

**Economic and Social Council**

Distr.: General
10 November 2017
English
Original: English and French

Economic Commission for Europe**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-second session

Geneva, 22-26 January 2018

Item 5 (a) of the provisional agenda

Proposals for amendments to the Regulations annexed to ADN: work of the RID/ADR/ADN Joint Meeting

Draft amendments relevant for ADN adopted by the Working Party on the Transport of Dangerous Goods (WP.15) and the Joint RID/ADR/ADN meeting in 2106 and 2017 for entry into force on 1 January 2019

Note by the secretariat^{*,}**

1. The Safety Committee may wish to note that the RID/ADR/ADN Joint Meeting at its spring and autumn sessions in 2016 and 2017 adopted draft amendments to RID/ADR/ADN. These draft amendments are reproduced in ECE/TRANS/WP.15/AC.1/142/Add.2, annex IV, ECE/TRANS/WP.15/AC.1/144, annex II, ECE/TRANS/WP.15/AC.1/146, annexes II and III and ECE/TRANS/WP.15/AC.1/148/Add.1.
2. The Safety Committee may also wish to consider these proposed amendments taking into account those adopted by the Working Party on the Transport of Dangerous Goods (WP.15) at its 101st and 102nd sessions

* Distributed in German by the Central Commission for the Navigation of the Rhine in document CCNR-ZKR/ADN/WP.15/AC.2/2018/2.

** In accordance with the programme of work of the Inland Transport Committee for 2017-2018 (ECE/TRANS/WP.15/237, annex V (9.3.)).

(ECE/TRANS/WP.15/235, annex I and ECE/TRANS/WP.15/237, annexes I, II and III).

3. Relevant amendments to ADN are reproduced below:

Chapter 1.1

1.1.4.3 In the footnote, replace “DSC.1/Circ.12 and Corrigenda” by “CCC.1/Circ.3”.

[\(Already included in ECE/ADN/2018/1\)](#)

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

Chapter 1.2

1.2.1 Amend the definition of “hermetically closed tank” to read as follows:

“*Hermetically closed tank* means a tank that:

- is not equipped with safety valves, bursting discs, other similar safety devices or vacuum valves; or
- is equipped with safety valves preceded by a bursting disc according to 6.8.2.2.10 [of ADR](#), but is not equipped with vacuum valves.

A tank intended for the carriage of liquid substances with a calculation pressure of at least 4 bar or intended for the carriage of solid substances (powdery or granular) regardless of its calculation pressure is also considered hermetically closed if it:

- is equipped with safety valves preceded by a bursting disc according to 6.8.2.2.10 [of ADR](#) and vacuum valves, in accordance with the requirements of 6.8.2.2.3 [of ADR](#); or,
- is not equipped with safety valves, bursting discs or other similar safety devices, but is equipped with vacuum valves, in accordance with the requirements of 6.8.2.2.3 [of ADR](#).”.

(Reference document: ECE/TRANS/WP.15/237, Annex I)

1.2.1 Add the following new definitions in alphabetical order:

“*Diameter* (for shells of tanks) means the internal diameter of the shell.”.

(Reference document: ECE/TRANS/WP.15/237, Annex I)

“*Protective lining* (for tanks) means a lining or coating protecting the metallic tank material against the substances to be carried;”.

NOTE: *This definition does not apply to a lining or coating used only to protect the substance to be carried.*”.

(Reference document: ECE/TRANS/WP.15/237, Annex I)

“*Over-moulded cylinder* means a cylinder intended for the carriage of LPG with a water capacity not exceeding 13 litres made of a coated welded steel inner cylinder with an over-moulded protective case made from cellular plastic, which is non-removable and bonded to the outer surface of the steel cylinder wall;”.

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

1.2.1 In the definition of “UN Model Regulations”, replace “nineteenth” by “twentieth” and replace “(ST/SG/AC.10/1/Rev.19)” by “(ST/SG/AC.10/1/Rev.20)”.

