



Outdoor furniture — Seating and tables for camping, domestic and contract use

Part 1. General safety requirements

The European Standard EN 581-1 : 1997 has the status of a
British Standard

ICS 97.140; 97.200.30

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee FW/2, Domestic and contract furniture, upon which the following bodies were represented:

Association of Building Engineers
 Association of Manufacturers of Domestic Electrical Appliances
 Association of Suppliers to the Furniture Industry Ltd.
 BSI Testing Services
 British Association for Accident and Emergency Medicine
 British Coatings Federation Ltd.
 British Contract Furnishing Association
 British Furniture Manufacturers
 British Laminated Plastics Fabricators' Association Ltd.
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 Mail Order Traders' Association
 Metal Sink Manufacturers' Association
 National Bed Federation Limited
 National Federation of Housing Associations
 Royal Society for the Prevention of Accidents
 SATRA Footwear Technology Centre
 Society of British Gas Industries
 Society of Glass Technology

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National foreword

This Part of BS EN 581 has been prepared by Technical Committee FW/2, and is the English language version of EN 581-1 : 1997 *Outdoor furniture — Seating and tables for camping, domestic and contract use — Part 1 : General safety requirements*, published by the European Committee for Standardization (CEN).

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, the EN title page, pages 2 to 8, an inside back cover and a back cover.

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English version

Outdoor furniture — Seating and tables for camping, domestic and contract use — Part 1: General safety requirements

Mobilier d'extérieur — Sièges et tables à usages domestique, collectif et de camping —
Partie 1: Exigences générales de sécurité

Außenmöbel — Sitzmöbel und Tische für den Camping-, Wohn- und Objektbereich —
Teil 1: Allgemeine sicherheitstechnische Anforderungen

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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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 207, Furniture, the secretariat of which is held by IBN.

The text is one part of a general standard concerning the safety and performance requirements for outdoor seating and tables.

The work programme of CEN/TC 207/WG 4 includes the following items:

prEN 581-2	<i>Outdoor furniture — Seating and tables for camping, domestic and contract use — Part 2 : Mechanical safety requirements and test methods of seating</i>
prEN 581-3	<i>Outdoor furniture — Seating and tables for camping, domestic and contract use — Part 3 : Mechanical safety requirements and test methods of tables</i>
prEN 581-4	<i>Outdoor furniture — Seating and tables for camping, domestic and contract use — Part 4 : Physical characteristics — Durability</i>
prEN 581-5	<i>Outdoor furniture — Seating and tables for camping, domestic and contract use — Part 5 : Requirements and test methods for surfaces</i>
prEN 581-6	<i>Outdoor furniture — Seating and tables for camping, domestic and contract use — Part 6 : General characteristics</i>

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 October 1997, and conflicting national standards shall be withdrawn at the latest by October 1997.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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1 Scope

This Part of EN 581 specifies the general safety requirements for outdoor seating and tables for camping, domestic and contract use with the exception of removable upholstery, coverings, permanently fixed furniture.

For the types of seating and tables for which this standard is applicable, see annex A.

2 Definitions

For the purposes of this standard, the following definitions apply:

2.1 intentionally contactable parts

Parts and edges of a structure designed to be in contact with a sitting, lying or reclining user.

2.2 externally accessible parts

Parts to which access can be easily gained when the furniture is in its intended position of use and for which the probability of unintentional user contact is high.

In order to distinguish the externally accessible parts from other parts the furniture are imagined as enveloped in a shrunk film that completely follows its outer contours (see figures 1, 2 and 3).

All parts which can be reached from the surface of the shrunk film by a probe 60 mm in length are externally accessible. This probe consists of a cylinder made of plastic or other hard, smooth material with a 60 mm mark on its length. There are 3 probes having diameters 7 mm, 12 mm and 18 mm respectively.

2.3 deliberately accessible parts

Parts which are only contacted when setting up or folding the furniture.

2.4 locking mechanism

A device which when operated will inhibit further movement when unfolding or adjusting the furniture and then maintaining the position (also under load).

