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**CARRIAGE OF SUBSTANCES OF UN NOS. 3097, 3100, 3121, 3127, 3132, 3133, 3135
AND 3137 PRESENTING COMBINATIONS OF HAZARDS OF CLASSES 4 AND 5.1,
CLASSES 4.3 AND 4.1 AND CLASSES 4.3 AND 4.2**

Transmitted by the Governments of Switzerland and Germany*

The secretariat has received from the Central Office for International Carriage by Rail (OCTI) the proposal reproduced below.

* Circulated by the Central Office for International Carriage by Rail (OCTI) under the symbol OCTI/RID/GT-III/2003/62.

Summary

Executive summary: The above-mentioned United Nations numbers presenting combinations of hazards of Classes 4 and 5.1, Classes 4.3 and 4.1 and Classes 4.3 and 4.2 are subject to a prohibition on carriage.

In order to ensure harmonization with the IMDG Code and so that substances presenting the combinations of hazards mentioned can be carried, this prohibition should be replaced by requirements governing carriage.

Decision to be taken: Determination of the conditions of carriage for the UN numbers mentioned and adaptation of the sections corresponding to Chapter 2.2.

Related documents: TRANS/WP.15/AC.1/2002/8-OCTI/RID/GT-III/2002/8.

Introduction

UN Nos. 3097, 3100, 3121, 3127, 3132, 3133, 3135 and 3137 are subject to a prohibition on carriage since these substances or solutions and mixtures may, as may be the case, react in a particularly dangerous fashion or present partially explosive properties. Some mixtures presenting combinations of hazards of Classes 4.3 and 4.1 (UN No. 3132) have been examined in Germany. Switzerland also has preparations which come under the UN numbers which are the subject of the proposal.

Proposal

In Table A of Chapter 3.2 delete “CARRIAGE PROHIBITED” for the following UN numbers:

UN Nos. 3097, 3100, 3121, 3127, 3132, 3133, 3135 and 3137.

The conditions of carriage to be determined can be found in the tables of annexes 1 and 2 of this document (annex 1 for RID and annex 2 for ADR).

The following amendments should accordingly be made in Chapter 2.2 to the conditions of carriage specified in Chapter 3.2:

For Class 4.1:

1. Insert a new paragraph 2.2.41.1.20 in 2.2.41.1 to read:

“2.2.41.1.20 The classification of flammable oxidizing solids or preparations of flammable oxidizing solids and their assignment to UN No. 3097 shall be made by the competent authority of the country of origin on the basis of a test report established in conformity with the appropriate tests of Parts 1 and 3 of the Manual of Tests and Criteria. The certificate of approval shall include the assignment and the relevant conditions of carriage. If the country of origin is not a member State of COTIF/Contracting Party to ADR, the assignment and the conditions of

carriage shall be recognized by the competent authority of the first member State of COTIF/first Contracting Party of ADR concerned by the consignment. Flammable oxidizing solids which cannot be carried in accordance with the conditions of UN No. 3097 are not accepted for carriage unless they meet the requirements for Class 1 (see also 2.1.3.7).”

2. 2.2.41.2.2 should be deleted.
3. In 2.2.41.3, under “Oxidizing FO”, the comment in brackets for UN No. 3097 should read:

“(Classification and assignment by the competent authority only, see 2.2.41.1.20)”.

For Class 4.2:

4. Insert a new paragraph 2.2.42.1.9 in 2.2.42.1, to read:

“2.2.42.1.9 The classification of self-heating oxidizing solids or preparations of self-heating oxidizing solids and their assignment to UN No. 3127 shall be made by the competent authority of the country of origin on the basis of a test report established in conformity with the appropriate tests of Parts 1 and 3 of the Manual of Tests and Criteria. The certificate of approval shall include the assignment and the relevant conditions of carriage. If the country of origin is not a member State of COTIF/Contracting Party to ADR, the assignment and the conditions of carriage shall be recognized by the competent authority of the first member State of COTIF/first Contracting Party of ADR concerned by the consignment. Self-heating oxidizing solids which cannot be carried in accordance with the conditions of UN No. 3127 are not accepted for carriage unless they meet the requirements for Class 1 (see also 2.1.3.7).”

5. The second indent of 2.2.42.2 should be deleted.
6. In 2.2.42.3, under “Oxidizing SO”, the comment in brackets for UN No. 3127 should read:

“(Classification and assignment by the competent authority only, see 2.2.42.1.9)”.