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

Chapter 1.4

1.4.2.2.2 Add the following new sentence at the end: “In the case of 1.4.2.2.1 (c) he may rely on what is certified in the “container, vehicle or wagon packing certificate” provided in accordance with 5.4.2.”

(Reference document: ECE/TRANS/WP.15/237, Annex I)

Chapter 1.6

1.6.1.1 Replace “30 June 2017” by “30 June 2019”. Replace “31 December 2016” by “31 December 2018”.

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

1.6.1.25, 1.6.1.39, 1.6.1.40 and 1.6.1.42 Delete and insert “(Deleted)”.

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

1.6.1 Add the following new transitional measures:

“1.6.1.44 Undertakings which participate in the carriage of dangerous goods only as consignors and which did not have to appoint a safety adviser on the basis of the provisions applicable until 31 December 2018 shall, by derogation from the provisions of 1.8.3.1 in force from 1 January 2019, appoint a safety adviser no later than 31 December 2022.”

(Reference document: ECE/TRANS/WP.15/237, Annex I)

“1.6.1.45 Contracting Parties may, until 31 December 2020, continue to issue training certificates for dangerous goods safety advisers conforming to the model applicable until 31 December 2018, instead of those conforming to the requirements of 1.8.3.18 applicable from 1 January 2019. Such certificates may continue in use to the end of their five-year validity.”

(Reference document: ECE/TRANS/WP.15/237, Annex I)

Chapter 1.8

1.8.3.1 Before “carriage”, insert “consigning”.

(Reference document: ECE/TRANS/WP.15/235, Annex I)

1.8.3.2 (a) In subparagraphs (ii) and (iii), replace “smaller than those” by “not exceeding those”.

(Reference document: ECE/TRANS/WP.15/235, Annex I)

1.8.3.3 In the ninth indent of the third subparagraph, before “carriage”, insert “consigning”.

(Reference document: ECE/TRANS/WP.15/235, Annex I)

1.8.3.18 In the eighth entry of the certificate (“Valid until ...”), before “packing”, insert “consigning”.

(Reference document: ECE/TRANS/WP.15/235, Annex I)

1.8.3 Insert the following new sub-section 1.8.3.19:

“1.8.3.19 *Extension of the certificate*

Where an adviser extends the scope of his certificate during its period of validity by meeting the requirements of 1.8.3.16.2, the period of validity of a new certificate shall remain that of the previous certificate.”.

(Reference document: ECE/TRANS/WP.15/237, Annex I)

Chapter 1.10

Table 1.10.3.1.2 In the column for “Substance or article”, amend the text of the first line for Class 2 to read as follows: “Flammable, non-toxic gases (classification codes including only letters F or FC)”.

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

Chapter 2.1

[2.1.3.5.5 Amend the footnote 2 to read as follows:

“² *Such legislation is for instance the Commission Decision No 2014/955/EU of 18 December 2014 amending Decision 2000/532/EC on the list of waste pursuant to Directive 2008/98/EC of the European Parliament and of the Council (Official Journal of the European Union No. L 370 of 30 December 2014, pages 44 to 86) and Commission Regulation (EU) No 1357/2014 of 18 December 2014 replacing Annex III to Directive 2008/98/EC of the European Parliament and of the Council on waste and repealing certain Directives (Official Journal of the European Union No. L 365 of 19 December 2014, pages 89 to 96).*”.]

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

Chapter 2.2

2.2.51.2.2 Replace indent thirteen by the following text:

“- ammonium nitrate based fertilizers with compositions that lead to exit boxes 4, 6, 8, 15, 31, or 33 of the flowchart of paragraph 39.5.1 of the Manual of Tests and Criteria, Part III, Section 39, unless they have been assigned a suitable UN number in Class 1;

- ammonium nitrate based fertilizers with compositions that lead to exit boxes 20, 23 or 39 of the flowchart of paragraph 39.5.1 of the Manual of Tests and Criteria, Part III, Section 39, unless they have been assigned a suitable UN number in Class 1 or, provided that the suitability for carriage has been demonstrated and that this has been approved by the competent authority, in Class 5.1 other than UN No. 2067;”.

