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**DRAFT**  
**prEN 1647**

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English Version

**Leisure accommodation vehicles - Caravan holiday homes  
- Habitation requirements relating to health and safety**

Véhicules habitables de loisirs - Résidences mobiles -  
Exigences d'habitation relatives à la santé et à la  
sécurité

Bewohnbare Freizeitfahrzeuge - Mobilheime -  
Anforderungen an den Wohnbereich hinsichtlich  
Gesundheit und Sicherheit

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 245.

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**prEN 1647:2024 (E)****European foreword**

This document (prEN 1647:2024) has been prepared by Technical Committee CEN/TC 245 “Leisure accommodation vehicles”, the secretariat of which is held by AFNOR.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 1647:2018+A1:2021.

prEN 1647:2024 includes the following significant technical changes with respect to EN 1647:2018+A1:2021:

- 5.4 “Doors” amended;
- 5.7 “Roof space ventilation” amended;
- 8.3 “Natural gas” included;
- 9.2.3 “Wardrobes and bed lockers” amended;
- 10.1.3 “Sanitation compartments” amended;
- 10.1.6 “Emergency windows and emergency panels” amended;
- editorial amendments.

Any feedback and questions on this document should be directed to the users’ national standards body. A complete listing of these bodies can be found on the CEN website.

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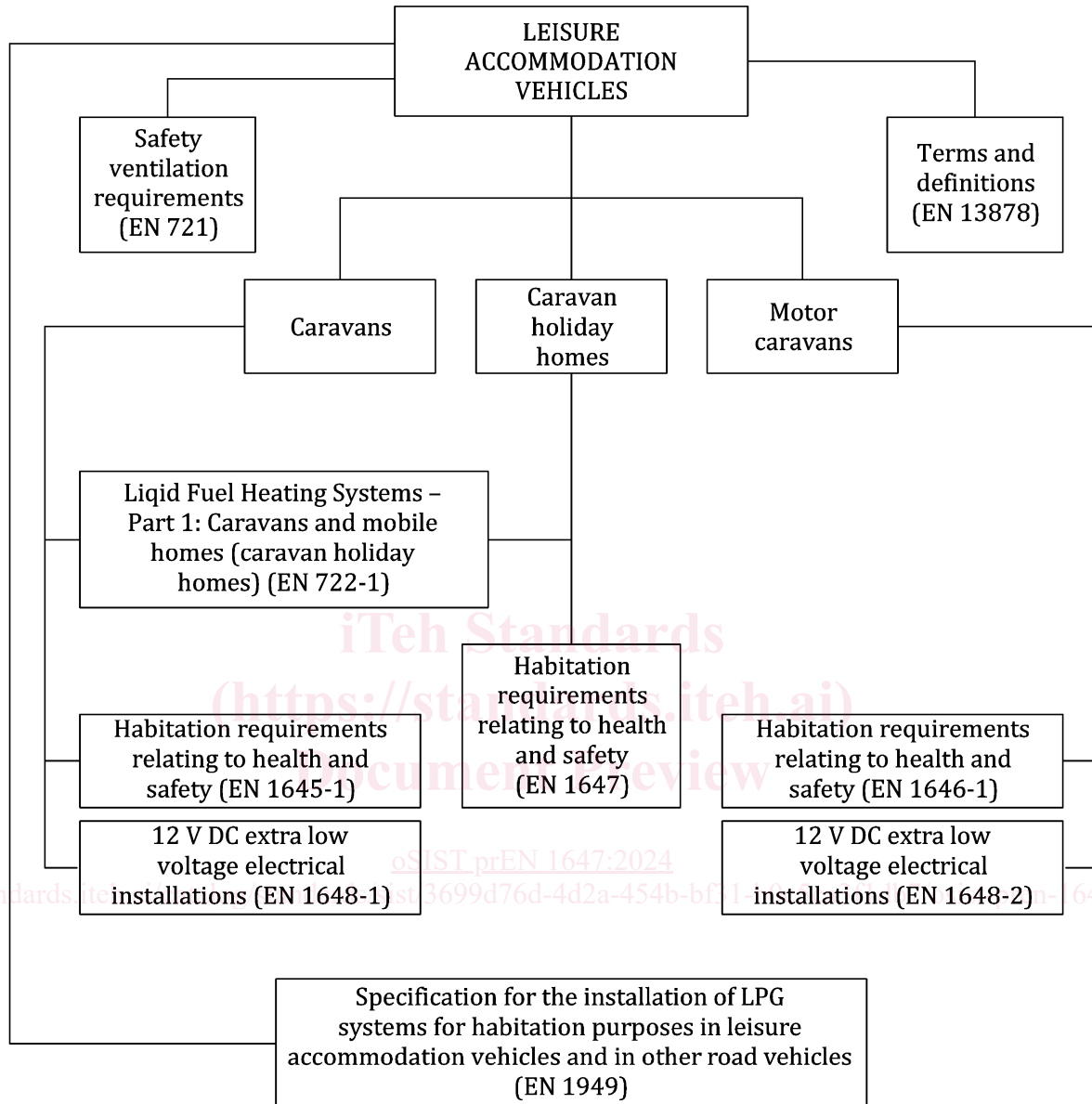
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## Introduction

