**Economic Commission for Europe**

Inland Transport Committee

**Working Party on the Transport of Dangerous Goods**

**Joint Meeting of the RID Committee of Experts and the  
Working Party on the Transport of Dangerous Goods 6 March 2023**

Bern, 20-24 March 2023  
Item 5 (a) of the provisional agenda

**Proposals for amendments to RID/ADR/ADN: pending issues**

**Direct delivery of dangerous goods to end customers (overpacks)**

Submitted by the Council on Safe Transportation of Hazardous Articles (COSTHA)

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| *Summary* |
| **Executive summary:**  The amount of dangerous goods transported directly to end consumers has increased in volume in recent years. However, the RID/ADR/ADN, as written, predominantly covers transportation between businesses, whether those businesses are manufacturers, shippers, retail locations or distribution sites.  The direct delivery to an end consumer has historically been handled by parcel delivery companies, the postal services and the consumer themselves. To that end, the regulations have exceptions intended to limit the transport requirements for some of these types of shipments.  **Action to be taken:** Consider potentially including a new definition for “Consolidation bin” in RID/ADR/ADN.  **Related documents:** Informal document INF.31 (COSTHA) of the Spring 2022 session, documents ST/SG/AC.10/C.3/2022/27 and ST/SG/AC.10/C.3/2022/28, and informal documents INF.20 (COSTHA) and INF.29 (RECHARGE) of the Autumn 2022 session. |
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Background

1. At the March 2022 session of the Joint Meeting of the RID Committee of Experts and the Working Party on the Transport of Dangerous Goods (WP.15/AC.1), COSTHA presented informal document INF.31 for discussion purposes and to gather input for a future proposal. Delegations were able to provide initial comments for which COSTHA was grateful, and from which a working paper was developed for the September session of the Joint Meeting.
2. Thus, COSTHA presented working document ECE/TRANS/WP.15/AC.1/2022/28 (WP.28) proposing to either amend the definition of “overpack” or to amend 3.4.1.1, 3.5.4.3, and special provision 188 of the RID/ADR/ADN to account for the use of overpacks for packages of dangerous goods in limited quantities, in excepted quantities, and those containing small, excepted lithium batteries. Some delegations expressed concerns with the proposal even though there is a difference between the UN Model Regulations and RID/ADR/ADN with respect to the definition of “overpack”. Many delegations seemed concerned with the examples provided instead of on the difference in definition and the practical ramifications of this different definition.
3. Since the last session of the Joint Meeting, COSTHA has been reviewing other regulatory text for potential pathways to resolving the issue described. In this informal document, COSTHA would like to introduce a concept used in other regulations which may help provide clarity on the issue.
4. For background and context, many carriers (especially parcel delivery and postal services) have the established practice of using a handling device (i.e., bag, tote, bin, etc.) during final mile delivery operations. While the bags increase the overall safety of these parcels in transport by providing yet another level of containment and protection, they are used mostly to facilitate the carriage of multiple parcels by organizing them in the delivery truck. These “bags” are then unloaded at different stops along a delivery route. Similar bags are utilized in other operations such as delivery by bike and hand delivery. Postal services and other delivery operations involving the hand carriage of parcels will also often utilize bags. There are some competent authorities who have derogations on file to except these types of bags from overpack markings, while most follow the ADR to strictly interpret as markings being necessary during all legs of the transportation, including the last mile.

Justification

1. COSTHA believes it is the core principle of ADR to guarantee safe transport of dangerous goods. The content of the bags / handling devices is constantly changing as the driver delivers individual parcels. It often contains both marked (dangerous) and unmarked (non-dangerous) goods. The driver does not know when the final marked dangerous goods consignment is removed from any one of the bags contained within a last mile delivery vehicle during the duration of a run. According to ADR, once the last consignment containing dangerous goods is removed, the marking required for an overpack (and/or LQ, Li-Bat) must be removed, since it is no longer applicable or appropriate. Not removing this marking would communicate a hazard that does not exist and violate the ADR requirements. It places additional pressure and responsibility on the driver to constantly watch the content of the bags by looking through the bags and handling the packages to verify compliance (the drivers do not have the space or time to safely carry out this function after every delivery throughout the run), and remove the marks from the handling device as appropriate. COSTHA sees the primary duty and focus of delivery employees on safe navigation, handling, and delivery of the packages to the end consumer.

Definition of overpack

6. In the UN Model Regulations, an overpack *means an enclosure used by a single consignor to contain one or more packages and to form one unit for convenience. Examples of overpacks are a number of packages either:*

*(1) Placed or stacked onto a load board such as a pallet and secured by strapping, shrink wrapping, stretch wrapping, or other suitable means; or*

*(2) Placed in a protective outer packaging such as a box or crate.*

7. In RID/ADR/ADN, an overpack means an enclosure used (by a single consignor in the case of radioactive material) to contain one or more packages, consolidated into a single unit easier to handle and stow during carriage. Examples of overpacks:

*(a) A loading tray such as a pallet, on which several packages are placed and stacked and secured by a plastics strip, shrink or stretch wrapping or other appropriate means; or*

*(b) An outer protective packaging such as a box or a crate.*

8. In the International Civil Aviation Organization (ICAO) Technical Instructions, the International Maritime Dangerous Goods (IMDG Code), the United States Department of Transpiration’s Hazardous Material Regulations (US DOT 49 CFR) and in Transport Canada’s Transportation of Dangerous Goods Regulations, the definition of an overpack is the same as in the UN Model Regulations.