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

2.2.9.1.3 Replace “2.2.9.1.4 to 2.2.9.1.14” by “2.2.9.1.4 to 2.2.9.1.8, 2.2.9.1.10, 2.2.9.1.11, 2.2.9.1.13 and 2.2.9.1.14”.

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

Chapter 3.2

Table A

For UN Nos. 1002, 1006, 1013, 1046, 1056, 1058, 1065, 1066, 1070, 1072, 1080, 1952, 1956, 2036, 2073, 2451, 3070, 3156, 3157, 3163, 3297, 3298 and 3299, insert “660” in column (6).

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

For UN Nos. 1011, 1075, 1965, 1969 and 1978, insert “674” in column (6).

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

For UN No. 2908, in column (6) insert “368”.

(Reference document: ECE/TRANS/WP.15/AC.1/146, annex III)

For UN No. 2913, in column (6) insert “325”

(Reference document: ECE/TRANS/WP.15/AC.1/146, annex III)

For UN No. 2913, in column (6) delete “336”.

(Reference document: ECE/TRANS/WP.15/AC.1/146, annex III)

For UN Nos. 3091 and 3481, replace “636” by “670” in column (6).

(Reference document: ECE/TRANS/WP.15/237, Annex I)

For UN No. 3326, in column (6) insert “326”.

(Reference document: ECE/TRANS/WP.15/AC.1/146, annex III)

For UN No. 3326, in column (6) delete “336”.

(Reference document: ECE/TRANS/WP.15/AC.1/146, annex III)

Chapter 3.3

Special provision 250 In paragraph (a), delete: “(see Table S-3-8 of the Supplement)”.

(Reference document: ECE/TRANS/WP.15/237, Annex I)

Special provision 363 Delete the introductory text under (g). Renumber existing (i) to (vi) under current (g) as (g) to (l).

Special provision 363 (l) Amend (l) to read as follows:

“(l) When the engine or machinery contains more than 1 000 l of liquid fuels, for UN No. 3528 and UN No. 3530, or the fuel tank has a water capacity of more than 1 000 l, for UN No. 3529:

- A transport document in accordance with 5.4.1 is required. This transport document shall contain the following additional statement "Transport in accordance with special provision 363";

~~—When the carriage is known beforehand to pass through a tunnel with restrictions for carriage of dangerous goods, the transport unit shall display orange coloured plates according to 5.3.2 and the tunnel restrictions according to 8.6.4 apply.”~~

(Reference document: ECE/TRANS/WP.15/237, Annex I and ECE/TRANS/WP.15/AC.1/2017/26/Add.1)

Special provision 636 Amend to read as follows:

“636 Up to the intermediate processing facility, lithium cells and batteries with a gross mass of not more than 500 g each, lithium ion cells with a Watt-hour rating of not more than 20 Wh, lithium ion batteries with a Watt-hour rating of not more than 100 Wh, lithium metal cells with a lithium content of not more than 1 g and lithium metal batteries with an aggregate lithium content of not more than 2 g, not contained in equipment, collected and handed over for carriage for sorting, disposal or recycling, together with or without other non-lithium cells or batteries, are not subject to the other provisions of [ADR-ADN](#) including special provision 376 and 2.2.9.1.7, if the following conditions are met:

(a) The cells and batteries are packed according to packing instruction P909 of 4.1.4.1 [of ADR](#) except for the additional requirements 1 and 2;

(b) A quality assurance system is in place to ensure that the total amount of lithium cells and batteries per transport unit does not exceed 333 kg;

NOTE: The total quantity of lithium cells and batteries in the mix may be assessed by means of a statistical method included in the quality assurance system. A copy of the quality assurance records shall be made available to the competent authority upon request.

(c) Packages are marked "LITHIUM BATTERIES FOR DISPOSAL" or "LITHIUM BATTERIES FOR RECYCLING" as appropriate.”

