

## Economic Commission for Europe

### Inland Transport Committee

Working Party on the Transport of Dangerous Goods

19 February 2024

Joint Meeting of the RID Committee of Experts and the  
Working Party on the Transport of Dangerous Goods

Bern, 25-28 March 2024

Item 3 of the provisional agenda:

**Standards**

### **Standard EN 1439:2021 in RID/ADR 2023**

**Transmitted by the Government of the Netherlands**

#### **I. Introduction**

1. Standard EN 1439:2021 shall apply to transportable refillable LPG cylinders for checking these cylinders before, during and after filling with LPG according to packing instruction P200 in RID/ADR 2023.
2. Clause 7.3 (Final checks) of standard EN 1439:2021 prescribes inter alia that cylinders, valves and valve seals shall be checked for leakage and that the admissible leakage rate shall be in any case not higher than 5 g/h.
3. However, serious concerns have been raised in the Netherlands regarding this leakage rate of 5 g/h in this standard, because it might be too high and can cause fire and explosion risks due to accumulation of LPG gas in closed areas of poorly ventilated spaces.
4. Unfortunately, there have been some accidents that were caused due to leakages from these LPG cylinders in roofers' vans in the past in the Netherlands. Also, many other incidents have happened with leaking of these LPG cylinders in construction sites, caravans, campers, or pleasure boats.
5. An indicative calculation also shows that an LPG cylinder with a leakage rate of 5 gram LPG gas per hour and a leakage duration of about 36 hours will result in exceeding the lower explosion limit of LPG gas in small (poorly ventilated) vans used by roofers. This may lead to fire and explosion if appropriate measures are not taken.
6. It is also stated in the general provision of packing instruction P200 (1) in section RID/ADR 4.1.4.1 that pressure receptacles shall be so closed and leakproof as to prevent escape of the gas or that the closures and equipment are not leaking according to RID/ADR 4.1.3.6.7.
7. This means that Clause 7.3 of EN 1439:2021 seems to conflict with the provisions 4.1.4.1 and 4.1.3.6.7 of RID/ADR. In such a case, these provisions of RID/ADR take precedence according to 1.1.5. However, RID/ADR is not clear on this point because Clause 7.3 of the standard is not explicitly excluded from application and thus this Clause may be used.
8. It is understood that no seal or valve will be 100 per cent tight. However, a maximum leakage rate of 5 g/h as prescribed in Clause 7.3 of EN 1439:2121 is expected to be too high if safety has to be guaranteed, for example in roofers' vans being parked over a weekend or in other poorly ventilated confinements.

## **II. Request and way forward**

9. The Joint Meeting is requested to consider if the leakage rate in Clause 7.3 of standard EN 1439:2021 is justified and acceptable and if deemed necessary to determine an acceptable leakage rate in RID/ADR or in the standard.

## **III. Justification**

10. It is from a safety point of view the aim of this document to seek a rationale for the leakage rate for valves and valve seals of LPG cylinders in standard EN 1439:2021 and to resolve conflicts between this standard and applicable provision in RID/ADR.

11. Ensuring a more systematic approach and a better rationale in RID/ADR helps to develop clearer legal texts to ensure safety and avoid different criteria among different Contracting States/Parties and inspection services, and thus helps to implement the United Nations Sustainable Development Goal number 16: Peace, justice and strong institutions.

12. It is also a fact that any emission or leakage of LPG has a negative impact on climate change and should be avoided. By including requirements in standard EN 1439:2021 to minimize these emissions or leakages helps to implement the United Nations Sustainable Development Goal number 13: Take urgent action to combat climate change and its impacts.

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