

Economic Commission for Europe

Inland Transport Committee

Working Party on the Transport of Dangerous Goods

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Interpretation of ADR**ADR Tank-Containers and UN Portable Tanks****Transmitted by the International Road Transport Union (IRU)**

1. During the last meeting of the IRU Group of Experts on the Transport of Dangerous Goods (GEMD), several issues regarding tank-containers (ADR) and portable tanks (UN) were raised.
2. The chapters 4.2 and 6.7 of the ADR/RID/ADN define the use and construction of UN portable tanks. This type of tanks is provided with an “Instruction for portable Tanks & Bulk Containers”, for instance T-code: T7. UN portable tanks can be used either in land- (road, rail and inland waterways) as in sea transport. The ADR/RID/ADN chapter 4.2 is a “copy/paste” version of chapter 4.2 of the IMDG code.
3. The chapters 4.3 and 6.8 of the ADR/RID/ADN define the use and construction of tank-containers. This type of tanks is provided with a “Tank Code for ADR tanks”, for instance: L4BH. ADR tank containers can only be used in land transport (except IMO 4 tanks, which can be used in sea transport under very strict restrictions).
4. Since the UN portable tanks are incorporated in the ADR/RID/ADN rules, it is possible to operate a “basic” land transport of certain dangerous goods either with a UN portable tank or with an ADR tank-container.
5. Under the technical specifications and instructions, we found the following descriptions for:

ADR tank-containers**i. Technical specifications**

The general provisions for the use of ADR tank-containers are in chapter 4.3.

The requirements for the construction, equipment, type approval, inspections and tests and marking are in chapter 6.8, along with other tanks, such as fixed tanks, demountable tanks, etc.

The use is only for land transport.

ii. Instructions

The coding of tanks is divided into four parts of the codes (tank codes) given in column (12) of table A in chapter 3.2.

- Type of tank (L or S) – L for liquid state / S for solid state.
- Calculation pressure

- Openings as described in 6.8.2.2.2
- Safety valves/devices (V, F, N, H) – V for venting system; F for venting system with flame trap; N for venting system not hermetically closed and H for hermetically closed tank.

UN portable tanks

i. Technical specifications

The general provisions for the use of UN portable tanks are in chapter 4.2 of the UN Model Regulations (Orange book) and were copied in the IMDG and the ADR/RID/ADN.

The requirements for construction, inspection and testing are in chapter 6.7, along with UN Multiple-element gas containers (MEGCs).

The use is for land and sea transport (worldwide).

ii. Instructions

Portable tank instructions specify the requirements applicable to a portable tank when in used for carriage of specific substances. The instruction “T” specifies the minimum test pressure, the minimum shell thickness, the minimum pressure-relief and bottom-opening requirement, given in column (10) of table A in chapter 3.2.

- Minimum test pressure (bar)
- Minimum shell thickness (in mm-reference steel)
- Pressure-relief requirements (see sub-section 6.7.2.8)
- Bottom opening (see sub-section 6.7.2.6)

6. For the same products, it has been notified that there are some discrepancies regarding the “tank specifications” for same products carried by tank-containers and portable tanks. The differences are:

- Between test pressure
- Between discharging
- Between hermetical closure

7. The following example gives different minimum requirements for tanks carrying the same product.

UN 1230 Methanol, 3, II, (D/E)

	ADR Tank-containers	UN Portable tanks
Code :	L4BH	T7
Test pressure :	4bars	4 bars
Discharging :	Bottom	Bottom
Hermetically closed :	Yes	No

8. The above example demonstrates that there are discrepancies between tank requirements for the same products carried by tanks. There are differences regarding the test pressure, discharging and hermetically situation.

The maintenance of ADR tank-containers is much more expensive than that of UN portable tanks, but provides some advantages as shell requirements for UN portable tanks are higher, which penalises them because of the higher tare weight (less cargo weight). UN portable tanks might offer an economical advantage as they can be used for all modes of transport.

9. In many cases, a portable tank with a T code meets the conditions of a tank code. For example, a portable tank having a code T7 also technically meets the requirements for a tank with tank code L4BN. On this basis, many tank-containers/tanks mobiles are equipped with a double code: a tank code and a tank instruction code “T”.

The issue faced today by tank transport operators is: what code should be used for land transport, when there is a conflict between codes as described under paragraph III of this document?

If we take the example given above: 1230 Methanol: the tank should have a double code: T7 and L4BH. Now, as it is known, the tanks with double codes are as follows for loading: with T7/L4BN codes.

According to the T, the portable tank can do the transport and according to the tank code for the tank-container, the transport is prohibited.

The actual situation is that many loaders refuse to load some products when transport companies present tank with double codes. It confuses the loader and gives a huge penalty to the transport companies facing double coding tanks when the products cannot be loaded.

10. Based on this analysis, the IRU therefore requests the experts of the WP.15 to clarify the **position of the loader** facing double coding tanks.

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