(Reference document: ECE/TRANS/WP.15/237, Annex I)

Special provision 660 Amend to read as follows:

“660 For the carriage of fuel gas containment systems designed and approved to be fitted in motor vehicles containing this gas the provisions of sub-section 4.1.4.1 and Chapter 6.2 [of ADR](#) need not be applied when carried for disposal, recycling, repair, inspection, maintenance or from where they are manufactured to a vehicle assembly plant, provided the conditions described in special provision 392 are met. This also applies for mixtures of gases subject to special provision 392 and gases of group A subject to this special provision.”

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

Special provision 666 Amend the first paragraph to read as follows:

“Vehicles and battery powered equipment, referred to by special provision 388, when carried as a load, as well as any dangerous goods they contain that are necessary for their operation or the operation of their equipment, are not subject to any other provisions of [ADN](#), provided the following conditions are met:”

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

3.3.1 Add the following new special provisions:

“670 (a) Lithium cells and batteries installed in equipment from private households collected and handed over for carriage for depollution, dismantling, recycling or disposal are not subject to the other provisions of [ADR-ADN](#) including special provision 376 and 2.2.9.1.7 when:

(i) They are not the main power source for the operation of the equipment in which they are contained;

(ii) The equipment in which they are contained does not contain any other lithium cell or battery used as the main power source; and

(iii) They are afforded protection by the equipment in which they are contained.

Examples for cells and batteries covered by this paragraph are button cells used for data integrity in household appliances (e.g. refrigerators, washing machines, dishwashers) or in other electrical or electronic equipment;

(b) Up to the intermediate processing facility lithium cells and batteries contained in equipment from private households not meeting the requirements of (a) collected and handed over for carriage for depollution, dismantling, recycling or disposal are not subject to the other provisions of [ADR-ADN](#) including special provision 376 and 2.2.9.1.7, if the following conditions are met:

(i) The equipment is packed in accordance with packing instruction P909 of 4.1.4.1 [of ADR](#) except for the additional requirements 1 and 2; or it is packed in strong outer packagings, e.g. specially designed collection receptacles, which meet the following requirements:

- The packagings shall be constructed of suitable material and be of adequate strength and design in relation to the packaging capacity and its intended use. The packagings need not meet the requirements of 4.1.1.3 [of ADR](#);

- Appropriate measures shall be taken to minimize the damage of the equipment when filling and handling the packaging, e.g. use of rubber mats; and

- The packagings shall be constructed and closed so as to prevent any loss of contents during carriage, e.g. by lids, strong inner liners, covers for transport. Openings designed for filling are acceptable if they are constructed so as to prevent loss of content;

(ii) A quality assurance system is in place to ensure that the total amount of lithium cells and batteries per transport unit does not exceed 333 kg;

NOTE: The total quantity of lithium cells and batteries in the equipment from private households may be assessed by means of a statistical method included in the quality assurance system. A copy of the quality assurance records shall be made available to the competent authority upon request.

(iii) Packages are marked "LITHIUM BATTERIES FOR DISPOSAL" or "LITHIUM BATTERIES FOR RECYCLING" as appropriate. If equipment containing lithium cells or batteries is carried unpackaged or on pallets in accordance with packing instruction P909 (3) of 4.1.4.1 [of ADR](#), this mark may alternatively be affixed to the external surface of the vehicles or containers).

NOTE: "Equipment from private households" means equipment which comes from private households and equipment which comes from commercial, industrial, institutional and other sources which, because of its nature and quantity, is similar to that from private households. Equipment likely to be used by both private households and users other than private households shall in any event be considered to be equipment from private households."

(Reference document: ECE/TRANS/WP.15/237, Annex I)

"674 This special provision applies to periodic inspection and test of over-moulded cylinders as defined in 1.2.1.

Over-moulded cylinders subject to 6.2.3.5.3.1 [of ADR](#) shall be subject to periodic inspection and test in accordance with 6.2.1.6.1 [of ADR](#), adapted by the following alternative method:

- Substitute test required in 6.2.1.6.1 d) [of ADR](#) by alternative destructive tests;
- Perform specific additional destructive tests related to the characteristics of over-moulded cylinders.

