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Inland Transport Committee

Working Party on the Transport of Dangerous Goods

Joint Meeting of Experts on the Regulations annexed to the European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways (ADN) (ADN Safety Committee)

Thirty-first session

Geneva, 28-31 August 2017

Item 4 (b) of the provisional agenda

**Proposals for amendments to the Regulations annexed to ADN:
other proposals**

Possible ambiguities in Table C

Transmitted by the Government of Belgium*,**

1. Upon review of Table C, Belgium has noted the following ambiguities.

I. Reference to EN standard for UN 1202

2. Belgium has noted that in the transition from ADN 2015 to ADN 2017 the reference to a standard has most likely not been updated.
3. In ADN 2017 Table C the standard “EN-590: 290 + A1: 2010” is mentioned for UN 1202. When comparing this standard with the one specified in ADN 2017 Table A the standard “EN 590: 2013 + AC: 2014” is mentioned. Belgium believes the standard has been updated in Table A, but not in Table C of ADN 2017. Furthermore, Belgium notes that the word ‘LIGHT’ is placed in brackets in Table C, but not in Table A.

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** In accordance with the programme of work of the Inland Transport Committee for 2016–2017 (ECE/TRANS/2016/28/Add.1 (9.3.)).

ADN 2017 Table C

1202	GAS OIL complying with standard EN 590: 2009 + A1:2010 or DIESEL FUEL or HEATING OIL (LIGHT) with flash-point as specified in EN 590:2009 + A1:2010	3	F1	III	3+N2+F	N	4	3		97	0,82 - 0,85	3	yes			no	PP	0	
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ADN 2017 Table A

1202	DIESEL FUEL complying with standard EN 590: 2013 + AC: 2014 or GAS OIL or HEATING OIL, LIGHT with flash-point as specified in EN 590:2013 + A1:2014	3	F1	III	3	640L	5L	E1	T	PP, EX, A	VE01							0	
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Proposal

4. Belgium proposes to replace the standard “EN-590: 290 + A1: 2010” for substance UN 1202 in the table with the standard “EN 590: 2013 + AC: 2014”. Also, the word ‘LIGHT’ (**adjustments marked in bold**) must be put in brackets.

ADN 2017 Table C

1202	GAS OIL complying with standard EN 590: 2013 + AC: 2014 or DIESEL FUEL or HEATING OIL (LIGHT) with flash-point as specified in EN 590: 2013 + AC: 2014	3	F1	III	3+N2+F	N	4	3		97	0,82 - 0,85	3	yes			no	PP	0	
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ADN 2017 Table A

1202	DIESEL FUEL complying with standard EN 590: 2013 + AC: 2014 or GAS OIL or HEATING OIL, (LIGHT) with flash-point as specified in EN 590:2013 + A1:2014	3	F1	III	3	640L	5L	E1	T	PP, EX, A	VE01							0	
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II. Definition UN 1203

5. In ADN 2017 Table C several entries are shown for UN 1203 “MOTOR SPIRIT or GASOLINE or PETROL, WITH MORE THAN 10 % BENZENE ”. Belgium is of the opinion that gasoline with more than 10% benzene has been incorrectly classified under UN 1203.

1203	MOTOR SPIRIT or GASOLINE or PETROL, WITH MORE THAN 10 % BENZENE BOILING POINT ≤ 60 °C	3	F1	II	3+N2+CMR+F	C	1	1		95		1	yes	T3	II A	yes	PP, EP, EX, TOX, A	1	29	
1203	MOTOR SPIRIT or GASOLINE or PETROL WITH MORE THAN 10 % BENZENE 60 °C < BOILING POINT ≤ 85 °C	3	F1	II	3+N2+CMR+F	C	2	2	3	50	95		2	yes	T3	II A	yes	PP, EP, EX, TOX, A	1	23; 29
1203	MOTOR SPIRIT or GASOLINE or PETROL WITH MORE THAN 10 % BENZENE 85 °C < BOILING POINT ≤ 115 °C	3	F1	II	3+N2+CMR+F	C	2	2		50	95		2	yes	T3	II A	yes	PP, EP, EX, TOX, A	1	29
1203	MOTOR SPIRIT or GASOLINE or PETROL WITH MORE THAN 10 % BENZENE BOILING POINT > 115 °C	3	F1	II	3+N2+CMR+F	C	2	2		35	95		2	yes	T3	II A	yes	PP, EP, EX, TOX, A	1	29

6. Belgium points out that UN 1203 was standardised in a European Standard (EN 228:2004 – see appended document). In this standard it is specified in Table 1 that the maximum amount of benzene in UN 1203 must be 10%.

