

2.2 &
2.5

“Transport of packaged waste: inner packagings packed together and “chemical compatibility”

Description of the issue

Original products are packed in a combined packaging, specifically tested for that purpose (see ADR 6.1.5). For waste collection, only the inner packaging (generally not UN-tested) remains available. This waste must be sorted, according to its hazardous properties, and be repacked fulfilling all the requirements of the ADR, which is not possible. There is a lack of a simple legal solution available to replace the missing outer packaging.

This issue is a daily problem faced by the waste management industry and is therefore of high priority in the transport of packed waste.

Several countries have developed national derogations dealing with this issue, proposing a facilitated approach of combined (inner + outer) packaging. There is a need for further harmonization at the ADR level. The challenge remains to verify that transported waste are not incompatible with the used packaging.

During reconditioning, waste is taken out of its original single packaging and brought together with other compatible waste in a ‘new’ waste packaging, UN-tested. As the composition of the mixture is not stable and changes for each used packaging, a solution has to be developed regarding the chemical compatibility.

Current solutions at national level

- **Austria**: multilateral agreement M287:

“The packagings specified in Table A of Chapter 3.2 for the relevant UN number shall be used.

3.2 For the following wastes, packagings which have expired or have not been tested may also be used:

a) Dangerous wastes of Packing Group III.

b) Dangerous wastes of Packing Group II, which correspond to the wastes defined in the table in the Annex to this Agreement according to their UN

number and description.

3.3 The packagings may have buckles and dents. Their condition and content as well as the manner of carriage shall not endanger the compliance with the protection provisions of section 4.1.1 of ADR.

- **Belgium**

For the packaging of materials and objects listed under article 3, except for dangerous goods included in point (a) of article 5, the following provisions must be respected: Inner packaging which contains waste as described in article 3 must be placed in outer receptacles. To this end, the outer receptacles can be opened by the driver/conductor or his assistant. All outer receptacles must be

closed during transport, except for during door-to-door collections of small hazardous waste from municipal sources. The receptacle must also be closed during the journeys preceding or following a round of collection. With exception for class 8, an individual outer receptacle must be used for each class. For materials and objects in class 8, individual receptacle must be used for acids, bases and batteries. In conformity with sub-section 4.1.1.6 ADR, goods shall not be packaged in the same outer packaging as other goods if they react dangerously with one another.

Outer receptacle for waste which belong to the packaging group I must satisfy the requirements for packaging group I in conformity with § 4.1.1.3 of the ADR. The outer receptacle must be labelled with the correct labels and with appropriate markings.

- **Denmark**

Summary

Inner packagings and articles containing waste or residues of dangerous goods of certain classes collected from private households or enterprises for the purpose of disposal may be packed together in certain outer packagings and/or overpacks and carried under special consignment procedures including special packing and marking restrictions. The quantity of dangerous goods per inner packaging, per outer packaging and/or per transport unit is restricted.

Detailed text (free translation)

4) In accordance with the packaging group, see paragraph 7, the waste must be packed in an outer packaging, which according to section 6.1.3 of the ADR is marked with an X or Y.

a) Inner packagings with up to 5 liters of liquid waste must be packed in an outer packaging of one of the following types:

i) Plastic drum with removable lid (1H2)

ii) Steel drum with removable lid (1A2)

iii) Homogeneous plastic box (4H2) in accordance with the provisions of Chapter II

iv) Steel box (4A) in accordance with the provisions of Chapter II;

b) Inner packagings of up to 5 kg of solid waste shall be packed in an outer packaging of one of the following types:

i) Plastic drum with removable lid (1H2)

ii) Steel drum with removable lid (1A2)

iii) Solid plastic box (4H2)

iv) Steel case (4A)

v) Large rigid plastic packaging (50H)

vi) rigid plastic IBC (11H2)

c) Empty, uncleaned inner packagings packaged in an outer packaging of one of the following types:

- i) Plastic drum with removable lid (1H2)*
- ii) Steel drum with removable lid (1A2)*
- iii) Case of homogeneous plastic (4H2)*
- iv) Steel case (4A)*
- v) Large packaging of rigid plastic (50H)*
- vi) rigid plastic IBC (11H2)*
- vii) Woven plastic bag, waterproof (5H3)*

5) In the case of outer packagings, unless a plastic drum with a removable lid (1H2) is used as outer packaging or the outer package contains only empty, uncleaned packages; packages should be placed in a plastic bag which encloses all the inner packagings. The plastic bag must be laced shut before closing the outer packaging.

6) Inner packagings, except for empty, uncleaned packages, must be packed in the outer packaging by means of inert shock absorbing material in sufficient quantity to fill any excess space and to prevent the inner packagings from moving substantially under normal transport conditions. In addition, inner packaging containing liquid waste must be packed in the outer package by means of liquid-absorbent material in sufficient quantity to allow the liquid waste in the two inner packages containing the largest quantities to be absorbed.

7) The total content of the individual outer packaging must be attributed to a UN number, the freight designation and the packaging group that best cover the most important hazard properties, cf. section 2.1.3 of the ADR on classification of mixtures and solutions.

8) The outer packaging must be marked with inscriptions and labels in accordance with the classification, cf. item 7. In addition, it must be labeled with the text 'Hazardous waste'. The label must have A5 format (210 mm × 148 mm) and must be orange with black text and with a 5 mm wide edge also in black. IBCs with a capacity of more than 450 liters and large packagings must bear inscriptions, markings and labels on two opposite sides”.

