
Camping tents — Requirements and test methods

Tentes de camping — Exigences et méthodes d'essai

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Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 83, *Sports and other recreational facilities and equipment*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 136, *Sports, playground and other recreational facilities and equipment*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fifth edition cancels and replaces the fourth edition (ISO 5912:2011), which has been technically revised.

The main changes compared to the previous edition are as follows:

- update of [Clause 3](#);
- revision of [6.1.1.1](#) on "Tear resistance, breaking strength, resistance to penetration by water and weatherability";
- amendment of the requirements for "Entrance/exit" ([6.1.5](#));
- revision of "Tubular components, holes and gaps" ([8.6.2](#));
- addition of "Material connection test" ([8.7](#));
- revision of "Instruction supplied by the manufacturer" ([10](#));
- addition of "Information at the point of sale" ([11.2](#));
- addition of "Example for the display of information at the point of sale" ([Annex C](#));
- editorial revision.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

0.1 General

This document has been substantially revised. The objective of the revision was to simplify it by deleting requirements and test methods which did not prove to be reproducible or which do not contribute to the safety and quality performance of camping tents. One of the deleted parameters was the stability performance. Stability was considered to be an important issue for the performance of a camping tent but there was no reproducible test method available when developing this document. Once a suitable test or simulated test is developed, this document will include more specific requirements.

For marquees and larger textile structures EN 15619 might be more relevant.

0.2 Environmental considerations

Every product affects the environment in the course of its lifecycle from raw material acquisition through production, distribution and use, to disposal. The environmental impacts are consequences of the consumption of energy and resources and the generation of waste as well as the emission of substances into air, water and soil. The magnitude of the environmental impacts during the various lifecycle changes depends on a number of choices made in the design of the product. These relate to aspects such as choice of materials, production methods, and the possibility of maintenance and recycling. Manufacturers and distributors of camping tents should consider the environmental impact of their product, for example by

- avoiding the use of environmentally harmful substances,
- selecting the best available technology and techniques to reduce consumption of energy and materials,
- considering use of recycled materials for product and packaging,
- encouraging responsible end of life disposal by the user including guidance on separation and identification of any recyclable components and packaging, or by
- using materials, components, and manufacturing facilities, who have declared documented environmental policies.

Camping tents — Requirements and test methods

1 Scope

This document specifies the requirements on safety, performance and fitness for use of camping tents.

NOTE For caravan awnings, see ISO 8936.

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.

ISO 105-A02, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*

ISO 105-B04, *Textiles — Tests for colour fastness — Part B04: Colour fastness to artificial weathering: Xenon arc fading lamp test*

ISO 105-X12, *Textiles — Tests for colour fastness — Part X12: Colour fastness to rubbing*

ISO 139, *Textiles — Standard atmospheres for conditioning and testing*

ISO 554, *Standard atmospheres for conditioning and/or testing — Specifications*

ISO 811, *Textiles — Determination of resistance to water penetration — Hydrostatic pressure test*

ISO 2081, *Metallic and other inorganic coatings — Electroplated coatings of zinc with supplementary treatments on iron or steel*

ISO 4675:2017, *Rubber- or plastics-coated fabrics — Low-temperature bend test*

ISO 6925, *Textile floor coverings — Burning behaviour — Tablet test at ambient temperature*

ISO 6941:2003, *Textile fabrics — Burning behaviour — Measurement of flame spread properties of vertically oriented specimens*

ISO 7152, *Camping tents and caravan awnings — Vocabulary and list of equivalent terms*

ISO 7771, *Textiles — Determination of dimensional changes of fabrics induced by cold-water immersion*

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

ISO 13934-2, *Textiles — Tensile properties of fabrics — Part 2: Determination of maximum force using the grab method*

ISO 13937-2, *Textiles — Tear properties of fabrics — Part 2: Determination of tear force of trouser-shaped test specimens (Single tear method)*

ISO 23388, *Protective gloves against mechanical risks*

3 Terms and definitions

For the purposes of this document, the terms and definitions in ISO 7152 and the following apply.

ISO 5912:2020(E)

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

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

3.1

base area

area limited by the outer tent walls, which contact the ground

Note 1 to entry: This area does include tents and canopies, but excludes area for guy lines, mud walls and snowskirts.

[SOURCE: ISO 7152:1997, 1.3.2, modified — Note 1 to entry has been added.]

3.2

outer tent dimensions

dimension of the smallest rectangular pitching space necessary for the camping tent excluding guy lines

3.3

inner tent area

part of the *base area* (3.1) designated for living and sleeping

3.4

inner tent dimensions

maximum length and the maximum width of the inner tent measured on the ground

3.5

pitching dimensions

dimension of the smallest rectangular pitching space necessary for the tent including guy lines

3.6

sleeping capacity

number of sleeping berths

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3.7

minimum usable weight

weight of the camping tent including the inner and flysheet (where applicable) plus the minimum number of poles, pegs, and guy lines for the camping tent when erected

Note 1 to entry: Tent pole bags and peg bags do not need to be included.