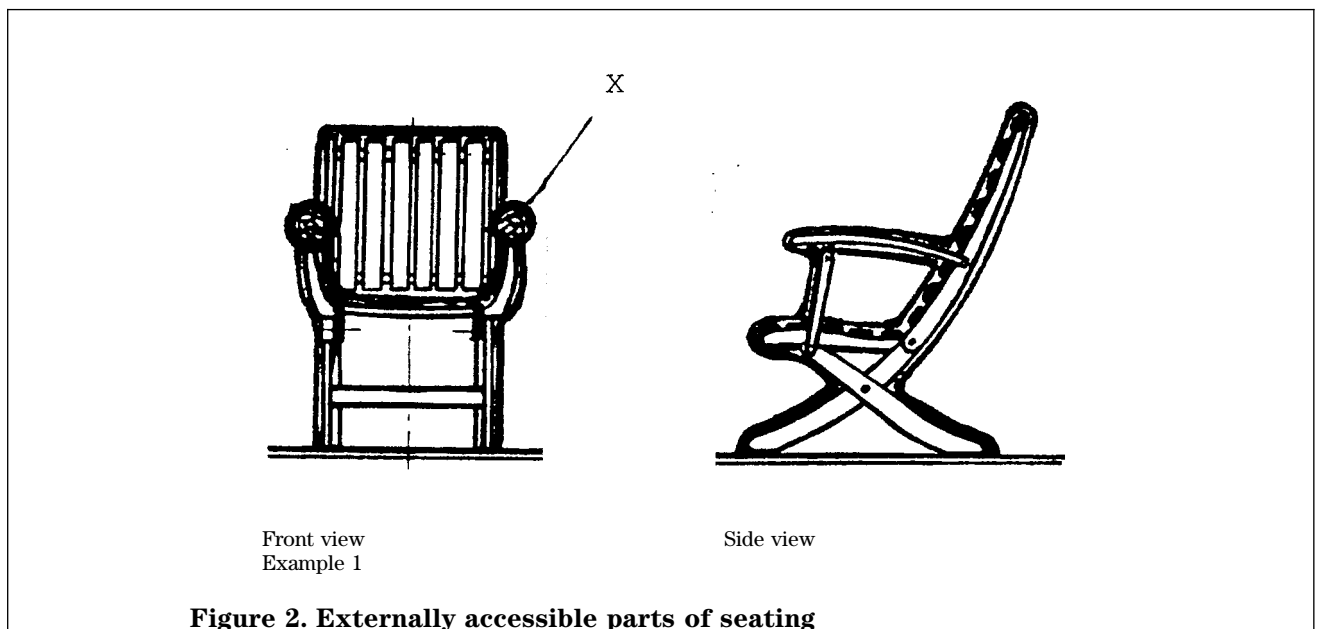
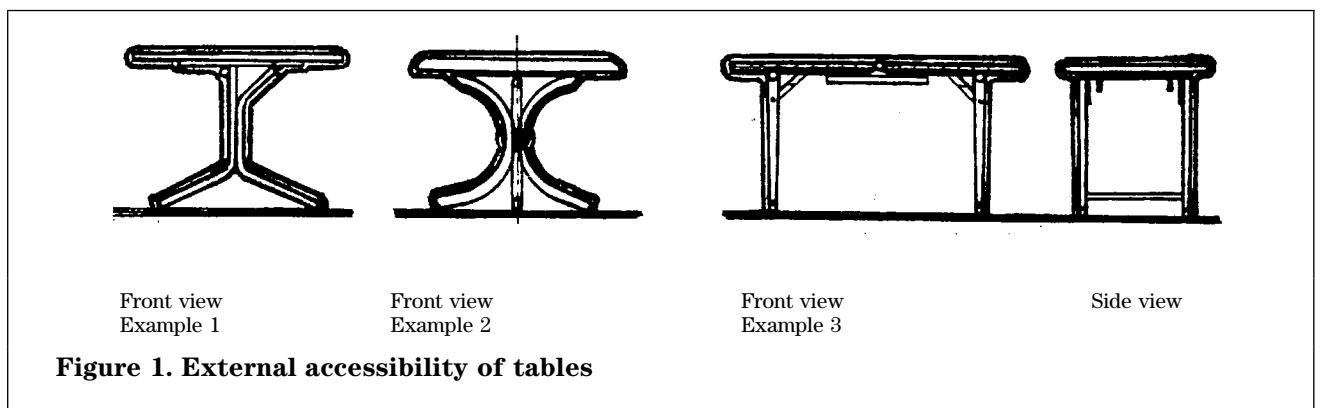
2.5 automatically operating locking mechanism