7. Petrol with more than 10% benzene also exists, but cannot be classified as UN 1203 on the basis of the aforementioned standard. Belgium is of the opinion that if the mixture contains more than 10 % benzene, this substance should be classified under UN 1268 “PETROLEUM DISTILLATES, N.O.S. or PETROLEUM PRODUCTS, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C” or under UN 3295, e.g. “HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C”. Therefore, UN 1203 with more than 10% benzene should be deleted.

Proposal

8. The Safety Committee may wish to request the informal working group on substances to consider this proposal.

III. Boiling point versus initial boiling point

A. UN 3289 and UN 1203

9. In the name and description of UN 3289 a ‘boiling point’ is assigned in the description.

3289	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. BOILING POINT > 115 °C	6.1	TC3	I	6.1+8+ (N1, N2, N3, CMR, F or S)	C	2	2	*	*	95		1	no			no	PP, EP, TOX, A	2	27; 29 *see 3.2.3.3
3289	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. BOILING POINT > 115 °C	6.1	TC3	II	6.1+8+ (N1, N2, N3, CMR, F or S)	C	2	2	*	*	95		2	no			no	PP, EP, TOX, A	2	27; 29 *see 3.2.3.3

10. The boiling point of a substance is the temperature at which the vapour pressure of the liquid equals the pressure surrounding the liquid and the liquid changes into a vapour. Pure substances have boiling points.

11. Belgium is of the opinion that mixtures do not have a 'boiling point', but an 'initial boiling point'.

12. Boiling points of substances can be affected by the presence of dissolved impurities (solutes) or other miscible compounds, the degree of effect depending on the concentration of the impurities or other compounds. The presence of non-volatile impurities such as salts or compounds of a volatility far lower than the main component compound decreases its mole fraction and the solution's volatility, and thus raises the normal boiling point in proportion to the concentration of the solutes. This effect is called boiling point elevation. As a common example, salt water boils at a higher temperature than pure water. Only pure substances have 'boiling points'.

13. In other mixtures of miscible compounds (components), there may be two or more components of varying volatility, each having its own pure component boiling point at any given pressure. The presence of other volatile components in a mixture affects the vapour pressures and thus boiling points and dew points of all the components in the mixture. The dew point is a temperature at which a vapour condenses into a liquid. Furthermore, at any given temperature, the composition of the vapour is different from the composition of the liquid in most such cases. In order to illustrate these effects between the volatile components in a mixture, a boiling point diagram is commonly used.

14. Belgium is of the opinion that UN 3289 has an 'initial boiling point' but not a 'boiling point'. Therefore, it proposes to modify this (**adjustments marked in bold**).

3289	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. (INITIAL) BOILING POINT > 115 °C	6.1	TC3	I	6.1+8+ (N1, N2, N3, CMR, F or S)	C	2	2	*	*	95		1	no			no	PP, EP, TOX, A	2	27; 29 *see 3.2.3.3
3289	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. (INITIAL) BOILING POINT > 115 °C	6.1	TC3	II	6.1+8+ (N1, N2, N3, CMR, F or S)	C	2	2	*	*	95		2	no			no	PP, EP, TOX, A	2	27; 29 *see 3.2.3.3

For UN 1203:

1203	MOTOR SPIRIT or GASOLINE or PETROL, WITH MORE THAN 10 % BENZENE (INITIAL) BOILING POINT ≤ 60 °C	3	F1	II	3+N2+CMR+F	C	1	1			95		1	yes	T3	II A	yes	PP, EP, EX, TOX, A	1	29
1203	MOTOR SPIRIT or GASOLINE or PETROL WITH MORE THAN 10 % BENZENE 60 °C < (INITIAL) BOILING POINT ≤ 85 °C	3	F1	II	3+N2+CMR+F	C	2	2	3	50	95		2	yes	T3	II A	yes	PP, EP, EX, TOX, A	1	23; 29
1203	MOTOR SPIRIT or GASOLINE or PETROL WITH MORE THAN 10 % BENZENE 85 °C < (INITIAL) BOILING POINT ≤ 115 °C	3	F1	II	3+N2+CMR+F	C	2	2		50	95		2	yes	T3	II A	yes	PP, EP, EX, TOX, A	1	29
1203	MOTOR SPIRIT or GASOLINE or PETROL WITH MORE THAN 10 % BENZENE (INITIAL) BOILING POINT > 115 °C	3	F1	II	3+N2+CMR+F	C	2	2		35	95		2	yes	T3	II A	yes	PP, EP, EX, TOX, A	1	29