3.8

total weight

weight of the camping tent as supplied including for example all poles, fabrics, pegs, bags, excluding packaging

3.9

shear and squeeze point

point at which the distance between two rigid accessible parts moving relative to each other is less than 18 mm and more than 7 mm in any position during movement

3.10

accessible shear and squeeze point

shear and *squeeze point* (3.9) to which access can be easily gained when the camping tent is in its intended configuration for use and for which unintentional contact is foreseeable

3.11

automatic locking system

mechanism which engages without guidance by the user and prevents unintended movement

3.12 sealed tent

camping tent that has either the groundsheet sewn to the flysheet to form a sealed enclosed area or a camping tent with a *snowskirt* (3.13)

Note 1 to entry: Camping tents with snowskirts are not normally sealed tents but there is the possibility of snow or sand building up on these snowskirts which can restrict air circulation creating a sealed tent.

Note 2 to entry: The use of a sealed tent can result in a build-up of harmful gases.

3.13 snowskirt

fabric attached to the lower edge of the tent flysheet which is usually designed to sit horizontally on the ground

Note 1 to entry: This can be covered with snow, or have rocks placed upon it, in order to secure the camping tent to the ground.

4 Classification

4.1 Categories of camping tents

4.1.1 Camping tents cat. A (lightweight)

Camping tents having a total weight of $\leq 2,5$ kg per sleeping berth.

4.1.2 Camping tents cat. B (standards.iteh.ai)

Camping tents having a total weight of $> 2,5$ kg per sleeping berth.

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4.2 Tent performance level

4.2.1 Level 1

Camping tent designed for infrequent and short-term use. Although rain resistant, these tents should be used mainly in fair weather.

EXAMPLE Occasional summer weekend camping.

4.2.2 Level 2

Camping tent designed for use in mainly moderate weather conditions. Suitable for use in poor (wet and windy) weather conditions, but not intended for extreme or mountain conditions.

4.2.3 Level 3

Camping tent designed for use in all weather conditions.

EXAMPLE Mountaineering, expeditions, snow-loading or extended residential use.

5 Calculation of the sleeping capacity

5.1 General

The sleeping capacity is determined by using test area 1 for camping tents cat. A (see 5.2, Table 1 and Figure 1) and test area 2 for camping tents cat. B tents (see 5.3) and establishing how many times this test area can be fitted into the sleeping area without overlapping or deforming the fabric of the tent.

5.2 Test area 1 for camping tents cat. A

The test area is measured at a height of 5 cm.

Table 1 — Dimensions of the reference value

Dimensions in centimetres

l_1	l_2	l_3	l_4	l_5
35	30	195	35	58

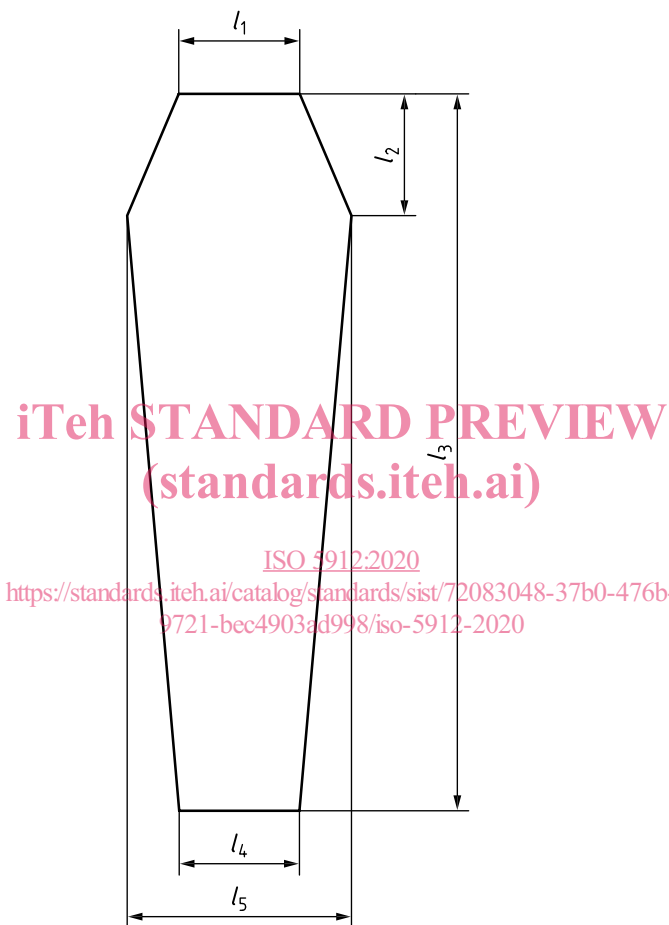


Figure 1 — Area of the reference value

5.3 Test area 2 for cat. B camping tents

Test area: 200 cm × 60 cm, height 5 cm.