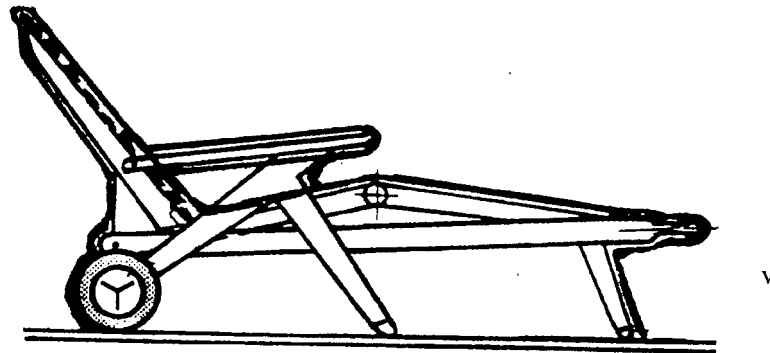
A mechanism which engages automatically without any guidance after the adjustable part is released or reloaded.

2.6 shear and squeeze points

Shear or squeeze points exist if the distance between two accessible parts relative to each other can be less than 18 mm and more than 7 mm when under body weight.

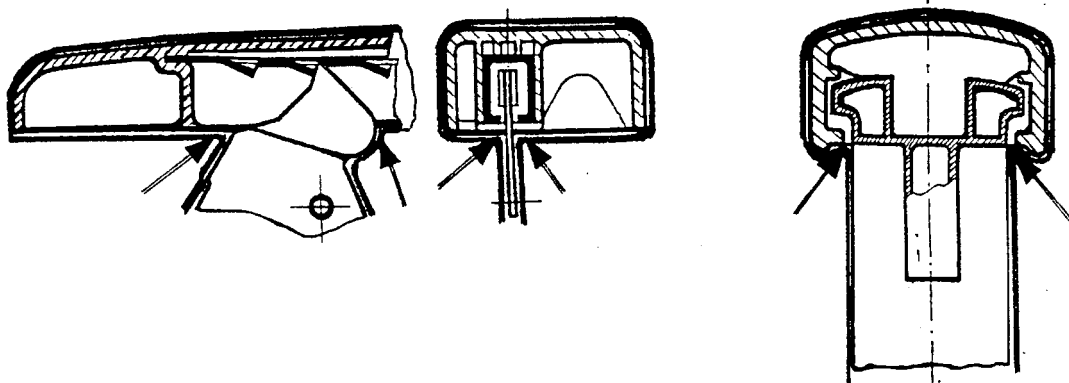
Examples are given under figure 4.





Side view
Example 2

Figure 2. Externally accessible parts of seating (continued)



Example 1

Example 2

Figure 3. Externally accessible parts

3 Safety requirements for the design

3.1 Edges and corners

3.1.1 Parts which are intentionally contactable

Edges and corners shall be rounded with a radius of not less than 2 mm.

Chamfered edges and corners shall have a blend radius of not less than 0,5 mm.

These requirements do not apply to edges and corners inside a surface (part) arising from embossed structures (patterns, profiles), means to create intended roughness or openings inside a surface which in total supports the body weight of the user.

3.1.2 Accessible parts

All other accessible parts shall be of a design such that, when touched by the user, no injury is caused.

3.2 Externally accessible openings

There shall be no open-ended tubes greater than 7 mm in diameter.