Proposal

15. The Safety Committee may wish to request the informal working group on substances to consider this proposal.

B. Scheme A in ADN 3.2.3.3

16. Belgium has noted that the same problem regarding the 'boiling point' also occurs in ADN 3.2.3.3 Scheme A.

Scheme A: Criteria for cargo tank equipment in vessels of type C

Cargo tank equipment	Cargo tank internal pressure at liquid temperature of 30 °C and gaseous phase temperature of 37.8 °C > 50 kPa	Cargo tank internal pressure at liquid temperature of 30 °C and gaseous phase temperature of 37.8 °C > 50 kPa	Cargo tank internal pressure unknown, owing to absence of certain data
With refrigeration (No. 1 in column (9))	Refrigerated		

Pressure tank (400 kPa)	Non-refrigerated	Cargo tank internal pressure at 50 °C > 50 kPa without water spraying	Boiling point ≤ 60°C
High-velocity vent valve opening pressure: 50 kPa, with water-spraying system (No. 3 in column (9))		Cargo tank internal pressure at 50 °C > 50 kPa with water spraying	60 °C < boiling point ≤ 85°C
High-velocity vent valve opening pressure as calculated, but at least 10 kPa		Cargo tank internal pressure at 50 °C ≤ 50 kPa	
High-velocity vent valve opening pressure: 50 kPa			85 °C < boiling point ≤ 115°C
High-velocity vent valve opening pressure: 35 kPa			Boiling point > 115°C

17. As Scheme A also refers to mixtures, Belgium proposes to make the following adjustments to Scheme A (**adjustments marked in bold**).

Cargo tank equipment	Cargo tank internal pressure at liquid temperature of 30 °C and gaseous phase temperature of 37.8 °C > 50 kPa	Cargo tank internal pressure at liquid temperature of 30 °C and gaseous phase temperature of 37.8 °C > 50 kPa	Cargo tank internal pressure unknown, owing to absence of certain data
With refrigeration (No. 1 in column (9))	Refrigerated		
Pressure tank (400 kPa)	Non-refrigerated	Cargo tank internal pressure at 50 °C > 50 kPa without water spraying	(Initial) Boiling point ≤ 60°C
High-velocity vent valve opening pressure: 50 kPa, with water-spraying system (No. 3 in column (9))		Cargo tank internal pressure at 50 °C > 50 kPa with water spraying	60 °C < (Initial) boiling point ≤ 85°C
High-velocity vent valve opening pressure as calculated, but at least 10 kPa		Cargo tank internal pressure at 50 °C ≤ 50 kPa	
High-velocity vent valve opening pressure: 50 kPa			85 °C < (Initial) boiling point ≤ 115°C
High-velocity vent valve opening pressure: 35 kPa			(Initial) Boiling point > 115°C

This view is supported by the table in ADN 3.2.4.3, paragraph 2.1, in which ‘initial boiling point’ is used.

Proposal

18. The Safety Committee may wish to request the informal working group on substances to consider this proposal.

IV. UN 1010

19. Belgium is of the opinion that there is not really any point to have, in Table C, an entry for UN 1010 butadiene which contains less than 0.1% 1,3-butadiene. When checking ADR and ADN 2017 Table B, this entry is not listed.

1010	BUTADIENES STABILIZED or BUTADIENES AND HYDROCARBON MIXTURE, STABILIZED, having a vapour pressure at 70 °C not exceeding 1.1 MPa (11 bar) and a density at 50 °C not lower than 0.525 kg/l (contains less than 0.1% 1,3-butadiene)	2	2F		2.1+unst.	G	1	1			91		1	no	T2	II B ₄ (II B ₂ ⁴)	yes	PP, EX, A	1	2; 3; 31
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20. Belgium is of the opinion that this entry should be deleted.