Figure 1 gives an overview of the relevant European Standards for caravans, motor caravans and caravan holiday homes.



**Figure 1 — Overview of relevant European Standards applying to leisure accommodation vehicles**

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### 1 Scope

This document specifies requirements intended to ensure safety and health of persons using caravan holiday homes as defined in EN 13878, as temporary or seasonal accommodation.

It specifies grades of resistance to snow loads and the stability of the structure of caravan holiday homes as well as the minimum information to be included in a user's handbook.

It also specifies the corresponding test methods.

### 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 3-7, *Portable fire extinguishers — Part 7: Characteristics, performance requirements and test methods*

EN 624, *Specification for dedicated LPG appliances - Room sealed LPG space heating equipment for installation in vehicles and boats*

EN 721, *Leisure accommodation vehicles — Safety ventilation requirements*

EN 722-1, *Leisure accommodation vehicles — Liquid fuel heating systems - Part 1: Caravans and caravan holiday homes*

EN 747-1, *Furniture — Bunk beds and high beds — Part 1: Safety, strength and durability requirements*

EN 1949, *Specification for the installation of LPG systems for habitation purposes in leisure accommodation vehicles and accommodation purposes in other vehicles*

EN 12600, *Glass in building — Pendulum test — Impact test method and classification for flat glass*

EN 13878, *Leisure accommodation vehicles — Terms and definitions*

EN 60598 (all parts), *Luminaires (IEC 60598 series)*

HD 60364 (all parts), *Low-voltage electrical installations (IEC 60364 series)*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 13878 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 4 Testing

The tests described in Annexes A to K are intended to verify that a caravan holiday home representative of a given model, including its fixtures and fittings, meets the requirements of this document.

These tests are intended to simulate the most onerous conditions, for the relevant characteristics.

It is recommended to take environmental aspects into account during development, production and disposal of caravan holiday homes based on established knowledge and within the respective technical possibilities (see also Annex J).

## 5 Design and construction

### 5.1 Occupancy

The occupancy shall be designated as the number of berths, both standard and additional berths, and provided in the User's Handbook. The occupancy is also necessary to determine the ventilation requirements (see EN 721).

### 5.2 Ceiling height

The ceiling height, measured internally from finished floor level to underside of finished ceiling, except in areas above fixed furniture, shall be not less than 1 980 mm.

The finished floor level shall be measured from the upper surface of any continuous fixed floor covering. This includes any vinyl carpet backing but not carpet pile.

### 5.3 Glazed areas

The living area, the area for meals and the kitchen shall each be provided with windows, the total glazed areas of which shall be equivalent to not less than 10 % of their respective floor areas. Sleeping accommodation shall be provided with glazed area not less than 5 % of the floor areas. An exterior glazed area can be classed as a window for this purpose.

