



NSAI
Standards

Irish Standard
I.S. EN 1846-2:2009+A1:2013

Firefighting and rescue service vehicles - Part 2: Common requirements - Safety and performance

I.S. EN 1846-2:2009+A1:2013

Incorporating amendments/corrigenda/National Annexes issued since publication:
EN 1846-2:2009/A1:2013

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWIFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces:
EN 1846-2:2009

<i>This document is based on:</i> EN 1846-2:2009+A1:2013 EN 1846-2:2009	<i>Published:</i> 25 February, 2013 5 August, 2009
---	--

This document was published under the authority of the NSAI and comes into effect on:
25 February, 2013

ICS number:
13.220.10

NSAI
1 Swift Square,
Northwood, Santry
Dublin 9

T +353 1 807 3800
F +353 1 807 3838
E standards@nsai.ie
W NSAI.ie

Sales:
T +353 1 857 6730
F +353 1 857 6729
W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

English Version

Firefighting and rescue service vehicles - Part 2: Common requirements - Safety and performance

Véhicules des services de secours et de lutte contre l'incendie - Partie 2: Prescriptions communes - Sécurité et performances

Feuerwehrfahrzeuge - Teil 2: Allgemeine Anforderungen - Sicherheit und Leistung

This European Standard was approved by CEN on 3 July 2009 and includes Amendment 1 approved by CEN on 8 December 2012.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

	page
Foreword.....	3
Introduction	4
1 Scope	5
2 Normative references	6
3 Terms and definitions, symbols and abbreviated terms	7
4 List of significant hazards	11
5 Requirements	14
5.1 Safety requirements and/or protective measures - Verifications	14
5.1.1 General requirements.....	14
5.1.2 Body	19
5.1.3 Electrical equipment.....	28
5.1.4 Operating and control instruments – Control system	29
5.1.5 Noise	30
5.1.6 Mechanical coupling	31
5.1.7 Breakdown and towing	31
5.2 Performance requirements – Verification	31
5.2.1 General performance requirements.....	31
5.2.2 Body	35
5.2.3 Electrical equipment.....	38
5.2.4 Operating and control instruments.....	39
5.2.5 Corrosion resistance	39
6 Information for use	40
6.1 General.....	40
6.2 Instruction handbook	40
6.3 Documents	42
6.4 Marking	42
6.4.1 General.....	42
6.4.2 Other markings	42
Annex A (normative) General conditions for the verification procedures	43
Annex B (informative) Example of an exhaust coupling	44
Annex C (informative) Different methods of determining levels of slip-resistance	45
Annex D (informative) Removal heights from equipment lockers	46
Annex E (informative) Examples of technical measures for noise reduction	47
Annex F (normative) Noise test code for the noise emission values declaration (Grade 2 of accuracy).....	48
F.1 General.....	48
F.2 Emission sound pressure level determination	48
F.3 Sound power determination	48
F.3.1 General.....	48
F.3.2 Vehicles up to and including 4 m in length.....	49
F.3.3 Vehicles more than 4 m in length.....	49
F.4 Installation and mounting conditions.....	49
F.5 Operating conditions.....	49
F.6 Measurement uncertainties	50
F.7 Information to be recorded and reported	50
F.8 Declaration and verification.....	50
Annex G (informative) Acceptance test on delivery	53
Annex H (informative) Conformity assessment	54
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2006/42/EC	56
Bibliography	57

Foreword

This document (EN 1846-2:2009+A1:2013) has been prepared by Technical Committee CEN/TC 192 "Fire service equipment", the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by August 2013, and conflicting national standards shall be withdrawn at the latest by August 2013.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes A1 EN 1846-2:2009 A1.

This document includes Amendment 1, approved by CEN on 2012-12-08.

The start and finish of text introduced or altered by amendment is indicated in the text by tags A1 A1.

This European Standard contains requirements common to fire fighting and rescue vehicles. Additional requirements are given for specific types of fire fighting and rescue vehicles in EN 1777, EN 14043 and EN 14044. These additional requirements supplement or modify the requirements of this European Standard. Compliance with the requirements of EN 1777, EN 14043 or EN 14044 and this European Standard is required to achieve conformity with the essential health and safety requirements of the Directives concerned.

Additional requirements may be necessary for vehicles operating outside the limits of this European Standard e.g. the operating temperature range specified in the scope, fires in the natural environment and flooding. These additional requirements should be agreed between the vehicle manufacturer and the user. Such requirements are outside the scope of this European Standard and compliance with this European Standard will not give conformity with the essential health and safety requirements of the Directives concerned for the related hazards.

A1 *deleted text* A1

EN 1846 "Firefighting and rescue service vehicles" is composed of three parts:

- Part 1: *Nomenclature and designation*;
- Part 2: *Common requirements - Safety and performance*;
- Part 3: *Permanently installed equipment - Safety and performance*.

A1 This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document. A1

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

This European Standard has been prepared as a harmonised standard to provide one means of conformity with the essential safety requirements of the Machinery Directive and associated EFTA Regulations.