21. It also points out that Table C contains the following entry with regard to this substance.

1010	1,2-BUTADIENE, STABILIZED	2	2F		2.1+unst.	G	1	1			91		1	no	T2	II B ₄	yes	PP, EX, A	1	2; 3; 31
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22. Several chemists have pointed out to Belgium that such a substance is chemically incorrect. This substance may exist, but only in small concentrations. In larger quantities, this substance is chemically so unstable that it cannot exist. Double bonds must always alternate, which is not the case for this substance.

Proposal

23. The Safety Committee may wish to request the informal working group on substances to consider the above issues.

V. UN 3295 CMR

24. In Table C, the following entries, amongst others, are shown for UN 3295:

3295	HYDROCARBONS, LIQUID, N.O.S. CONTAINING ISOPRENE AND PENTADIENE, STABILIZED	3	F1	I	3+inst.+ N2+CMR	C	2	2	3	50	95	0.678	1	yes	T4 ₃)	II B ₄)	yes	PP, EX, A	1	3; 27
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3295	HYDROCARBONS, LIQUID, N.O.S. (1-OCTEN)	3	F1	II	3+N2+F	N	2	3		10	97	0,71	3	yes	T3	II B ₄)	yes	PP, EP, EX, TOX, A	1	14
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25. Column (5) of the entry mentions the ‘hazards’. Column (18) mentions “Determination of whether personal protective equipment, escape devices, portable flammable gas detectors, portable toximeters or ambient-air- dependent breathing apparatus is required”.

26. We point out that the first entry mentions the CMR property in column (5), whereas the second entry does not. Column (18) indicates PP, EX and A as required equipment in the first entry. The second entry mentions PP, EP, EX, TOX, A.

27. Belgium is of the opinion that an error has occurred in these two entries and proposes that the entry with CMR properties take over the required equipment from the entry without CMR properties and vice versa (**adjustments and deletions marked in bold**).

3295	HYDROCARBONS, LIQUID, N.O.S. CONTAINING ISOPRENE AND PENTADIENE, STABILIZED	3	F1	I	3+inst.+ N2+CMR	C	2	2	3	50	95	0,678	1	yes	T4 ₃)	II B ₄)	yes	PP, EP , EX, TOX , A	1	3; 27
3295	HYDROCARBONS, LIQUID, N.O.S. (1-OCTEN)	3	F1	II	3+N2+F	N	2	3		10	97	0,71	3	yes	T3	II B ₄)	yes	PP, EP , EX, TOX , A	1	14

Proposal

28. The Safety Committee may wish to request the informal working group on substances to consider this proposal.

VI. (F) Floater

29. Table C shows several entries for UN 3295:

3295	HYDROCARBONS, LIQUID, N.O.S.	3	F1	I	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*	*	*	yes	T4 ₃)	II B ₄)	yes	*	1	14, *see 3.2.3.3
3295	HYDROCARBONS, LIQUID, N.O.S.	3	F1	II	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*	*	*	yes	T4 ₃)	II B ₄)	yes	*	1	14; *see 3.2.3.3
3295	HYDROCARBONS, LIQUID, N.O.S.	3	F1	III	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*	*	*	yes	T4 ₃)	II B ₄)	yes	*	0	14; *see 3.2.3.3

3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	I	3+CMR+ (N1, N2, N3)	C	1	1		95		1	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	1	29	
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	II	3+CMR+ (N1, N2, N3)	C	1	1		95		1	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	1	29	
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 60 °C < INITIAL BOILING POINT ≤ 85 °C	3	F1	II	3+CMR+ (N1, N2, N3)	C	2	2	3	50	95		2	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	1	23; 29; 38
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 85 °C < INITIAL BOILING POINT ≤ 115 °C	3	F1	II	3+CMR+ (N1, N2, N3)	C	2	2		50	95		2	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	1	29
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT > 115°C	3	F1	II	3+CMR+ (N1, N2, N3)	C	2	2		35	95		2	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	1	29
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	III	3+CMR+ (N1, N2, N3)	C	1	1		95		1	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	0	29	
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 60 °C < INITIAL BOILING POINT ≤ 85 °C	3	F1	III	3+CMR+ (N1, N2, N3)	C	2	2	3	50	95		2	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	0	23; 29; 38
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 85 °C < INITIAL BOILING POINT ≤ 115 °C	3	F1	III	3+CMR+ (N1, N2, N3)	C	2	2		50	95		2	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	0	29