For Class 4.3:

7. Insert a new paragraph 2.2.43.1.9 in 2.2.43.1 to read:

“2.2.43.1.9 The classification

- Water-reactive solids, flammable,
- Water-reactive solids, oxidizing, and
- Water-reactive solids, self-heating, or preparations of

- Water-reactive solids, flammable,
- Water-reactive solids, oxidizing, and
- Water-reactive solids, self-heating,

and their assignment to UN Nos. 3132, 3133 or 3135 shall be made by the competent authority of the country of origin on the basis of a test report established in conformity with the appropriate tests of Parts 1 and 3 of the Manual of Tests and Criteria. The certificate of approval shall include the assignment and the relevant conditions of carriage. If the country of origin is not a member State of COTIF/Contracting Party to ADR, the assignment and the conditions of carriage shall be recognized by the competent authority of the first member State of COTIF/first Contracting Party of ADR concerned by the consignment. Water-reactive flammable solids, water-reactive oxidizing solids and water-reactive self-heating solids which cannot be carried in accordance with the conditions of UN Nos. 3132, 3133 or 3135 are not accepted for carriage unless they meet the requirements for Class 1 (see also 2.1.3.7).”

8. 2.2.43.2 should be deleted.

9. In 2.2.43.3, under “Solid, flammable, WF2”, the comment in brackets for UN No. 3132 should read:

“(Classification and assignment by the competent authority only, see 2.2.43.1.9)”.

10. In 2.2.43.3, under “Solid, self-heating, WS”, the comment in brackets for UN No. 3135 should read:

“(Classification and assignment by the competent authority only, see 2.2.43.1.9)”.

11. In 2.2.43.3, under “Solid, oxidizing, WO”, the comment in brackets for UN No. 3133 should read:

“(Classification and assignment by the competent authority only, see 2.2.43.1.9)”.

For Class 5.1:

12. Insert a new paragraph 2.2.51.1.10 in 2.2.51.1 to read:

“2.2.51.1.10 The classification

- Oxidizing solids, self-heating
- Oxidizing solids, water-reactive, and
- Oxidizing solids, flammable, or preparations of

- Oxidizing solids, self-heating
- Oxidizing solids, water-reactive, and
- Oxidizing solids, flammable,

and their assignment to UN Nos. 3100, 3121 or 3137 shall be made by the competent authority of the country of origin on the basis of a test report established in conformity with the appropriate tests of Parts 1 and 3 of the Manual of Tests and Criteria. The certificate of approval shall include the assignment and the relevant conditions of carriage. If the country of origin is not a member State of COTIF/Contracting Party to ADR, the assignment and the conditions of carriage shall be recognized by the competent authority of the first member State of COTIF/first Contracting Party of ADR concerned by the consignment. Oxidizing self-heating solids, oxidizing water-reactive solids and oxidizing flammable solids which cannot be carried in accordance with the conditions of UN Nos. 3100, 3121 or 3137 are not accepted for carriage unless they meet the requirements for Class 1 (see also 2.1.3.7).”

13. The first indent of 2.2 51.2.2 should be deleted.

14. In 2.2.51.3, under “Solid, flammable, OF”, the comment in brackets for UN No. 3137 should read:

“(Classification and assignment by the competent authority only, see 2.2.51.1.10)”.

15. In 2.2.51.3, under “Solid, self-heating, OS”, the comment in brackets for UN No. 3100 should read:

“(Classification and assignment by the competent authority only, see 2.2.51.1.10)”.

16. In 2.2.51.3, under “Solid, water-reactive, OW”, the comment in brackets for UN No. 3121 should read:

“(Classification and assignment by the competent authority only, see 2.2.51.1.10)”.

The following amendments should accordingly be made in Chapter 3.3 to the conditions of carriage specified in Chapter 3.2:

The following new special provision specific to RID/ADR should be inserted in Chapter 3.3:

“**6xy** The classification of substances and mixtures and the assignment to this UN number shall be made by the competent authority of the country of origin on the basis of a test report established in conformity with the appropriate tests of Parts 1 and 3 of the Manual of Tests and Criteria.”

The following amendments should accordingly be made in Chapter 5.3 to the conditions of carriage specified in Chapter 3.2:

In 5.3.2.3.2, the wording of the following hazard identification numbers should be amended to read:

“423 solid which reacts with water, emitting flammable gases, or flammable solid which reacts with water, emitting flammable gases or self-heating solid which reacts dangerously with water, emitting flammable gases.

X423 solid which reacts dangerously with water,¹ emitting flammable gases, or flammable solid which reacts dangerously with water,¹ emitting flammable gases, or self-heating solid which reacts dangerously with water,¹ emitting flammable gases.”