6 Requirements

6.1 General requirements

6.1.1 Fabrics and their connections

6.1.1.1 Tear resistance, breaking strength, resistance to penetration by water, weatherability

Fabrics and their connections shall meet the requirements specified in [Table 2](#).

Material connections (e.g. by bonding or sewing) shall have no lower than 10 % less than the tensile strength of either of the fabric connected. Test in accordance with [8.7](#).

For example, a material with a breaking strength of 300 N the connection shall not have less than 270 N.

Table 2 — Requirements for fabrics and their connections

		Camping tents cat. A			Camping tents cat. B		
		Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Tear resistance in accordance with ISO 13937-2 ^a	Outer tent, coated	10 N	10 N	15 N	10 N	15 N	20 N
	Outer tent, uncoated	10 N	10 N	15 N	15 N	20 N	25 N
	Inner tent	8 N	8 N	12 N	8 N	9 N	13 N
	Ground-sheet	12 N	12 N	15 N	12 N	15 N	20 N
Breaking strength in accordance with ISO 13934-2 ^a	Outer tent, coated	250 N	300 N	400 N	300 N	400 N	500 N
	Outer tent, uncoated	250 N	300 N	400 N	300 N	400 N	500 N
	Inner tent	150 N	200 N	300 N	200 N	300 N	400 N
	Ground-sheet	250 N	300 N	400 N	300 N	400 N	500 N
	Plastic windows	100 N	150 N	200 N	100 N	150 N	200 N
Resistance to penetration by water in accordance with ISO 811 ^a	Outer tent, coated	15 000 Pa	15 000 Pa	25 000 Pa	15 000 Pa	20 000 Pa	30 000 Pa
	Ground-sheet	15 000 Pa	30 000 Pa	50 000 Pa	15 000 Pa	30 000 Pa	50 000 Pa
Colour fastness to artificial weathering in accordance with ISO 105-B04 ^a measured against blue wool	Outer tent, coated	3	3 to 4	4	3	3 to 4	4
	Outer tent, uncoated	3	3 to 4	4	3	3 to 4	4
	Plastic windows	3	3 to 4	4	3	3 to 4	4

^a If not stated otherwise, the tests shall be carried out at standard atmosphere in accordance with ISO 139. Manufacturers of products complying with this standard should consider the health and protection of the user, the environment and the supply chain. Materials used should not, during foreseeable conditions of normal use, release or degrade to release substances generally known to be hazardous and should comply with national legislation for such substances.

NOTE Conversion factors for the units of resistance against penetration by water: 1 Pa = 0,01 hPa = 0,01 mbar = 0,101 971 62 mm H₂O = 0,010 197 162 cm H₂O

Table 2 (continued)

		Camping tents cat. A			Camping tents cat. B		
		Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Colour fastness to rubbing accordance with ISO 105-X12 ^a (wet test)	Outer tent, coated	3 to 4	4	5	3 to 4	4	5
	Outer tent, uncoated	3 to 4	4	5	3 to 4	4	5
	Inner tent	3 to 4	4	5	3 to 4	4	5
	Ground-sheet	3 to 4	4	5	3 to 4	4	5
	Plastic windows	3 to 4	4	5	3 to 4	4	5
Resistance to puncture in accordance with ISO 23388 ^a	Ground-sheet	10 N	15 N	15 N	10 N	15 N	20 N
Resistance to cold crack in accordance with ISO 4675:2017, 10.1. Test temperature shall be -5 °C (performance level 2) and -10 °C (performance level 3).	Plastic windows	—	Cracks of grade A acceptable	Cracks of grade A acceptable	—	Cracks of grade A acceptable	Cracks of grade A acceptable

^a If not stated otherwise, the tests shall be carried out at standard atmosphere in accordance with ISO 139. Manufacturers of products complying with this standard should consider the health and protection of the user, the environment and the supply chain. Materials used should not, during foreseeable conditions of normal use, release or degrade to release substances generally known to be hazardous and should comply with national legislation for such substances.

NOTE Conversion factors for the units of resistance against penetration by water: 1 Pa = 0,01 hPa = 0,01 mbar = 0,101 971 62 mm H₂O = 0,010 197 162 cm H₂O

6.1.1.2 Dimensional stability

When tested in accordance with ISO 7771 using a cycle of 2 h, the dimensional change shall be not more than ±3 %.

6.1.1.3 Flammability

6.1.1.3.1 General

If the fabrics of camping tents are claimed to have flame retardant properties, they shall be tested when new and shall conform with the requirements in 6.1.1.3.2, 6.1.1.3.3 and 6.1.1.3.4. Where applied chemical finishes are used to produce the flame retardant properties, see Table 2, NOTE, as well as 11.1.2 and Annex B.

6.1.1.3.2 Outer tent material

When tested in accordance with ISO 6941:2003, Procedure A (using a 10 s ignition time, face ignition), no marker threads shall be severed, there shall be no flaming debris, there shall be no flame to either vertical edge of the test specimen, no single sample shall show after-flame time exceeding 10 s, and the average after-flame time not exceeding 6 s.