Drilled holes, gaps or cavities with a diameter greater than 7 mm and smaller than 12 mm shall be covered if a 7 mm diameter probe can enter to a depth of 10 mm or more.

3.3 Externally accessible shear and squeeze points on movable parts

3.3.1 General requirements

Shear and squeeze points shall as far as possible be avoided.

In cases where this is not possible, the requirements given in 3.3.2, 3.3.3 and 3.3.4 shall be fulfilled.

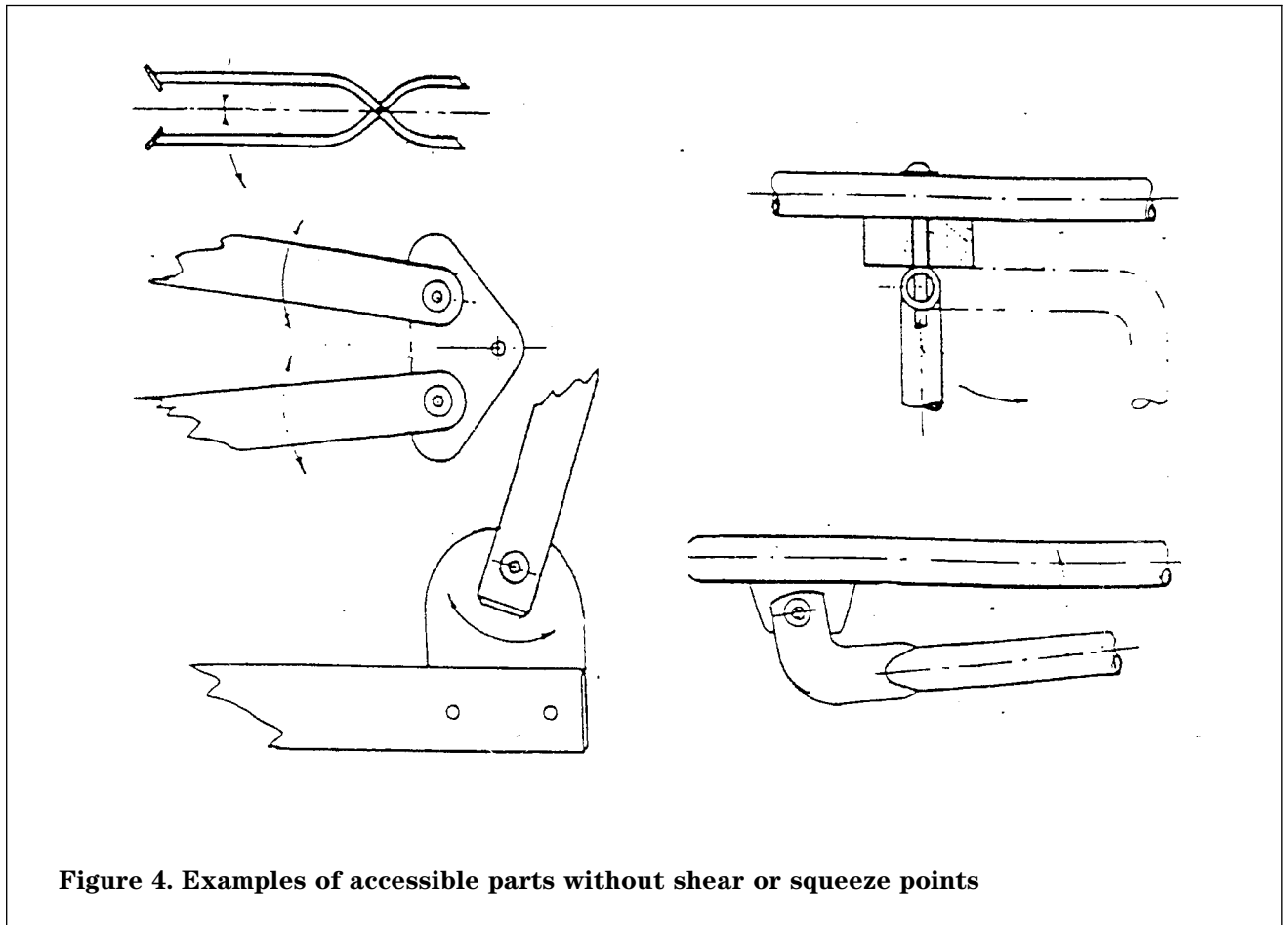


Figure 4. Examples of accessible parts without shear or squeeze points

3.3.2 Shear and squeeze points when setting up and folding

Provided 3.3.3 or 3.3.4 is not applicable, shear and squeeze points that are created only during setting up or folding outdoor furniture are acceptable because the user can be assumed to be in control of his movements and to be able to cease applying the effective forces immediately on experiencing pain.