The procedures and requirements of this alternative method are described below.

Alternative method:

(a) General

The following provisions apply to over-moulded cylinders produced serially and based on welded steel cylinders in accordance with EN 1442:2017, EN 14140:2014 + AC:2015 or annex I, parts 1 to 3 to Council Directive 84/527/EEC. The design of the over-moulding shall prevent water from penetrating on to the inner steel cylinder. The conversion of the steel cylinder to an over-moulded cylinder shall comply with the relevant requirements of EN 1442:2017 and EN 14140:2014 + AC:2015.

Over-moulded cylinders shall be equipped with self-closing valves.

(b) Basic population

A basic population of over-moulded cylinders is defined as the production of cylinders from only one over-moulding manufacturer using new inner cylinders manufactured by only one manufacturer within one calendar year, based on the same design type, the same materials and production processes.

(c) Sub-groups of a basic population

Within the above defined basic population, over-moulded cylinders belonging to different owners shall be separated into specific sub-groups, one per owner.

If the whole basic population is owned by one owner, the sub-group equals the basic population.

(d) Traceability

Inner steel cylinder marks in accordance with 6.2.3.9 [of ADR](#) shall be repeated on the over-moulding. In addition, each over-moulded cylinder shall be fitted with an individual resilient electronic identification device. The detailed characteristics of the over-moulded cylinders shall be recorded by the owner in a central database. The database shall be used to:

- Identify the specific sub-group;
- Make available to inspection bodies, filling centres and competent authorities the specific technical characteristics of the cylinders consisting of at least the following: serial number, steel cylinder production batch, over-moulding production batch, date of over-moulding;
- Identify the cylinder by linking the electronic device to the database with the serial number;
- Check individual cylinder history and determine measures (e.g. filling, sampling, retesting, withdrawal);
- Record performed measures including the date and the address of where it was done.

The recorded data shall be kept available by the owner of the over-moulded cylinders for the entire life of the sub-group.

(e) Sampling for statistical assessment

The sampling shall be random among a sub-group as defined in sub-paragraph (c). The size of each sample per sub-group shall be in accordance with the table in sub-paragraph (g).

(f) Test procedure for destructive testing

The inspection and test required by 6.2.1.6.1 of ADR shall be carried out except (d) which shall be substituted by the following test procedure:

- Burst test (according to EN 1442:2017 or EN 14140:2014 + AC:2015).

In addition, the following tests shall be performed:

- Adhesion test (according to EN 1442:2017 or EN 14140:2014 + AC:2015);
- Peeling and Corrosion tests (according to EN ISO 4628-3:2016).

Adhesion test, peeling and corrosion tests, and burst test shall be performed on each related sample according to the table in sub-paragraph (g) and shall be conducted after the first 3 years in service and every 5 years thereafter.

(g) Statistical evaluation of test results – Method and minimum requirements

The procedure for statistical evaluation according to the related rejection criteria is described in the following.

Test interval (years)	Type of test	Standard	Rejection criteria	Sampling out of a sub-group
After 3 years in service (see (f))	Burst test	EN 1442:2017	Burst pressure point of the representative sample must be above the lower limit of tolerance interval on the Sample Performance Chart $\Omega_m \geq 1 + \Omega_s \times k3(n;p;1-\alpha)^a$ No individual test result shall be less than the test pressure	$3\sqrt[3]{Q}$ or $Q/200$ whichever is lower, and with a minimum of 20 per sub-group (Q)
	Peeling and corrosion	EN ISO 4628-3:2016	Max corrosion grade: Ri2	Q/1 000
	Adhesion of Polyurethane	ISO 2859-1:1999 + A1:2011 EN 1442:2017 EN 14140:2014 + AC:2015	Adhesion value > 0.5 N/mm ²	See ISO 2859-1:1999 + A1:2011 applied to Q/1000
Every 5 years thereafter (see (f))	Burst test	EN 1442:2017	Burst pressure point of the representative sample must be above the lower limit of tolerance interval on the Sample Performance Chart $\Omega_m \geq 1 + \Omega_s \times k3(n;p;1-\alpha)^a$ No individual test result shall be less than the test pressure	$6\sqrt[3]{Q}$ or $Q/100$ whichever is lower, and with a minimum of 40 per sub-group (Q)
	Peeling and corrosion	EN ISO 4628-3:2016	Max corrosion grade: Ri2	Q/1 000
	Adhesion of	ISO 2859-1:1999 +	Adhesion value > 0.5 N/mm ²	See ISO 2859-