This European Standard is a type C standard as stated in EN ISO 12100.

The machinery concerned and the extent to which hazards, hazardous situations and events are covered are indicated in the scope of this part of this European Standard.

When provisions of this type C standard are different from those which are stated in type A or B standards, the provisions of this type C standard take precedence over the provisions of the other standards, for machines that have been designed and built according to the provisions of this type C standard.

This European Standard also deals with the performance requirements which are common to all firefighting and rescue service vehicles as defined in the scope.

1 Scope

1.1 This European Standard specifies the common requirements for safety and the (minimum) common performance requirements of firefighting and rescue service vehicles as designated in EN 1846-1.

NOTE 1 Categories and mass classes of these vehicles are given in EN 1846-1.

When drafting this European Standard it has been assumed that the finished standard automotive chassis (or the chassis designed in accordance with the same principles) that is the basis for the firefighting or rescue vehicle, offers an acceptable safety level for its basic transport functions within the limits specified by the manufacturer. Therefore, this European Standard does not formulate requirements for this chassis.

This European Standard deals with all significant hazards, hazardous situations and events relevant to firefighting and rescue service vehicles, when they are used as intended and under the conditions of misuse which are reasonably foreseeable by the manufacturer (see Clause 4).

Complementary specific requirements for aerial appliances are the subject of the following European Standards:

- EN 1777: Hydraulic platforms (HPs) for fire fighting and rescue services,
- EN 14043: Turntable ladders with combined movements,
- EN 14044: Turntable ladders with sequential movements.

These specific requirements may supplement or modify the requirements of this document and they take precedence over the corresponding requirements of this document.

NOTE 2 Additional regulations, not dealt with in this document, may apply in relation with the use of the vehicles on public roads.

This European Standard deals with firefighting and rescue vehicles intended for use in a temperature range from -15 °C to $+35\text{ °C}$.

NOTE 3 In the case of utilisation outside this temperature range, additional measures may be necessary as agreed between the manufacturer and the user. Such requirements are outside the scope of this European Standard.

1.2 This European Standard does not deal with the following types of fire-fighting or rescue vehicles or equipment:

- vehicles designed exclusively for carrying personnel;
- vehicles with a gross laden mass not exceeding 3 t;
- boats;
- aircraft;
- railway vehicles;
- ambulances (see EN 1789);
- provisions for removable equipment driven by PTO;
- airport vehicles in the scope of the recommendations of the International Civil Aviation Organisation (ICAO).

1.3 This European Standard deals with the technical requirements to minimise the hazards listed in Clause 4 which can arise during operational use, routine checking and maintenance of firefighting and rescue service vehicles when carried out in accordance with the specifications given by the manufacturer or his authorised representative.

It does not cover the hazards generated by:

- non-permanently installed equipment i.e. portable equipment carried on the vehicle;
- use in potentially explosive atmospheres;
- commissioning and decommissioning;
- electromagnetic compatibility.

Additional measures not dealt with in this European Standard may be necessary for specific use (e.g. fire in natural environment, flooding, etc.).

1.4 This European Standard is not applicable to machines that are manufactured before its date of publication as a European Standard.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 659, *Protective gloves for firefighters*

EN 953, *Safety of machinery – Guards - General requirements for the design and construction of fixed and movable guards*

EN 981, *Safety of machinery – System of auditory and visual danger and information signals*

EN 1846-1:1998, *Firefighting and rescue service vehicles – Part 1: Nomenclature and designation*

EN 60204-1:2006, *Safety of machinery – Electrical equipment of machines – Part 1: General requirements (IEC 60204-1:2005, modified)*

FprCEN/TS 15989¹, *Firefighting vehicles and equipment – Symbols for operator controls and other displays*

EN ISO 3744:1995, *Acoustics – Determination of sound power levels of noise sources using sound pressure–Engineering method in an essentially free field over a reflecting plane (ISO 3744:1994)*

EN ISO 4871, *Acoustics – Declaration and verification of noise emission values of machinery and equipment (ISO 4871:1996)*

EN ISO 5353, *Earth moving machinery, and tractors and machinery for agriculture and forestry – Seat index point (ISO 5353:1995)*

EN ISO 11201, *Acoustics – Noise emitted by machinery and equipment – Measurement of emission sound pressure levels at a work station and at other specified positions – Engineering method in an essentially free field over a reflecting plane (ISO 11201:1995)*

EN ISO 12100-1:2003, *Safety of machinery – Basic concepts, general principles for design – Part 1: Basic terminology, methodology (ISO 12100-1:2003)*

EN ISO 12100-2:2003, *Safety of machinery – Basic concepts, general principles for design – Part 2: Technical principles (ISO 12100-2:2003)*

EN ISO 13849-1, *Safety of machinery – Safety-related parts of control systems – Part 1: General principles for design (ISO 13849-1:2006)*

¹ In preparation.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-