

# Leisure accommodation vehicles — Caravans —

## Part 2: User payload

The European Standard EN 1645-2:1998 has the status of a  
British Standard

ICS 43.100

## National foreword

This British Standard is the English language version of EN 1645-2:1998.

The UK participation in its preparation was entrusted to Technical Committee B/511, Buildings — Mobile and temporary, which has the responsibility to:

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- present to the responsible European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
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### Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 4, an inside back cover and a back cover.

This British Standard, having been prepared under the direction of the Sector Committee for Building and Civil Engineering, was published under the authority of the Standards Committee and comes into effect on 15 February 1999

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### Amendments issued since publication

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ICS 43.100

Descriptors: caravans, specifications, computation, useful loads, minimum value

English version

## Leisure accommodation vehicles — Caravans — Part 2: User payload

Véhicules habitables de loisirs — Caravanes —  
Partie 2: Charges utiles

Bewohnbare Freizeitfahrzeuge — Caravans —  
Teil 2: Zuladung

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**CEN**

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

**Central Secretariat: rue de Stassart 36, B-1050 Brussels**

## **Foreword**

This European Standard has been prepared by Technical Committee CEN/TC 245, Leisure accommodation vehicles, 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of an identical text or by endorsement, at the latest by January 1999, and conflicting national standards shall be withdrawn at the latest by January 1999.

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This European Standard is one of a series covering the habitation and design aspects of leisure accommodation vehicles.

The method of calculation of minimum user payloads to be allowed for when designing motor caravans is specified in EN 1646-2.

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## 1 Scope

This European Standard specifies the method of calculation of minimum user payloads to be allowed for when designing caravans.

It also sets out the information relating to user payload to be included in the user's handbook.

It applies to all categories of caravan as defined in EN 27418.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

EN 27418, *Leisure accommodation vehicles — Vocabulary*.  
(ISO 7418:1989)

ISO 612:1978, *Road vehicles — Dimensions of motor vehicles and towed vehicles — Terms and definitions*.

## 3 Definitions

For the purposes of this standard the definitions given in EN 27418 apply, together with the following.

### 3.1

**maximum technically permissible laden mass**  
(as stated by the vehicle manufacturer)

This mass takes into account specific operating conditions including factors such as the strength of materials, loading capacity of the tyres etc.

### 3.2

**mass in running order**

mass of the caravan equipped to the manufacturer's standard specification

### 3.3

**user payload**

the difference between the maximum technically permissible laden mass (see 3.1) and the mass in running order (see 3.2)

Payload includes essential habitation equipment, personal effects and optional equipment.

### 3.4

**essential habitation equipment**

those items and fluids required for the safe and proper functioning of the equipment for habitation as defined by the manufacturer of the caravan

### 3.5

**personal effects**

those items which a user can choose to carry in a caravan and which are not included as essential habitation equipment or optional equipment

### 3.6

**optional equipment**

items made available by the manufacturer over and above the standard specification for the caravan.

## 4 Calculation of user payload

### 4.1 General

The mass of any item shall not be included more than once.

### 4.2 Essential habitation equipment

The essential habitation equipment shall include the following items, as appropriate, in the state given.

#### a) *Liquefied petroleum gas (LPG) system*

The mass of the recommended cylinder(s) or tank(s) when filled to 90 % of their permissible maximum capacity.

#### b) *Fluids*

The mass of the liquids normally remaining in systems:

- 1) water heater system – full;
- 2) central heating system – full;
- 3) freshwater tank(s) – 90% full;
- 4) wastewater tank – empty;
- 5) toilet system flushing tank – full;
- 6) toilet system holding tank – empty;
- 7) essential fluids for the use of any other items of standard equipment – full.

#### c) *Electrical supply*

- 1) an allowance of 4 kg for the low voltage (LV) connection cable;
- 2) the mass of a recommended auxiliary battery, but only when provision has been included.

### 4.3 Personal effects

Personal effects are typically items common to all occupants, such as food, cutlery, pots, pans, first aid box, maps, portable chemical toilet, levelling blocks, TV and radio, fire blanket or fire extinguisher and items personal to each occupant, such as clothing, footwear, bedding, books, cameras, toys and toiletries. Bicycles, boats, sailboards, sports equipment etc. are also included whether carried on racks or otherwise.

The minimum mass allowance  $M$ , in kilograms, for personal effects for a caravan shall be calculated from the following formula:

$$M = 10N + 10L + 30$$

where

$L$  is the overall length of the caravan in metres, excluding draw gear as given in 6.1.2 of ISO 612:1978;

$N$  is the sum of all standard and optional berths.

### 4.4 Optional equipment

The manufacturer shall specify the mass of each item of optional equipment offered including the mass of any fluids required for their safe and proper functioning.

NOTE Typical table of available options.

Optional item	Mass kg
Air conditioning	40
Bicycle rack	8
Awning	38
Spare wheel and carrier	25

### 5 User's handbook

The manufacturer shall state in the user's handbook the following information including the definitions where appropriate:

- a) the maximum technically permissible laden mass, in kilograms;
- b) the mass in running order, in kilograms;
- c) the maximum user payload [(a) minus b)], in kilograms;
- d) the mass of the essential habitation equipment for the caravan, in kilograms.

The manufacturer shall indicate clearly that the payload includes:

- a) essential habitation equipment [see 5d)],
- b) optional equipment;
- c) personal effects.

The manufacturer shall give information and general principles relative to the correct distribution of the various loads.

The manufacturer shall also include the following notes in the user's handbook:

NOTE 1 PLEASE TAKE CARE TO ENSURE THAT YOU HAVE ALLOWED FOR THE MASSES OF ALL ITEMS YOU INTEND TO CARRY IN THE CARAVAN, e.g. optional equipment, essential habitation equipment and personal effects such as clothing, food, bicycles, sailboards, sports equipment etc.

NOTE 2 **WARNING** – UNDER NO CIRCUMSTANCES SHOULD THE MAXIMUM TECHNICALLY PERMISSIBLE LADEN MASS OF THIS CARAVAN BE EXCEEDED.



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