" or "B". Explanations should also be provided for "none" and use of a blank space.

d. Packing instructions for explosives will need to be revised to make them consistent with the format of the packing instructions for substances in classes 2-9. These should be shown in the DGL preceded by a "P" consistent with other packing instructions. The particular packing provisions or exceptions should be sequentially numbered. The new numbers should be shown in the DGL consistent with the approach taken for the special packing provisions in the Report of the Frankfurt Working Group. The heading "Particular packing provisions or exceptions" should be changed to "Special packing provisions". The statement "the general packing provisions of 4.1.1 and special packing provisions of 4.1.3 shall be met should be removed from the packing instructions and should be included in the introductory text for the explosives packing instructions. The heading for paragraph 4.1.3 should be changed from "Special packing provisions for goods of Class1" to " General packing provisions for goods of Class 1".

***NOTE BY THE SECRETARIAT**:*
The secretariat suggests that the reference to the general packing provisions in the individual packing instructions should be kept in the existing class 1 Packing instructions and should be included in all packing instructions. This is the case in the ICAO Technical instructions and this statement ensures that the reader is made aware that general provisions have to be complied with. This statement is also useful for computer application, as in a navigable version it is possible to make a direct link between the packing isntructions and the general provisions by "clicking" on the paragraph number indicated in the packing instructions.

e. The same amendments proposed for Class 1 packing instructions in paragraph (d) above should also be taken into account for organic peroxides and self-reactive substances. Paragraph 4.1.5.2.1 will need to be amended to take into account IBC10 as opposed to Packing Instruction 521 and 522.

f. The packing instructions for infectious substances will also need to be amended to conform to the format of other packing instructions.

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Annex
(prepared by the secretariat)

CLASS 8

UN No	Substance	Melting Point (IMDG Code)	Physical estate (IMDG Code)	Packing Instruction	Tank Instruction
1729	ANISOYL CHLORIDE	22 °C	Liquid	P001	T7, TP2
			Solid	P002?	T1
1733	ANTIMONY TRICHLORIDE	73.2 °C	Solid	P002?	T1
			Liquid	P001	T7, TP2
1740	HYDROGENDIFLUORIDES, N.O.S.		Solid	P002?	T1
			Liquid	P001	T7/T11, TP2, TP1
1742	BORON TRIFLUORIDE ACETIC ACID COMPLEX	23 °C	Solid	P002?	T1
			Liquid	P001	T8, TP2, TP12
1743	BORON TRIFLUORIDE PROPIONIC ACID COMPLEX	28 °C	Solid	P002?	T1
			Liquid	P001	T8, TP2, TP12
1805	PHOSPHORIC ACID	42.35 °C	Solid	P002?	T1
			Liquid	P001	T4, TP1
1811	POTASSIUM HYDROGENDIFLUORIDE	225 °C	Solid	P002	T1
		Solution	Liquid	P001	T7, TP2
1835	TETRAMETHYLAMMONIUM HYDROXIDE	60 °C	Solid	P002	T1
			Liquid	P001	T7, TP2
1938	BROMOACETIC ACID	51 °C	Solid	P002?	T1
			Liquid	P001	T7, TP2
2214	PHTHALIC ANHYDRIDE with more than 0.05% of maleic anhydride	131 °C	Solid	P002	T1
		Solution	Liquid	P001?	T4, TP3
2215	MALEIC ANHYDRIDE		Molten	P001	T4, TP3
			Solid	P002	T1
2225	BENZENESULPHONYL CHLORIDE	12 °C	Liquid	P001	T4, TP1
			Solid	P002?	T1
2308	NITROSYLSULPHURIC ACID	73 °C	Solid	P002	T1
			Liquid	P001	T8, TP2, TP12
2511	2-CHLOROPROPIONIC ACID	20 °C	Liquid	P001	T4, TP2
			Solid	P002	T1
2579	PIPERAZINE	104-107 °C	Solid	P002	T1
		Solution	Liquid	P001?	T4, TP1
2834	PHOSPHOROUS ACID	70 °C	Solid	P002	T1
			Liquid	P001	T3, TP1
2949	SODIUM HYDROSULPHIDE with not less than 25% water of cristallization	52 °C	Solid	P002	T1
			Liquid	P001	T7, TP2