3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT > 115 °C	3	F1	III	3+CMR+ (N1, N2, N3)	C	2	2	35	95		2	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	0	29	
3295	HYDROCARBONS, LIQUID, N.O.S. CONTAINING ISOPRENE AND PENTADIENE, STABILIZED	3	F1	I	3+inst.+ N2+CMR	C	2	2	3	50	95	0,678	1	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, A	1	3; 27
3295	HYDROCARBONS, LIQUID, N.O.S. (1-OCTEN)	3	F1	II	3+N2+F	N	2	3	10	97	0,71	3	yes	T3	II B ₄)	yes	PP, EP, EX, TOX, A	1	14	
3295	HYDROCARBONS, LIQUID, N.O.S. (POLYCYCLIC AROMATIC HYDROCARBONS MIXTURE)	3	F1	III	3+CMR+F	N	2	3	3	10	97	1,08	3	yes	T1	II A	yes	PP, EP, EX, TOX, A	0	14

30. Belgium points out that in column (5) of UN 3295 the first three entries give the indication (F). In the next 12 entries this indication is lacking.

31. Belgium proposes to also add this indication in the entries where it is lacking (**Adjustments marked in bold**).

3295	HYDROCARBONS, LIQUID, N.O.S.	3	F1	I	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ₃)	II B ₄)	yes	*	1	14; *see 3.2.3.3
3295	HYDROCARBONS, LIQUID, N.O.S.	3	F1	II	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ₃)	II B ₄)	yes	*	1	14; *see 3.2.3.3
3295	HYDROCARBONS, LIQUID, N.O.S.	3	F1	III	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ₃)	II B ₄)	yes	*	0	14; *see 3.2.3.3
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	I	3+CMR+ (N1, N2, N3, F)	C	1	1		95		1	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	1	29	
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	II	3+CMR+ (N1, N2, N3, F)	C	1	1		95		1	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	1	29	

3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 60 °C < INITIAL BOILING POINT ≤ 85 °C	3	F1	II	3+CMR+ (N1, N2, N3, F)	C	2	2	3	50	95		2	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	1	23; 29; 38
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 85 °C < INITIAL BOILING POINT ≤ 115 °C	3	F1	II	3+CMR+ (N1, N2, N3, F)	C	2	2		50	95		2	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	1	29
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT > 115°C	3	F1	II	3+CMR+ (N1, N2, N3, F)	C	2	2		35	95		2	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	1	29
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT ≤ 60 °C	3	F1	III	3+CMR+ (N1, N2, N3, F)	C	1	1			95		1	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	0	29
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 60 °C < INITIAL BOILING POINT ≤ 85 °C	3	F1	III	3+CMR+ (N1, N2, N3, F)	C	2	2	3	50	95		2	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	0	23; 29; 38
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE 85 °C < INITIAL BOILING POINT ≤ 115 °C	3	F1	III	3+CMR+ (N1, N2, N3, F)	C	2	2		50	95		2	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	0	29
3295	HYDROCARBONS, LIQUID, N.O.S. WITH MORE THAN 10% BENZENE INITIAL BOILING POINT > 115 °C	3	F1	III	3+CMR+ (N1, N2, N3, F)	C	2	2		35	95		2	yes	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	0	29
3295	HYDROCARBONS, LIQUID, N.O.S. CONTAINING ISOPRENE AND PENTADIENE, STABILIZED	3	F1	I	3+inst.+ N2+CMR+F	C	2	2	3	50	95	0.678	1	yes	T4 ₃)	II B ₄)	yes	PP, EX, A	1	3; 27

3295	HYDROCARBONS, LIQUID, N.O.S. (1- OCTEN)	3	F1	II	3+N2+F	N	2	3	10	97	0,71	3	yes	T3	II B4)	yes	PP, EP, EX, TOX, A	1	14	
3295	HYDROCARBONS, LIQUID, N.O.S. (POLYCYCLIC AROMATIC HYDROCARBONS MIXTURE)	3	F1	III	3+CMR+F	N	2	3	3	10	97	1,08	3	yes	T1	II A	yes	PP, EP, EX, TOX, A	0	14