Insert the following hazard identification numbers in 5.3.2.3.2 after the hazard identification number “44”:

“45 flammable or self-heating solid, oxidizing

452 solid which reacts with water, emitting flammable gases, oxidizing

X452 solid which reacts dangerously with water,¹ emitting flammable gases, oxidizing.”

Insert the following hazard identification numbers in 5.3.2.3.2 after the hazard identification number “539”:

“54 oxidizing solid, flammable or self-heating

542 oxidizing solid which reacts with water, emitting flammable gases

X542 oxidizing solid which reacts dangerously with water,¹ emitting flammable gases and which may spontaneously produce a violent reaction.”

Insert the following hazard identification number in 5.3.2.3.2 after the hazard identification number “55”:

“X554 highly oxidizing, flammable or self-heating solid, which may spontaneously produce a violent reaction.”

When this document was drafted, it was noted that different terms were used in Chapters 3.2 and 5.3. Chapter 3.2 refers to “oxidizing solid” while Chapter 5.3 refers to “oxidizing (fire-intensifying).” It is therefore proposed that the expression “(fire-intensifying)” should be deleted from the following hazard identification numbers:

225, 25, 265, 50, 539, 55, 556, 558, 559, 56, 568, 58, 59, 65, 665, 75, 85, 856 and 885.

If this proposal is not implemented, the hazard identification numbers which should be amended or re-introduced for UN Nos. 3097, 3100, 3121, 3127, 3132, 3133, 3135 and 3137 in accordance with this document should be adapted to the wording of RID/ADR.

Justification

- Safety:** The amendments proposed do not compromise safety since in this case the classification and assignment are carried out by the competent authority of the country of origin on the basis of a test report established in conformity with the appropriate tests of Parts 1 and 3 of the Manual of Tests and Criteria, as is similarly the practice today for self-reactive substances of Class 4.1 and organic peroxides of Class 5.2 (in this case, however, in accordance with Part 2 of the Manual of Tests and Criteria).
- Feasibility:** In view of the fact that the carriage of the substances, solutions and mixtures referred to in this document has not been possible up to now and that the conditions of carriage and the classification and assignment are carried out by the competent authority of the country of origin on the basis of a test report established in conformity with the appropriate tests of Parts 1 and 3 of the Manual of Tests and Criteria, as is similarly the practice today for self-reactive substances of Class 4.1 and organic peroxides of Class 5.2 (in this case, however, in accordance with Part 2 of the Manual of Tests and Criteria), no obstacle exists to the feasibility of the carriage of the substances, solutions and mixtures referred to.

Annex 1

Amendments to Chapter 3.2 of RID

UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited quantities	Packaging			UN portable tanks		RID tank		Vehicle for tank carriage	Transport category	Special provisions for carriage				Hazard identification No.
								Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Express packages	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
3097	Flammable, solid oxidizing, N.O.S.	4.1	FO	II	4.1 + 5.1	274 6xy	LQ	P099								0					45
3097	Flammable, solid oxidizing, N.O.S.	4.1	FO	III	4.1 + 5.1	274 6xy	LQ	P099								0					45
3100	Oxidizing solid, self-heating, N.O.S.	5.1	OS	I	5.1 + 4.2	274 6xy	LQ	P099								0					X554
3100	Oxidizing solid, self-heating, N.O.S.	5.1	OS	II	5.1 + 4.2	274 6xy	LQ	P099								0					54
3121	Oxidizing solid, water-reactive, N.O.S.	5.1	OW	I	5.1 + 4.3	274 6xy	LQ	P099								0					X542
3121	Oxidizing solid, water-reactive, N.O.S.	5.1	OW	II	5.1 + 4.3	274 6xy	LQ	P099								0					542
3127	Self-heating solid, oxidizing, N.O.S.	4.2	SO	II	4.2 + 5.1	274 6xy	LQ	P099								0					45
3127	Self-heating solid, oxidizing, N.O.S.	4.2	SO	III	4.2 + 5.1	274 6xy	LQ	P099								0					45
3132	Water-reactive solid, flammable, N.O.S.	4.3	WF2	I	4.3 + 4.1	274 6xy	LQ	P099								0					X423
3132	Water-reactive solid, flammable, N.O.S.	4.3	WF2	II	4.3 + 4.1	274 6xy	LQ	P099								0					423

UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited quantities	Packaging			UN portable tanks		RID tank		Vehicle for tank carriage	Transport category	Special provisions for carriage				Hazard identification No.
								Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Express packages	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
3132	Water-reactive solid, flammable, N.O.S.	4.3	WF2	III	4.3 + 4.1	274 6xy	LQ0	P099								0					423
3133	Water-reactive solid, oxidizing, N.O.S.	4.3	WO	I	4.3 + 5.1	274 6xy	LQ0	P099								0					X452
3133	Water-reactive solid, oxidizing, N.O.S.	4.3	WO	II	4.3 + 5.1	274 6xy	LQ0	P099								0					452
3133	Water-reactive solid, oxidizing, N.O.S.	4.3	WO	III	4.3 + 5.1	274 6xy	LQ0	P099								0					452
3135	Water-reactive solid, self-heating, N.O.S.	4.3	WS	I	4.3 + 4.2	274 6xy	LQ0	P099								0					X423
3135	Water-reactive solid, self-heating, N.O.S.	4.3	WS	II	4.3 + 4.2	274 6xy	LQ0	P099								0					423
3135	Water-reactive solid, self-heating, N.O.S.	4.3	WS	III	4.3 + 4.2	274 6xy	LQ0	P099								0					423
3137	Oxidizing solid, flammable, N.O.S.	5.1	OF	I	5.1 + 4.1	274 6xy	LQ0	P099								0					X554

Annex 2

Amendments to Chapter 3.2 of ADR

UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited quantities	Packaging			UN portable tanks		ADR tank		Vehicle for tank carriage	Transport category	Special provision for carriage				Hazard identification No.
								Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
3097	Flammable, solid oxidizing, N.O.S.	4.1	FO	II	4.1 + 5.1	274 6xy	LQ	P099								0					
3097	Flammable, solid oxidizing, N.O.S.	4.1	FO	III	4.1 + 5.1	274 6xy	LQ	P099								0					
3100	Oxidizing solid, self-heating, N.O.S.	5.1	OS	I	5.1 + 4.2	274 6xy	LQ	P099								0					
3100	Oxidizing solid, self-heating, N.O.S.	5.1	OS	II	5.1 + 4.2	274 6xy	LQ	P099								0					
3121	Oxidizing solid, water-reactive, N.O.S.	5.1	OW	I	5.1 + 4.3	274 6xy	LQ	P099								0					
3121	Oxidizing solid, water-reactive, N.O.S.	5.1	OW	II	5.1 + 4.3	274 6xy	LQ	P099								0					
3127	Self-heating solid, oxidizing, N.O.S.	4.2	SO	II	4.2 + 5.1	274 6xy	LQ	P099								0					
3127	Self-heating solid, oxidizing, N.O.S.	4.2	SO	III	4.2 + 5.1	274 6xy	LQ	P099								0					
3132	Water-reactive solid, flammable, N.O.S.	4.3	WF2	I	4.3 + 4.1	274 6xy	LQ	P099								0					
3132	Water-reactive solid, flammable, N.O.S.	4.3	WF2	II	4.3 + 4.1	274 6xy	LQ	P099								0					

UN No.	Name and description	Class	Classification code	Packing group	Labels	Special provisions	Limited quantities	Packaging			UN portable tanks		ADR tank		Vehicle for tank carriage	Transport category	Special provision for carriage				Hazard identification No.
								Packing instructions	Special packing provisions	Mixed packing provisions	Instructions	Special provisions	Tank code	Special provisions			Packages	Bulk	Loading, unloading and handling	Operation	
(1)	(2)	(3a)	(3b)	(4)	(5)	(6)	(7)	(8)	(9a)	(9b)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
3132	Water-reactive solid, flammable, N.O.S.	4.3	WF2	III	4.3 + 4.1	274 6xy	LQ0	P099								0					
3133	Water-reactive solid, oxidizing, N.O.S.	4.3	WO	I	4.3 + 5.1	274 6xy	LQ0	P099								0					
3133	Water-reactive solid, oxidizing, N.O.S.	4.3	WO	II	4.3 + 5.1	274 6xy	LQ0	P099								0					
3133	Water-reactive solid, oxidizing, N.O.S.	4.3	WO	III	4.3 + 5.1	274 6xy	LQ0	P099								0					
3135	Water-reactive solid, self-heating, N.O.S.	4.3	WS	I	4.3 + 4.2	274 6xy	LQ0	P099								0					
3135	Water-reactive solid, self-heating, N.O.S.	4.3	WS	II	4.3 + 4.2	274 6xy	LQ0	P099								0					
3135	Water-reactive solid, self-heating, N.O.S.	4.3	WS	III	4.3 + 4.2	274 6xy	LQ0	P099								0					
3137	Oxidizing solid, flammable, N.O.S.	5.1	OF	I	5.1 + 4.1	274 6xy	LQ0	P099								0					