CLASS 6.1

UN No	Substance	Melting Point (IMDG Code)	Physical estate (IMDG Code)	Packing Instruction	Tank Instruction
1564	BARIUM COMPOUND, N.O.S.		Solid	P002	T1
			Liquid	P001	T7/T11, TP1, TP2
1566	BERYLLIUM COMPOUND, N.O.S.		Solid	P002	T1
			Liquid	P001	T7/T11, TP1, TP2
1577	CHLORODINITROBENZENES	22 °C	Liquid	P001?	T7, TP2
			Solid	P002	T1
1578	CHLORONITROBENZENES	30-80 °C	Solid	P002	T1
			Liquid	P001?	T7, TP2
1579	4-CHLORO-o-TOLUIDINE HYDROCHLORIDE	20-22 °C	Liquid	P001?	T7, TP2
			Solid	P002	T1
1590	DICHLOROANILINES	24-72 °C	Solid	P002	T1
			Liquid	P001	T7, TP2
1597	DINITROBENZENES	89.9-173 °C	Solid	P002	T1
			Liquid	P001	T7, TP2
1650	beta-NAPHTHYLAMINE	109,5 °C	Solid	P002	T1
		Solution	Liquid	P001?	T7, TP2
1656	NICOTINE HYDROCHLORIDE or NICOTINE HYDROCHLORIDE SOLUTION	< 22 °C ?? Oil	Liquid	P001	T7/T11, TP2
			Solid	P002	T1
1658	NICOTINE SULPHATE, SOLID or NICOTINE SULPHATE SOLUTION	?? Cristals	Solid	P002	T1
			Liquid	P001	T6/T7, TP2
1664	NITROTOLUENES (o-, m-, p-)	o-,m-: -4-15 °C	Liquid	P001	T7, TP2
		p-: 52-54 °C	Solid	P002	T1
1665	NITROXYLENES (o-, m-, p-)	2,3- 2,4- 2,5- 3,2- 4,3- : 2- 16 °C	Liquid	P001	T7, TP2
		4,2- 5,3- : 29-74 °C	Solid	P002	T1
1680	POTASSIUM CYANIDE	634 °C	Solid	P002	T1
		Solution	Liquid	P001	T14, TP2, TP13
1689	SODIUM CYANIDE	563°	Solid	P002	T1
		Solution	Liquid	P001	T14, TP2, TP13
1690	SODIUM FLUORIDE	988 °C	Solid	P002	T1
		Solution	Liquid	P001	T4, TP1
1693	TEAR GAS SUBSTANCE, LIQUID or SOLID, N.O.S.	???	Liquid	P001	T11, T19, TP2
			Solid	P002	T1
1694	BROMOBENZYL CYANIDES	o-: 1 °C	Liquid	P001	T14, TP2, TP13
		m-: 25 °C	Solid	P002	T1