The edges of parts moving against each other and creating shear and squeeze points shall be as specified in 3.1.1.

3.3.3 Shear and squeeze points under the influence of powered mechanisms

There shall be no shear or squeeze points as defined in 2.6 if these are created by parts of the furniture operated by powered mechanisms, including springs.

3.3.4 Externally accessible shear and squeeze points under body weight

Externally accessible shear and squeeze points as defined in 2.2 and 2.6 are not acceptable if unintentional movement of the parts may occur so that a hazard is created by the weight of the user.

Shear and squeeze points shall not be created by normal movements and actions, e.g. attempting to move the seating by lifting the seat or by adjusting the backrest.

Unintentional movements are prevented if:

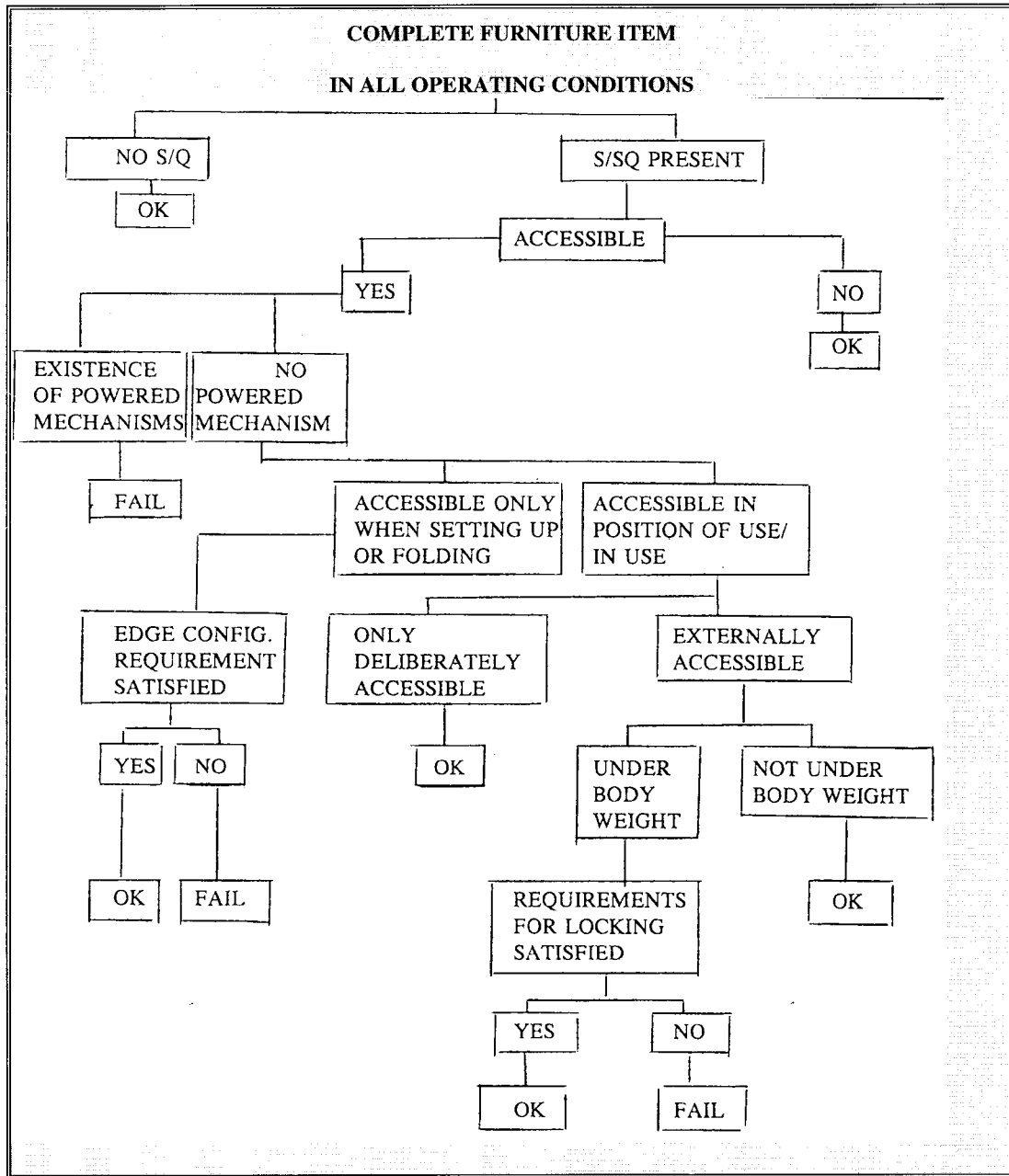
- the product satisfies the appropriate mechanical safety requirements; and
- all locking mechanisms are automatic.