Proposal

32. The Safety Committee may wish to request the informal working group on substances to consider this proposal.

VII. UN 9003 ‘Shipping name’

33. ADN 3.2.3.1 gives an explanation of Table C. In this explanation column (2) “Name and descriptive text” indicates how the proper shipping name is to be recorded:

Column (2) : “Contains, in upper case characters, the name of the substance, if the substance has been assigned its own specific UN number or identification number or of the generic or n.o.s. entry to which the dangerous substances have been assigned in accordance with the criteria (“decision trees”) of Part 2. This name shall be used as the proper shipping name or, when applicable, as part of the proper shipping name (see 3.1.2 for further details on the proper shipping name).

A descriptive text in lower case characters is added after the proper shipping name to clarify the scope of the entry if the classification or carriage conditions of the substance may be different under certain conditions”.

34. Belgium notes that when looking at substance UN 9003 in Table C it is shown as below:

9003	SUBSTANCES WITH A FLASH-POINT ABOVE 60 °C BUT NOT MORE THAN 100 °C or SUBSTANCES WHERE 60° C < flash-point ≤ 100° C, which are not affected to another class	9			9+(N1, N2, N3, CMR, F or S)	*	*	*	*	*			*	yes			no	*	0	27 *see 3.2.3.3
9003	SUBSTANCES WITH A FLASH-POINT ABOVE 60 °C BUT NOT MORE THAN 100 °C or SUBSTANCES WHERE 60° C < flash-point ≤ 100 °C, which are not affected to another class (ETHYLENE GLYCOL MONOBUTYL ETHER)	9			9+N3+F	N	4	3		97	0.9	3	yes				no	PP	0	

9003	SUBSTANCES WITH A FLASH-POINT ABOVE 60 °C BUT NOT MORE THAN 100 °C or SUBSTANCES WHERE 60° C < flash-point ≤ 100 °C, which are not affected to another class (2-ETHYLHEXYL ACRYLATE)	9		9+N3+F	N	4	3			97	0.89	3	yes			no	PP	0	3; 5; 16;
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35. On the one hand, Belgium is of the opinion that the descriptive text of UN 9003 does not meet the requirements set out in 3.2.3.1. Belgium is of the opinion that the word ‘flash-point’ should also be shown in upper case characters. On the other hand, it is of the opinion that the alternative name should be shown in lower case characters.

36. This viewpoint is supported by what is mentioned in ADN 3.1.2.1:

3.1.2.1. : “The proper shipping name is that portion of the entry most accurately describing the goods in Table A or Table C in Chapter 3.2, which is shown in upper case characters (plus any numbers, Greek letters, "sec", "tert", and the letters "m", "n", "o", "p", which form an integral part of the name). Particulars concerning the vapour pressure (vp) and the boiling point (bp) in column (2) of Table C in chapter 3.2 are part of the proper shipping name. An alternative proper shipping name may be shown in brackets following the main proper shipping name. In Table A, it is shown in upper case characters (e.g., ETHANOL (ETHYL ALCOHOL)). In Table C, it is shown in lower case characters (e.g. ACETONITRILE (methyl cyanide)). Portions of an entry appearing in lower case need not be considered as part of the proper shipping name unless otherwise stated above”.

37. ADN 3.1.2.1 mentions that ‘boiling point’ and ‘vapour pressure’ are part of the proper shipping name. Therefore, Belgium wonders why ‘flash-point’ is not part of it.

38. It is also stated that the alternative proper shipping name may be shown in upper case characters in Table A. In Table C it must be shown in lower case characters. This problem also arises with respect to substances UN 3077 and UN 3082.