UN No	Substance	Melting Point (IMDG Code)	Physical estate (IMDG Code)	Packing Instruction	Tank Instruction
1697	CHLOROACETOPHENONE	> 20 °C	Liquid	P001?	T7, TP2, TP13
			Solid	P002	T1
1699	DIPHENYLCHLOROARSINE	41 °C	Solid	P002	T1
			Liquid	P001	T14, TP2, TP13?
1708	TOLUIDINES	45 °C	Solid	P002	T1
			Liquid	P001	T7, TP2
1709	2,4-TOLUYLENEDIAMINE	99 °C	Solid	P002	T1
			Liquid	P001	T4, TP1
1711	XYLIDINES	47 °C	Solid	P002	T1
			Liquid	P001	T7, TP2
1812	POTASSIUM FLUORIDE	846 °C	Solid	P002	T1
			Liquid	P001	T4, TP1
1843	AMMONIUM DINITRO-o-CRESOLATE	???	Solid	P002	T1
			Liquid	P001?	T7, TP2
2026	PHENYLMERCURIC COMPOUND, N.O.S.		Solid	P002	T1
			Liquid	P001	T7, T14, TP1, TP2
2038	DINITROTOLUENES	2,3-, 2,4-, 2,6-, 3,4- and 3,5-: 52-93 °C	Solid	P002	T1
		mixture of 2,4-, 3,4- and 3,5-	Liquid	P001	T7, TP2
2074	ACRYLAMIDE	84.5 °C	Solid	P002	T1
			Liquid	P001?	T4, TP1
2076	CRESOLS	m-: 11-12 °C	Liquid	P001	T7, TP2
		o-: 30 °C and p-: 35 °C	Solid	P002	T1
2077	alpha-NAPHTHYLAMINE	50 °C	Solid	P002	T1
			Liquid	P001?	T3, TP1
2235	CHLOROBENZYL CHLORIDES	29 °C	Solid	P002?	T1
			Liquid	P001	T4, TP1
2239	CHLOROTOLUIDINES	0-24 °C	Liquid	P001?	T4, TP1
			Solid	P002	T1
2252	1,2-DIMETHOXYETHANE	85.2 °C	Solid	P002?	T1
			Liquid	P001?	T4, TP2
2291	LEAD COMPOUND, SOLUBLE, N.O.S.		Solid	P002	T1
			Liquid	P001	T7, TP1
2306	NITROBENZOTRIFLUORIDES	31-32 °C	Solid	P002	T1
			Liquid	P001	T7,TP2
2433	CHLORONITROTOLUENES	35-40 °C	Solid	P002	T1
			Liquid	P001	T7, TP1
2515	BROMOFORM	9 °C	Liquid	P001	T4, TP1
			Solid	P002?	T1

UN No	Substance	Melting Point (IMDG Code)	Physical estate (IMDG Code)	Packing Instruction	Tank Instruction
2570	CADMIUM COMPOUND		Solid	P002	T1
			Liquid	P001	T7, T14, TP1, TP2?
2572	PHENYLHYDRAZINE	20 °C	Liquid	P001	T7, TP2
			Solid	P002?	T1
2662	HYDROQUINONE	170 °C	Solid	P002	T1
		Solution	Liquid	P001	T4, TP1
2669	CHLOROCRESOLS	45-68 °C	Solid	P002?	T1
			Liquid	P001	T7, TP2
2730	NITROANISOLE	38-54 °C	Solid	P002	T1
			Liquid	P001	T4, TP1
2732	NITROBROMOBENZENE	1,3-: 17 °C	Liquid	P001	T4, TP1
		1,2-: 43 °C 1,4-: 127 °C	Solid	P002	T1
2753	N-ETHYLBENZYLTOLUIDINES	???	Solid	P002	T1
			Liquid	P001	T7, TP1
2937	alpha-METHYLBENZYL ALCOHOL	21 °C	Liquid	P001	T4, TP1
			Solid	P002	T1
3278	ORGANOPHOSPHORUS COMPOUND, TOXIC, N.O.S.		Solid	P002	T1
			Liquid	P001	T14, TP2, TP9
3279	ORGANOPHOSPHORUS COMPOUND, TOXIC, FLAMMABLE, N.O.S.		Solid	P002	T1
			Liquid	P001	T14, TP2, TP9
3280	ORGANOARSENIC COMPOUND, N.O.S.		Solid	P002	T1
			Liquid	P001	T11, TP2,TP27
3281	METAL CARBONYLS, N.O.S.		Solid	P002	T1
			Liquid	P001	T7, TP1, TP28
3282	ORGANOMETTALLIC COMPOUND, TOXIC, N.O.S.		Solid	P002	T1
			Liquid	P001	T14, TP2, TP9
3283	SELENIUM COMPOUND, N.O.S.		Solid	P002	T1
			Liquid	P001	T11, TP2, TP27
3284	TELLURIUM COMPOUND, N.O.S.		Solid	P002	T1
			Liquid	P001	T7, TP1, TP28
3285	VANADIUM COMPOUND, N.O.S.		Solid	P002	T1
			Liquid	P001	T14, TP2, TP9

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