	Polyurethane	A1:2011 EN 1442:2017 EN 14140:2014 + AC:2015		1:1999 + A1:2011 applied to Q/1000
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^a *Burst pressure point (BPP) of the representative sample is used for the evaluation of test results by using a Sample Performance Chart:*

Step 1: Determination of the burst pressure point (BPP) of a representative sample

Each sample is represented by a point whose coordinates are the mean value of burst test results and the standard deviation of burst test results, each normalised to the relevant test pressure.

$$BPP: (\Omega_s = \frac{s}{PH} ; \Omega_m = \frac{x}{PH})$$

with

x: sample mean value;

s: sample standard deviation;

PH: test pressure

Step 2: Plotting on a Sample Performance Chart

Each BPP is plotted on a Sample Performance Chart with following axis:

- *Abscissa : Standard Deviation normalised to test pressure (Ω_s)*
- *Ordinate : Mean value normalised to test pressure (Ω_m)*

Step 3: Determination of the relevant lower limit of tolerance interval in the Sample Performance Chart

Results for burst pressure shall first be checked according to the Joint Test (multidirectional test) using a significance level of $\alpha=0.05$ (see paragraph 7 of ISO 5479:1997) to determine whether the distribution of results for each sample is normal or non-normal.

- *For a normal distribution, the determination of the relevant lower limit of tolerance is given in step 3.1.*
- *For a non-normal distribution, the determination of the relevant lower limit of tolerance is given in step 3.2.*

Step 3.1: Lower limit of tolerance interval for results following a normal distribution

In accordance with the standard ISO 16269-6:2014, and considering that the variance is unknown, the unilateral statistical tolerance interval shall be considered for a confidence level of 95% and a fraction of population equal to 99.9999%.

By application in the Sample Performance Chart, the lower limit of tolerance interval is represented by a line of constant survival rate defined by the formula:

$$\Omega_m = 1 + \Omega_s \times k3(n;p;1-\alpha)$$

with

k3: factor function of n, p and 1- α ;

p: proportion of the population selected for the tolerance interval (99.9999%);

1- α : confidence level (95%);

n: sample size.

The value for k_3 dedicated to Normal Distributions shall be taken from the table at end of Step 3.

Step 3.2: Lower limit of tolerance interval for results following a non-normal distribution

The unilateral statistical tolerance interval shall be calculated for a confidence level of 95% and a fraction of population equal to 99.9999%.

The lower limit of tolerance is represented by a line of constant survival rate defined by the formula given in previous step 3.1, with factors k_3 based and calculated on the properties of a Weibull Distribution.

The value for k_3 dedicated to Weibull Distributions shall be taken from the table below at end of Step 3.

Table for k_3 <i>$p=99.9999\%$ and $(1-\alpha)=0.95$</i>		
Sample size n	Normal distribution k_3	Weibull distribution k_3
20	6.901	16.021
22	6.765	15.722
24	6.651	15.472
26	6.553	15.258
28	6.468	15.072
30	6.393	14.909
35	6.241	14.578
40	6.123	14.321
45	6.028	14.116
50	5.949	13.947
60	5.827	13.683
70	5.735	13.485
80	5.662	13.329
90	5.603	13.203
100	5.554	13.098
150	5.393	12.754
200	5.300	12.557
250	5.238	12.426
300	5.193	12.330
400	5.131	12.199
500	5.089	12.111
1000	4.988	11.897
∞	4.753	11.408

NOTE: If sample size is between two values, the closest lower sample size shall be selected.

