

Use of hydrogen trucks in the transport of dangerous goods according to ADR

1. Reason and legal basis

With the further development of the **European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)**, the regulatory framework has been adapted to modern vehicle technologies.

The currently valid version of the ADR (**ADR 2025**, in force since **1 January 2025**, binding since 1 July 2025) permits the use of hydrogen-powered lorries for the **transport of dangerous goods**, provided that the relevant requirements are met.

The Clean Energy Partnership (CEP) provides information on the resulting legal framework in this fact sheet.

2. Principle of the ADR regulation

The ADR regulates the safe transport of dangerous goods based on:

- Vehicle types (AT = vehicle for other dangerous substances, FL = vehicle for flammable liquids and gases).
- Structural and safety requirements for vehicles.

Hydrogen-powered trucks may be used for the transport of dangerous goods if:

- a valid national or European vehicle registration certificate is available and
- the ADR requirements for the respective vehicle type are met.

3. Hydrogen trucks in hazardous goods transport

Hydrogen trucks are defined as:

- **Fuel cell electric vehicles (FCEVs)** with electric drive systems

- **Truck with hydrogen internal combustion engine (HICE)**

The following applies to both vehicle concepts:

- The safety-related components are subject to existing international technical regulations.
- **The vehicle's ADR compliance** is the sole determining factor for its use in the transport of dangerous goods.

4. Significance of the ADR amendment

The further development of the ADR clarifies that:

- new drive technologies can be integrated into existing safety concepts.
- the transport of dangerous goods is also possible with low-emission commercial vehicles.
- technological innovation and safety requirements are being developed jointly.

The ADR thus creates a clear and **reliable framework** for the use of hydrogen trucks in the transport of dangerous goods.

5. Practical information

When using hydrogen trucks for the transport of dangerous goods, particular attention must be paid to the following:

- Classification of the vehicle in the applicable ADR vehicle type.
- ADR-compliant vehicle design and equipment.
- National implementation regulations as well as operational and insurance requirements.

These tests are carried out **regardless of the type of drive**.

6. Source

ADR 2025 - European Agreement concerning the International Carriage of Dangerous Goods by Road, [document: ECE/TRANS/352/](#)

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