Glazed areas to the living area, the area for meals and the kitchen shall have an openable area equivalent to 5 % of each respective floor area.

The floor area of the unit should be calculated from the total internal floor area excluding partition walls and separate fixed compartments which extend the full internal height of the unit. All floor area covered by fixed or loose furniture that does not extend the full height of the unit should be counted into the area. Transparent or translucent roof lights may be classed as glazed area.

### 5.4 Doors

At least one exterior door which opens outwards shall provide a clear opening of not less than 1 800 mm high and 700 mm wide.

Sliding doors will be deemed to be acceptable provided that the sliding operation of the door is not obstructed by a fixture and the door, when open, does not obstruct any emergency exit.

### 5.5 Glazing

Any glass in external windows, panels and doors that are less than 800 mm above finished floor level shall be safety glazing class 3B3 or 3C3 or better in accordance with EN 12600.

### 5.6 Classification of thermal insulation and heating

The thermal insulation and heating levels for specific climatic conditions shall be classified as follows:

- a) grade 1: A caravan holiday home, including windows, doors and roof lights in which the average thermal transmittance ( $U$ ) of the elements of construction shall not exceed 1,7 W/(m<sup>2</sup>K). There is no heating requirement for this grade;
- b) grade 2: A caravan holiday home, including windows, doors and roof lights in which the average thermal transmittance ( $U$ ) of the elements of construction shall not exceed 1,7 W/(m<sup>2</sup>K);

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An average temperature difference of at least 20 K between inside and outside temperatures shall be achieved in the living area, the area for meals and the kitchen, when the outside temperature is 0 °C;

- c) grade 3: A caravan holiday home, including windows, doors and roof lights in which the average thermal transmittance ( $U$ ) of the elements of construction shall not exceed 1,2 W/(m<sup>2</sup>K).

An average temperature difference of at least 35 K between inside and outside temperatures shall be achieved in all rooms, except the sanitation compartment, when the outside temperature is –15 °C.

Precautions shall be taken to ensure that all water services still operate when the outside temperature is –15 °C.

For grade 1, the average thermal transmittance ( $U$ ) shall be calculated in accordance with the relevant parts of Annex A. For grades 2 and 3, the average thermal transmittance ( $U$  value) and heating requirements shall be calculated in accordance with Annex A.

**5.7 Roof space ventilation**

Where there is an air gap between the external roof skin and the insulation material, this air gap shall be ventilated to the external air. It has to be ensured that the whole area is sufficiently ventilated to prevent the build up of moisture.

**5.8 Underfloor**

Underfloor insulation, if provided, shall be protected to reduce the possibility of degradation by birds or other animals (for example: rodents).

**5.9 Fire behaviour of materials**

NOTE Pending harmonized European requirements for the assessment of the fire behaviour of materials, attention is drawn to national requirements which may apply.

**5.10 Stability (resistance to overturning)**

Caravan holiday homes of all grades shall be provided with suitable holding-down points, each capable of resisting 10 kN.

Holding down points shall be located at (1 000 ± 200) mm from the ends of the main longitudinal chassis members at each corner of the caravan holiday home.

The position of the holding down points shall be indicated in the User's Handbook.

**5.11 Structural classification of caravan holiday homes**

The structure of a caravan holiday home shall be graded according to its ability to withstand one of the following snow loadings:

- a) grade A: A caravan holiday home Grade A resting on its normal supports shall be capable of resisting a snow load of 750 Pa, exerted uniformly over the roof.
- b) grade B: A caravan holiday home Grade B resting on its normal supports shall be capable of resisting a snow load of 1 500 Pa, exerted uniformly over the roof.
- c) grade C: A caravan holiday home Grade C resting on its normal supports shall be capable of resisting a snow load of 2 000 Pa, exerted uniformly over the roof.
- d) grade D: A caravan holiday home Grade D resting on its normal supports shall be capable of resisting a snow load of 3 000 Pa, exerted uniformly over the roof.