(h) Measures if the acceptance criteria are not met

If a result of the burst test, peeling and corrosion test or adhesion test does not comply with the criteria detailed in the table in paragraph (g), the affected sub-group of over-moulded cylinders shall be segregated by the owner for further investigations and not be filled or made available for transport and use.

In agreement with the competent authority or the Xa-body which issued the design approval, additional tests shall be performed to determine the root cause of the failure.

If the root cause cannot be proved to be limited to the affected sub-group of the owner, the competent authority or the Xa-body shall take measures concerning the whole basic population and potentially other years of production.

If the root cause can be proved to be limited to a part of the affected sub-group, not affected parts may be authorized by the competent authority to return to service. It shall be proved that no individual over-moulded cylinder returning to service is affected.

(i) Filling centre requirements

The owner shall make available to the competent authority documentary evidence that the filling centres:

- Comply with the provisions of packing instruction P200 (7) of 4.1.4.1 [of ADR](#) and that the requirements of the standard on pre-fill inspections referenced in table P200 (11) of 4.1.4.1 [of ADR](#) are fulfilled and correctly applied;
- Have the appropriate means to identify over-moulded cylinders through the electronic identification device;
- Have access to the database as defined in (d);
- Have the capacity to update the database;
- Apply a quality system, according to the standard ISO 9000 (series) or equivalent, certified by an accredited independent body recognized by the competent authority.”.

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

Chapter 5.2

5.2.1.9.2 In the last paragraph, after “black on white” insert “or suitable contrasting background”.

(Reference document: ECE/TRANS/WP.15/AC.1/146, annex III)

[5.2.2.2.1.1.2 Replace the second and third sentences by “The minimum dimensions shall be 100 mm x 100 mm. There shall be a line inside the edge forming the diamond which shall be parallel and approximately 5 mm from the outside of that line to the edge of the label.”.]

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

Chapter 5.3

5.3.1.1.1 At the end, add: “The placards shall be weather-resistant and shall ensure durable marking throughout the entire journey.”.

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

5.3.2.1.4 Replace “transport units” by “vehicles” and “transport unit” by “vehicle” wherever it appears.

(Reference document: ECE/TRANS/WP.15/237, Annex I)

5.3.2.1.6 Amend to read as follows

[“5.3.2.1.6 For transport units carrying:

- Only one dangerous substance, which requires the marking with orange-coloured plates; and

- No non-dangerous substance in fixed tanks, portable tanks, demountable tanks, tank-containers, MEGCs or in bulk;

the orange coloured-plates described in 5.3.2.1.2, 5.3.2.1.4 and 5.3.2.1.5 shall not be necessary provided that those displayed at the front and rear in accordance with 5.3.2.1.1 bear the hazard identification number and the UN number for that substance prescribed respectively in Columns (20) and (1) of Table A of Chapter 3.2 of ADR.”.]

(Reference document: ECE/TRANS/WP.15/237, Annex I, kept in square brackets, see § 45 of ECE/TRANS/WP.15/237)

5.3.3 Add the following sentence at the end of the second paragraph: “The mark shall be weather-resistant and shall ensure durable marking throughout the entire journey.”.

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

5.3.6.1 Add the following new sentence at the end: “This does not apply to the exceptions listed in 5.2.1.8.1”.

(Reference document: ECE/TRANS/WP.15/AC.1/148/Add.1)

Chapter 5.4

5.4.1.1.1 (f) Amend Note 1 to read as follows:

“NOTE 1: *In the case of intended application of 1.1.3.6, the total quantity and the calculated value of dangerous goods for each transport category shall be indicated in the transport document in accordance with 1.1.3.6.3 and 1.1.3.6.4.*”.

(Reference document: ECE/TRANS/WP.15/237, Annex I)