39. Belgium proposes to adjust this proper shipping name as follows (**adjustments and deletions marked in bold**).

9003	SUBSTANCES WITH A FLASH-POINT ABOVE 60 °C BUT NOT MORE THAN 100 °C or SUBSTANCES WHERE 60° C < flash-point FLASH-POINT ≤ 100° C, which are not affected to another class	9		9+(N1, N2, N3, CMR, F or S)	*	*	*	*	*		*	yes			no	*	0	27 *see 3.2.3.3
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9003	SUBSTANCES WITH A FLASH-POINT ABOVE 60 °C BUT NOT MORE THAN 100 °C or SUBSTANCES WHERE 60° C < flash=point FLASH-POINT ≤ 100 °C, which are not affected to another class (ETHYLENE GLYCOL MONOBUTYL ETHER) (ethylene glycol monobutyl ether)	9				9+N3+F	N	4	3			97	0.9	3	yes			no	PP	0	
9003	SUBSTANCES WITH A FLASH-POINT ABOVE 60 °C BUT NOT MORE THAN 100 °C or SUBSTANCES WHERE 60° C < flash=point FLASH-POINT ≤ 100 °C, which are not affected to another class (2-ETHYLHEXYLACRYLATE) (2-ethylhexylacrylate)	9				9+N3+F	N	4	3			97	0.89	3	yes			no	PP	0	3; 5; 16;

3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MOLTEN, (ALKYLAMINE (C₁₂ to C₁₈)) (alkylamine (C₁₂ to C₁₈))	9	M7	III	9+F	N	4	3	2			95	0.79	3	yes			no	PP	0	7; 17
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3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BILGE WATER) (bilge water)	9	M6	III	9+N2+F	N	4	3				97		3	yes			no	PP	0	
3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE; LIQUID, N.O.S. (HEAVY HEATING OIL) (heavy heating oil)	9	M6	III	9+CMR (N1, N2, F or S)	N	2	3		10	97			3	yes			no	PP	0	

Proposal

40. The Safety Committee may wish to request the informal working group on substances to consider this proposal.

VIII. Remark “27”

41. In column (20) of Table C reference is made to remark “27” for specific substances which meet the following requirements:

Remark 27: Reference shall be made in column (20) to remark 27 for substances for which the reference N.O.S. or a generic reference is made in column (2).

42. Belgium notes that in Table C the substances UN 3077 and UN 3082 are shown as indicated below:

3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MOLTEN, (ALKYLAMINE (C ₁₂ to C ₁₈))	9	M7	III	9+F	N	4	3	2		95	0.79	3	yes			no	PP	0	7; 17
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3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BILGE WATER)	9	M6	III	9+N2+F	N	4	3			97		3	yes			no	PP	0	
3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE; LIQUID, N.O.S. (HEAVY HEATING OIL)	9	M6	III	9+CMR (N1, N2, F or S)	N	2	3		10	97		3	yes			no	PP	0	

43. This representation does not correspond with the explanation of remark “27” which states that reference shall be made to remark “27” in column (20) for substances for which the reference N.O.S. is made.

44. Belgium proposes to adjust these tables as follows (**adjustments marked in bold**).

3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MOLTEN, (ALKYLAMINE (C ₁₂ to C ₁₈)) (alkylamine (C ₁₂ to C ₁₈))	9	M7	III	9+F	N	4	3	2		95	0.79	3	yes			no	PP	0	7; 17 ; 27
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3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (BILGE WATER) (Bilge water)	9	M6	III	9+N2+F	N	4	3			97		3	yes			no	PP	0	27
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3082	ENVIRONMENTALLY HAZARDOUS SUBSTANCE; LIQUID, N.O.S. (HEAVY HEATING OIL)	9	M6	III	9+CMR (N1, N2, F or S)	N	2	3		10	97		3	yes			no	PP	0	27
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45. Furthermore, Belgium notes that special provision 274 is not included in the ADR and in Table A column (6) of the ADN for UN 1268 and UN 3295. However, we do find remark “27” (except in the obvious exceptional cases) in Table C column (20) of the ADN.

46. In ADN 2017 remark “27” has been left out for UN 3295, but not for UN 1268. This is not in accordance with the ADR regulations and with Table A of the ADN.

Proposal

47. The Safety Committee may wish to request the informal working group on substances to consider this proposal and to verify whether this viewpoint also applies to substances UN 3295, UN 9003, UN 1993 and UN 1268.

IX. Remark “29”

48. In column (20) of Table C remark “29” is added for specific substances which meet the following requirements:

Remark 29: Reference shall be made in column (20) to remark 29 for substances for which the vapour pressure or boiling point is indicated in column (2).

