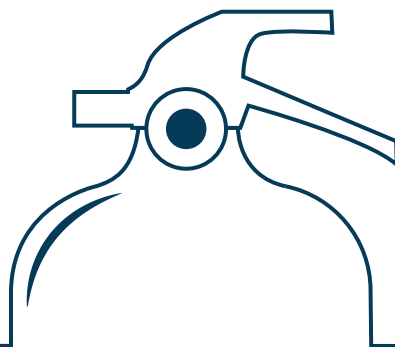


Fact File 78



Fire Industry Association



Portable Fire Extinguishers under the ADR

Note: This Fact File supersedes Fact File 060 which is withdrawn

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

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 2017.

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.)

The ADR has been implemented in the UK in the 'The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009. This gives the ADR a level of enforcement that is not in the ADR.

REQUIREMENTS

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

Table 1: ADR requirements for the carriage of fire extinguishers

<p>Carriage of fire Extinguishers.</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 3.2g per extinguishing unit. Fire extinguishers shall be manufactured, tested, approved and labelled according to the provisions applied in the country of manufacture.</p> <p><i>Note: 'Provisions applied in the country of manufacture' means the provisions applicable in the country of manufacture or those applicable in the country of use.</i></p> <p>Fire extinguishers under this entry include:</p> <ul style="list-style-type: none"> (a) Portable fire extinguishers for manual handling and operation; (b) fire extinguishers for installation in aircraft; (c) fire extinguishers mounted on wheels for manual handling; (d) fire extinguishing equipment or machinery mounted on wheels or wheeled platforms or units carried similar to (small) trailers; and (e) fire extinguishers composed of a non-rollable pressure drum and equipment, and handled, eg by fork lift or crane when loaded or unloaded. <p><i>NOTE: Pressure receptacles which contain gases for use in the above-mentioned fire extinguishers or for use in stationary fire fighting installations, shall meet the requirements of Chapter 6.2 and all requirements applicable to the relevant dangerous goods, when these pressure receptacles are carried separately.</i></p>
<p>Carriage of fire extinguishers Fire extinguishers are considered exempt from the requirements of the ADR, according to special provision 594 – see column two.</p>	<p>594 The following articles, manufactured and filled according to the regulations of the manufacturing state and packaged in strong outer packaging materials, are not subject to the requirements of ADR:</p> <p>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: right;">  </div> <p style="text-align: right;">UN Number 1044</p>

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

BACKGROUND

Vehicles transporting dangerous goods 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.

REQUIREMENTS

Table 2 below highlights the main requirements with regard to the fire extinguishers to be carried on ADR vehicles in the 2017 edition of the ADR.

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

<p>Portable fire extinguishers</p> <p>Chapter 8 clause 8.1.4 covers the requirements for fire fighting equipment to be carried on vehicles transporting dangerous goods</p>	<p>8.1.4.1 provides information on the extinguishers to be carried and in the 2013 edition, this is provided in tabular form:</p> <p>8.1.4.1 states the following: The following table shows the minimum provisions for portable fire extinguishers the inflammability Classes¹ A, B and C that apply to transport units carrying dangerous goods except for those referred to in 8.1.4.2.</p>				
	(1) Transport unit maximum permitted mass	(2) Minimum number of fire extinguishers	(3) Minimum total capacity per transport unit	(4) Extinguisher suitable for engine or cab fire. At least one with minimum capacity of:	(5) Additional extinguisher(s) requirement. At least one extinguisher shall have a minimum capacity of:
	≤ 3.5 Tonnes	2	4 kg	2 kg	2 kg
	> 3.5 Tonnes ≤ 7.5 Tonnes	2	8 kg	2 kg	6 kg
	> 7.5 Tonnes	2	12 kg	2 kg	6 kg
<p>The capacities are for dry powder devices (or an equivalent capacity for any other suitable extinguishing agent).</p> <p>Clause 8.1.4.2 states the following: Transport units carrying dangerous goods in accordance with 1.1.3.6, shall be equipped with one portable fire extinguisher for the inflammability Classes¹ A, B and C, with a minimum capacity of 2kg dry powder (or an equivalent capacity for any other suitable extinguishing agent).</p> <p>Clause 8.1.4.3 also states the following: The portable fire extinguishers shall be suitable for use on a vehicle and shall comply with the relevant requirements of EN 3 Portable fire extinguishers, Part 7 (EN 3-7:2004 + A1:2007).</p> <p>If the vehicle is equipped with a fixed fire extinguisher, automatic or easily brought into action for fighting a fire in the engine, the portable extinguisher need not be suitable for fighting a fire in the engine. The extinguishing agents shall be such that they are not liable to release toxic gases into the driver's cab or under the influence of the heat of the fire.</p> <p>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 recognised 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.</p> <p>The fire extinguishers shall be subjected to periodic inspections in accordance with authorized national standards in order to guarantee their functional safety</p> <p>Clause 8.1.4.5 also states the following: The fire extinguishers shall be installed on the transport units in a way that they are easily accessible to the vehicle crew. The installation shall be carried out in such a way that the fire extinguishers shall be protected against the effects of the weather, so that their operational safety is not affected.</p>					

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

DISCLAIMER

The information set out in this document is believed to be correct in the light of information currently available but it is not guaranteed and neither the Fire Industry Association nor its officers can accept any responsibility in respect of the contents or any events arising from use of the information contained within this document.



Fire Industry Association

Tudor House, Kingsway Business Park, Oldfield Road, Hampton, Middlesex TW12 2HD

Tel: +44 (0)20 3166 5002 • www.fia.uk.com