Consolidation bins

9. The United States Department of Transpiration’s Hazardous Material Regulations (US DOT 49 CFR) and Transport Canada’s *Transportation of Dangerous Goods* (TDG) Regulations have utilized a regulatory term, consolidation bin, and have included requirements associated with the use of the bins.

10. Within §172.404(c) of US DOT 49 CFR, consolidation bins used by a single motor carrier:

(a) must be reusable, made of materials such as plastic, wood, or metal and have a capacity of 1.8 m3 or less;

(b) must be properly blocked and braced within the transport vehicle; and

(c) may only be transported by a single motor carrier, or on railcars transporting such vehicles; and

(d) the outside of the consolidation bin must be labelled as required for each class of hazardous material contained therein, unless labels representative of each hazardous material are visible from the outside of the consolidation bin. Alternatively, labelling of a consolidation bin is not required if the consolidation bin is clearly and legibly marked on a tag or fixed display device with an indication of each hazard class or division contained within the bin.

Additionally, dangerous goods packages placed in the consolidation bin:

(a) must be marked and labelled as required by the regulations;

(b) must not require segregation;

(c) may only be placed within the consolidation bin, and the bin be loaded on a motor vehicle, by an employee of a single motor carrier; and

(d) must be secured within the consolidation bin by other packages or by other suitable means in such a manner as to prevent shifting of, or significant relative motion between, the packages that would likely compromise the integrity of any package.

11. Within Section 1.4, ***Definitions*,** of Transport Canada’s TDG Regulations, a consolidation bin is defined as a bin that is used in a road vehicle:

*“(a) to secure one or more small means of containment so that, under normal conditions of transport, they will not shift in a way that might compromise their integrity; and*

*(b) to allow small means of containment to be added or removed during transport.”*

*Note*: According to paragraph (b) above, a consolidation bin allows users to add or remove small means of containment during transport (unlike an overpack). A typical user of consolidation bins would be a delivery service that makes many deliveries in one route.

Part 4, **Dangerous Goods Safety Marks**, of the TDG Regulations contains the marking and labelling requirements. Section 4.10.2, *Safety Marks on a Consolidation Bin*, states that:

*“When a label is required by this Part to be displayed on a small means of containment that is inside a consolidation bin, an indication of each class of dangerous goods contained in the consolidation bin must be clearly and legibly marked on a tag or fixed display device that is attached to the bin.”*

Part 5, **Means of Containment**, of the TDG Regulations contains the packaging requirements. Section 5.18, contains further details on the use of consolidation bins as follows:

*“A person must not use a consolidation bin to handle or transport dangerous goods in a road vehicle unless:*

*(a) the capacity of the consolidation bin is less than or equal to 1.8 m3 (64 cubic feet);*

*(b) the consolidation bin is reusable and constructed of plastic, wood or metal; and*

*(c) the consolidation bin is blocked or braced within the road vehicle.”*

12. Similarly, within the ICAO Technical Instructions, when dangerous goods packages which require a hazard label are loaded into Unit Load Devices (ULDs), each ULD must display an identification tag on its exterior indicating that dangerous goods are contained within the ULD.

13. It is COSTHA’s opinion that the requirements within US DOT 49 CFR, the TDG Regulations present a possible way forward for introducing a definition of a carrier specific handling device (such as a consolidation bin) that would be subject to appropriate hazard communication requirements. Additionally, this concept is similar to what is utilized for carrier specific handling devices within air transportation (i.e., Unit Load Devices, ULDs) as per the ICAO Technical Instructions’ requirements.

Proposals

14. COSTHA is considering presenting this concept in a proposal to a future session of the Joint Meeting but would first like to hear and understand delegates’ opinions and concerns to the information presented in this informal document to formulate an agreeable proposal for future consideration.

15. Comparison between “Overpack” and “Consolidation bin”:

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|  | **Overpack** | **Consolidation bin** |
| Purpose | Based on the UN definition, this term is primarily intended to cover shippers and their responsibilities. | * Similar to a ULD, consolidation bins are utilized for the convenience of carriers. * The use of a different term allows for specific and necessary requirements to be included based on scope and applicable limitations. |
| Definition | An overpack is an enclosure used (by a single consignor in the case of radioactive material) to contain one or more packages, consolidated into a single unit easier to handle and stow during carriage. | A consolidation bin is used in a road vehicle to secure one or more dangerous packages so that, under normal conditions of transport, they will not shift in a way that might compromise their integrity. The use of a consolidation bin also allows packages to be added or removed during transport. |
| Applicability | Any enclosure of one or more packages. | * Limited to transportation by a single motor carrier, or on railcars transporting such vehicles (US specific limitation). * This applicability could also require the bin to be prepared by the carrier. |
| Marking and Labelling | * Marked “Overpack” with representative marks/labels replicated as necessary. * Marks must be updated as appropriate during transportation. | * Labelling is only required when labels are present on packages in the consolidation bin (similar to requirements for ULD within ICAO TI); a tag may be used instead of labels. * Requirements would need to be developed for when labels are required to be removed or not (i.e. during transportation) |