49. Belgium notes that in Table C substance UN 1992 has been supplemented with remark “29” in column (20):

1992	FLAMMABLE LIQUID, TOXIC, N.O.S.	3	FT1	I	3+6.1+(N1, N2, N3, CMR, F or S)	C	1	1	*	*	95		1	no	T4 ³⁾	II B ₄₎	yes	PP, EP, EX, TOX, A	2	27; 29 *see 3.2.3.3
1992	FLAMMABLE LIQUID, TOXIC, N.O.S	3	FT1	I	3+6.1+(N1, N2, N3, CMR, F or S)	C	2	2	*	*	95		1	no	T4 ³⁾	II B ₄₎	yes	PP, EP, EX, TOX, A	2	27; 29 *see 3.2.3.3
1992	FLAMMABLE LIQUID, TOXIC, N.O.S	3	FT1	II	3+6.1+(N1, N2, N3, CMR, F or S)	C	2	2	*	*	95		2	no	T4 ³⁾	II B ₄₎	yes	PP, EP, EX, TOX, A	2	27; 29 *see 3.2.3.3

50. Furthermore, Belgium has noted that remark “29” is not mentioned, for instance, for UN 1267. Belgium wonders how ADN 3.2.3.3 can be applied without the data of remark “29”. How can the substance be classified and how must the checklist and Table A be completed? The vapor pressure must be mentioned on the shipping document, otherwise the product cannot be assigned and it is impossible to complete Question 1 of the checklist.

51. Belgium is of the opinion that this remark “29” should be mentioned again. The same goes for UN 1268, UN 1863, UN 1993 and UN 3295.

1267	PETROLEUM CRUDE OIL	3	F1	I	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ₃₎	II B ₄₎	yes	*	1	14; *see 3.2.3.3
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1267	PETROLEUM CRUDE OIL	3	F1	II	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ₃)	II B ₄)	yes	*	1	14; *see 3.2.3.3
1267	PETROLEUM CRUDE OIL	3	F1	III	3+(N1, N2, N3, CMR, F)	*	*	*	*	*	*		*	yes	T4 ₃)	II B ₄)	yes	*	0	14; *see 3.2.3.3

52. Belgium also points out that remark “29” is mentioned for substance UN 1986 ALCOHOLS, FLAMMABLE, TOXIC, N.O.S. However, the substance must be shipped in a pressure tank in which the vapour pressure is less important. It is not entirely clear to Belgium why that is.

1986	ALCOHOLS, FLAMMABLE, TOXIC, N.O.S.	3	FT1	I	3+6.1+(N1, N2, N3, CMR, F or S)	C	1	1	*	*	95		1	no	T4 ₃)	II B ₄)	yes	PP, EP, EX, TOX, A	2	27; 29; *see 3.2.3.3
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Proposal

53. The Safety Committee may wish to request the informal working group on substances to consider this proposal to examine whether Belgium’s viewpoint is correct.

X. Column (16): Specification of explosion groups

54. In ADN 2017, the explosion groups are shown as below:

Flammable substances shall be assigned to an explosion group on the basis of their maximum experimental safe gaps. The maximum experimental safe gaps shall be determined in accordance with standard IEC 60079-20-1.

55. The different explosion groups are as follows:

Explosion group	Maximum experimental safe gap in mm
II A	> 0.9
II B	≥ 0.5 to ≤ 0.9
II C	< 0.5

56. When anti-explosion protection is required and the relevant data are not provided, reference shall be made to explosion group II B, considered safe.

57. Following a reclassification of the explosion groups, the Safety Committee has decided to subdivide the explosion group IIB of autonomous protective systems into sub-groups. These are specified as follows:

II B: 0.5 mm ≤ NSW ≤ 0.9 mm II
 B3: 0.65 mm ≤ NSW ≤ 0.9 mm II
 B2: 0.75 mm ≤ NSW ≤ 0.9 mm II
 B1: 0.85 mm ≤ NSW ≤ 0.9 mm

58. To Belgium it seems logical that this reclassification should also be shown in ADN 2017.

59. Belgium proposes to adjust the explanation of column (16) in the ADN (adjustments and deletions marked in bold).

Explosion group	Maximum experimental safe gap in mm
II A	> 0.9
II B II B II B3 II B2 II B1	≥ 0.5 to ≤ 0.9 0.5 mm ≤ NSW ≤ 0.9 mm 0.65 mm ≤ NSW ≤ 0.9 mm 0.75 mm ≤ NSW ≤ 0.9 mm 0.85 mm ≤ NSW ≤ 0.9 mm
II C	< 0.5