- **France**

For the collection of household hazardous waste (DDS for *Déchets Diffus Spécifiques*) the French waste collectors use a combination of

- Original inner packaging brought by the citizens
- A plastic bag
- A UN-tested Big bag
- A non-UN-tested palletbox

- **Germany**: Ausnahme 20 (see updated free English translation in annex I and the table in annex II)

Classes 2 to 6.1, 8 and 9: combined packaging and transportation of hazardous waste in packs and IBCs; waste must be packaged in internal packaging (as collected) and categorized in specific waste groups (avoidance of dangerous reactions within a waste group); use of special written instructions relating to the waste groups and as a waybill; collection of domestic and laboratory waste, etc.

If wastes are collected, they may only be filled in the packages and intermediate bulk containers (IBCs) under the supervision of a competent person by means of small delivery receptacles with a capacity of not more than 60 litres or a weight of 60 kilogrammes.

The wastes shall be packed in

- a) plastics drums or jerricans of code 1H2 or 3H2,
- b) steel drums or jerricans of code 1A2 or 3A2,
- c) steel or solid plastics boxes of code 4A or 4H2 or
- d) combination packagings with a close-fitting inner receptacle made of suitable plastics as inner packaging and steel or aluminium boxes of code 4A or 4B as outer packaging

which are type-approved for solids of packing group 1.

The conditions for solids of packing group 1 shall be applied.

- **Sweden**

Small packaging (less than 30 kg) of dangerous goods as waste may be packed in packaging, including IBCs and large packagings, without complying with the provisions of sub-sections 6.1.5.2.1, 6.1.5.8.2, 6.5.6.1.2, 6.5.6.14.2, 6.6.5.2.1 and 6.6.5.4.3 of Annex I, Section I.1 to this Directive. Packaging, including IBCs and large packaging need not be tested as prepared for carriage with a representative sample of small inner packages.

This is permitted provided that:

- packaging, IBCs and large packaging conform to a type which has been tested and approved according to packing group I or II of the applicable provisions of Sections 6.1, 6.5 or 6.6 of Annex I, Section I.1 to this Directive;
- the small packagings are packed with absorbent material that retains any free liquid that might escape into the outer packaging, IBCs or large packaging during carriage; and
- the packaging, IBCs or large packaging as prepared for carriage have a gross mass of no more than the permitted gross mass stated on the

UN design type marking for packing groups I or II for the packaging, IBCs or large packaging; and

- the following sentence is included in the transport document 'Packed according to part 16 of ADR-S'.

- **Switzerland**

1.1.3.11 Exception for household waste

1.1.3.11.1 Household waste containing identifiable dangerous goods

By way of derogation from the ADR requirements concerning packaging, mixed packing, labeling, marking and classification, household waste containing identifiable dangerous goods may be transported from collection centers to disposal undertakings under the following conditions:

- a) an expert approved by the competent authority must evaluate and classify them according to their dangerous properties and in view of the appropriate action to be taken in the event of an incident or an accident. Where the exact classification of a subject is uncertain, the expert shall proceed, on the basis of the sender's knowledge of the subject, to the provisional attribution of a class, official name or UN number. For this purpose, the classification criteria of chap. 2.2 apply and the principles of ch. 2.1.3.5.2 to 2.1.3.5.5 ADR. The classification will take into account the main danger; the use of appropriate n.o.s. is permitted;
- b) the expert must pack the household waste in suitable collection containers. Marking and labeling of individual containers is not necessary if the collection containers are marked;
- c) the expert must instruct the driver of the vehicle accordingly;
- d) the transport document must bear the inscription "Transport according to Appendix 1, ch. 1.1.3.11.1, SDR ". The indication of the technical name according to ch. 3.1.2.8 ADR is not necessary and the information according to ch. 5.4.1.1.1, let. e, ADR can be limited to the gross mass and the number of collection containers.

1.1.3.11.2 Household waste containing unidentifiable dangerous goods

By way of derogation from the ADR requirements concerning packaging, mixed packaging, labeling, marking and classification; household waste that cannot be classified by the expert in accordance with ch. 1.1.3.11.1, let. a, can be transported from collection centers to disposal undertakings under the following conditions:

- a) the waste may be transported at the rate of 50 kg or l maximum per transport unit in packages which meet the requirements of the Packing Group II tests;
- b) the quantity per transport unit may be increased to 300 kg or l if these packages are packaged as inner packaging in an outer packaging that meets the requirements of Packing Group II tests;
- c) the packages must bear danger labels conforming to models 3, 6.1, 8 and 9, as well as the inscription "Dangerous goods unidentified" which must be durable and clearly visible;

- d) an accompanying document is required, containing at least the following information:
- The reference “Transport according to ch. 1.1.3.11.2 SDR”
 - The name and the address of the sender(s);
 - The name and the address of the recipient(s);
 - The name and the weight of the package.

- **The Netherlands:**

New packaging in development especially designed for waste to be used as external packaging for different kinds of inner packaging.

Nowadays, UN-tested open drums are used for the packaging of waste :

- USA

Suggested amendment to the ADR:

Specific rules are required for the packaging of industrial waste under section 6.1.5.2.5

Do we agree on the development of

1. A standardized procedure for the testing of UN-inner packaging for waste
2. A standardized procedure for the testing of UN-outer packaging used for inner single waste packaging non UN-tested

Justification

This proposal clarifies the situation faced in waste management and has no significant effect on the Current risk level.