



Fire Industry Association

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Portable Fire Extinguishers under the ADR

The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) refers to portable fire extinguishers in two ways:

- A.** As an article for transport to which the provisions of the ADR apply, and
 - B.** As safety equipment required to be carried by vehicles transporting dangerous goods.
- This Fact File provides guidance on both areas.

A. ADR requirements for transporting fire extinguishers

1. Background

The European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR) sets out which articles are barred from international carriage and those which require controls.

Annexes A and B which contain the main requirements of the agreement have been regularly amended and updated since the entry into force of ADR, the last amendment being in 2005.


Portable fire extinguishers are listed in Chapter 3.2 “the dangerous goods list” under UN number 1044 and description “Fire Extinguishers with compressed or liquefied gases”. The associated class under the ADR is class 2 and special provisions 225 and 594 apply. (Full explanations of these are given in the ADR text.)

2. Requirements

Table 1 below sets out the requirements for the transport of portable fire extinguishers under the ADR.

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Table 1 ADR requirements for the carriage of fire extinguishers

<p><u>Carriage of fire Extinguishers.</u></p>	<p>225 Fire extinguishers under this entry may include installed actuating cartridges (cartridges, power device of classification code 1.4C or 1.4S), without changing the classification of Class 2, group A or O according to 2.2.2.1.3 provided the total quantity of deflagrating (propellant) explosives does not exceed 3.2 g per extinguishing unit.</p>
<p><u>Carriage of fire Extinguishers.</u> Fire Extinguishers are considered exempt from the requirements of the ADR according to special provision 594 see column 2.</p>	<p>594 The following articles, manufactured and filled according to the regulations of the manufacturing State and packaged in strong outer packagings, are not subject to the requirements of ADR: - UN No. 1044 fire extinguishers provided with protection against inadvertent discharge; it is considered that the original cardboard box supplied with a new extinguisher is suitable and marked with the following</p> <div style="text-align: center;">  <p>UN Number 1044</p> </div>

Note: there may be differing labelling requirements in other EU Member States

B. Portable Fire extinguisher to be carried on vehicles transporting dangerous goods under the ADR Annex B Chapter 8

1. Background

Vehicles transporting dangerous good under the ADR have to meet specific requirements with regard to their construction, crews, equipment carried and documentation. These requirements are contained in chapters 8 and 9. Chapter 9 covers the construction requirements and chapter 8 the requirements for crew, equipment and documentation.

2. Requirements

Table 2 below highlights the main requirements with regard to the fire extinguishers to be carried on ADR vehicles in the 2005 edition of the ADR.

Table 2 Portable Fire extinguishers to be carried on vehicles transporting dangerous goods

Portable Fire extinguishers

Chapter 8 clause 8.1.4 covers the requirements for fire fighting equipment to be carried on vehicles transporting dangerous goods

- Every transport unit shall be equipped with at least one portable fire extinguisher for the inflammability classes¹ A, B and C, with a minimum capacity of 2 kg dry powder (or an equivalent capacity for any other suitable extinguishant agent) suitable for fighting a fire in the engine or cab of the transport unit.
- Additional equipment is required as follows:
 - i. for transport units with a maximum permissible mass of **more than 7.5 tonnes**, one or more portable fire extinguishers for the inflammability classes¹ A, B and C, with a **minimum total capacity of 12 kg dry powder** (or an equivalent capacity for any other suitable extinguishing agent), of which at least one shall have a **minimum capacity of 6 kg**;
 - ii. for transport units with a maximum permissible mass of more than **3.5 tonnes up to and including 7.5 tonnes**, one or more portable fire extinguishers for the inflammability classes¹ A, B and C, with a **minimum total capacity of 8 kg dry powder** (or an equivalent capacity for any other suitable extinguishing agent), of which at least one shall have a **minimum capacity of 6 kg**;
 - iii. for transport units with a maximum permissible mass of up to and including **3.5 tonnes**, one or more portable fire extinguishers for the inflammability classes¹ A, B and C with a **minimum total capacity of 4 kg dry powder** (or an equivalent capacity for any other suitable extinguishing agent);

Clause 8.1.4.4 also states the following:

The portable fire extinguishers conforming to the provisions of 8.1.4.1 or 8.1.4.2 shall be fitted with a seal verifying that they have not been used. In addition, they shall bear a mark of compliance with a standard recognized by a competent authority and an inscription at least indicating the date (month, year) of the **next recurrent inspection** or of the maximum permissible period of use, as applicable.

¹ For the definition of the inflammability classes, see Standard EN 2:1992 Classification of fires.

Note: These requirements are unchanged from the 2003 ADR.

There is one exemption to the requirements of clause 8.1.4 and that is given in clause 1.6.5.6 which states that transport units equipped with fire extinguishers in accordance with the provisions of 8.1.4 applicable until 31 December 2002 may continue to be used until 31 December 2007.

This means that any vehicle built and equipped before 1st January 2003 will comply with the 2001 ADR requirements. The 2001 ADR only required a 6 kg, dry powder equivalent, extinguisher irrespective of the size of the unit. If the maximum mass of the unit was less than 3.5 tonnes then 2x 2kg, dry powder equivalent, extinguishers were considered sufficient.

3. Sources of further information

The text of all the versions of the ADR can be found and freely downloaded from the UNECE website:

<http://www.unece.org/trans/danger/danger.htm>

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