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

**(Twentieth session,
Geneva, 7-16 December 1998,
agenda item 2 (d))**

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

New proposals

Hydrazine, Aqueous Solutions (UN 2030)

Transmitted by the expert from the United States of America

Background

1. The current Class 8 entry for “HYDRAZINE, AQUEOUS SOLUTIONS” (UN 2030, subsidiary risk 6.1, Packing Group II) covers hydrazine solutions only with concentrations of up to 64%, by mass. No specific entry in the Recommendations covers aqueous hydrazine solutions with higher concentrations, although there is at present a Class 8 entry for “HYDRAZINE, ANHYDROUS” (UN 2029, subsidiary risks 3 and 6.1, Packing Group I).
2. Tests recently conducted in the United States (copies of which can be made available upon request) confirm that certain aqueous hydrazine solutions with hydrazine concentrations greater than 64%, by mass (e.g., 70%, by mass), would, by applying the relevant criteria in the Recommendations, be classified in the same manner as the currently listed solutions with not more than 64% hydrazine (i.e., in Class 8, Packing Group II, with subsidiary risk 6.1). In addition, tests confirmed that aqueous solutions of 80% hydrazine, by mass, would be classified in Class 8, Packing Group I, with a subsidiary risk of 6.1. It is also known that aqueous solutions with a hydrazine concentration of approximately 37% hydrazine, by mass, no longer meet the defining criteria for Class 8, and such solutions are classified in Division 6.1, Packing Group III (see document ST/SG/AC.10/C.3/R.348, upon which the Sub-Committee’s adoption of UN 3293 was based).

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This demonstrates that certain aqueous solutions with concentrations above 37%, by mass, would appropriately be classified in Class 8, Packing Group III, with subsidiary risk of Division 6.1.

3. It is noted that the current entry for Class 8 aqueous hydrazine solutions (UN 2030) was initially adopted before the full development of the classification and grouping criteria now provided in the Recommendations. Consequently, this concentration limit does not take account of the existing classification and grouping criteria. Therefore, in light of the grouping criteria now appearing in the Recommendations, the expert from the United States believes it appropriate that the 64% upper concentration limit appearing in UN 2030 be removed, and the possibility provided in this entry to assign Class 8 aqueous hydrazine solutions to any of the three packing groups. This would permit solutions of any concentration to be transported under the appropriate packing group and related transport provisions (e.g., limited quantity, tank instructions, etc.), as determined by the relevant grouping criteria.

Proposals

4. In consideration of the foregoing, to specifically provide for the transport of aqueous hydrazine solutions with concentrations greater than 64%, by mass, and to ensure that Class 8 aqueous solutions of hydrazine are assigned to the appropriate packing group in accordance with the relevant grouping criteria, the expert from the United States proposes that UN 2030 be amended to remove specific reference to a maximum hydrazine concentration of 64%, by mass, and to provide for the classification of aqueous hydrazine solutions in any of the three packing groups. Specifically, it is proposed that UN 2030 be amended to read as follows:

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
2030	HYDRAZINE HYDRATE, or HYDRAZINE, AQUEOUS SOLUTIONS, with not less than 37% hydrazine, by mass	8	6.1	I		NONE			T20	TP2 TP13
		8	6.1	II		500 ml			T15	TP2 TP13
		8	6.1	III		1 L			T4	TP2