4 Test report

The test report shall include at least the following information:

- a) a reference to this Part of the European Standard;
- b) the item of furniture tested (relevant data);
- c) the test results;
- d) details of any deviations from this Part of the European Standard;
- e) the name and address of the test facility;
- f) the date of the test.

5 Schematic presentation of requirements and conditions concerning shear and squeeze points



S/SQ = SHEARING AND SQUEEZING POINTS

Annex A (informative)

Terminology

A.1 Outdoor furniture for contract use

Outdoor furniture intended for non-private use in places with public access, like restaurants, open-air swimming pools, vocational and leisure sites. Due to this public use they are submitted to extreme stresses.

A.2 Outdoor furniture for domestic use

Outdoor furniture intended for private use in places without public access like gardens, wintergardens, terraces, balconies etc.

A.3 Outdoor furniture for camping use

In accordance with the need for easy transportation, outdoor furniture for camping use are foldable or detachable and of light-weight design.

It is intended for use in connection with camping and travelling.

A.4 Stool, folding stool, camping stool

Seat insuring the sole function of seating posture, without backrest.

A.5 Garden chair, garden folding chair, camping chair

Seat with a back for an upright seating posture.

A.6 Fixed armchair, folding fixed armchair, camping fixed armchair (if folding)

Seat for upright or inclined seating posture, with back and armrests.

A.7 Multi-position armchair, camping multi-position armchair

Armchair with adjustable back in inclination and fixed or adjustable seat.

A.8 'Producer' seat

Camping folding seat with armrests and back. Seat and back are made out of tightened textile material. It is not adjustable.

A.9 Bench

Multi-place seat with or without back, with or without armrests.

A.10 Mobile lounge chair

Seat intended for lying rest supplied with wheels and possibly handles, supplied with fixed or adjustable back.

A.11 Lounge chair

Seat without wheels for lying rest. Lounge chairs can be foldable.

A.12 Footrest

Item intended for resting legs, with a fixed or adjustable height, independent or incorporated into an armchair.

A.13 Deck chair

Seat which folds flat supplied with a support made of a flexible material (ex. linen) whose adjustable structure enables various resting postures. The deck chairs can be provided with or without armrests and possibly with a fixed footrest.

A.14 Outdoor table, camping table

Table with a fixed or extendable top, foldable or non-foldable, with or without removable feet.

A.15 Coffee table

Table with a restricted height fixed top, foldable or non-foldable, with or without feet.

A.16 Serving trolley

Mobile table, usually provided with handles and wheels, with removable or fixed tray(s).

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