INTERNATIONAL STANDARD

ISO 5912

Fourth edition
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Camping tents

Tentes de camping

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ISO copyright office
Case postale 56 • CH-1211 Geneva 20
Tel. + 41 22 749 01 11
Fax + 41 22 749 09 47
E-mail copyright@iso.org
Web www.iso.org

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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 5912 was prepared by Technical Committee ISO/TC 83, *Sports and recreational equipment*, Subcommittee SC 2, *Camping tents*.

This fourth edition replaces part of ISO 10966:2005 and cancels and replaces the third edition of this International Standard (ISO 5912:2003), which has been technically revised to incorporate the following changes:

a) inclusion of revised requirements for fabric for camping tents from ISO 10966:2005;

b) deletion of requirements on stability performance;

c) introduction of three levels of performance for camping tents;

d) clarification of consumer information regarding ventilation;

e) change of test method for flame retardant fabric;

f) rain test brought into line with industry best practice;

g) addition of requirements to address risks related to new styles of tents which include squeeze and sheer points;

h) modification of size of sleeping areas.

0 Introduction

0.1 General

The principal objective of this International Standard is to simplify it from previous editions 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 such deleted parameter was stability performance. Stability was considered to be an important issue for the performance of a tent, however there was no reproducible test method available when developing this International Standard. When a suitable test or simulated test can be developed, it is the intention of ISO/TC 83 to include a more specific requirement in this International Standard.

For marquees and larger textile structures, see Reference [3].

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. 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, such as the materials used, production methods, and considerations related to maintenance and recycling. Manufacturers and distributors of camping tents should consider the environmental impact of their product by, for example:

— 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;

— using materials, components, and manufacturing facilities which have declared documented environmental policies.

Camping tents

1 Scope

This International Standard specifies requirements for safety, performance and fitness for use of camping tents (referred to as “tents” throughout).

NOTE For caravan awnings, ISO 8936 applies. For terms relating to camping tents and caravan awnings, see ISO 7152.

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.

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, *Textile fabrics — 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 4675:1990, *Rubber- or plastics-coated fabrics — Low-temperature bend test*

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

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

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

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

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)*

EN 388, *Protective gloves against mechanical risks*

3 Terms and definitions

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

3.1
base area
area limited by the outer tent walls which contact the ground

NOTE This area includes awnings and canopies, but excludes area for guy lines, mud walls and snow skirts.

3.2
outer tent dimensions
dimension of the smallest rectangular pitching space required for the tent, excluding guy lines

3.3
inner tent area
part of the base area 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
sleeping capacity
number of sleeping berths

3.6
minimum usable weight
weight of the tent including the inner sheet and flysheet (where applicable) plus the minimum number of poles, pegs, and guy lines needed for the tent to be erected and used

NOTE Tent pole bags and peg bags do not need to be included.

3.7
total weight
weight of the tent as supplied, including all poles, fabrics, pegs, bags, etc., excluding packaging

3.8
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

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

3.10
automatic locking mechanism
mechanism which engages without guidance by the user and prevents unintended movement

3.11
sealed tent
tent that has the groundsheet sewn to the flysheet to form a sealed enclosed area, or a tent with a snowskirt

NOTE 1 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 The use of a sealed tent can result in a build-up of harmful gases.

3.12
snowskirt
fabric attached to the lower edge of the tent flysheet which is usually designed to sit horizontally on the ground

NOTE This can be covered with snow, or have rocks placed upon it, in order to secure the tent to the ground.

4 Classification

4.1 Categories of camping tents

4.1.1 Cat. A (lightweight)

Tents having a total weight of ≤ 2,5 kg per sleeping berth.

4.1.2 Cat. B

Tents having a total weight of > 2,5 kg per sleeping berth.

4.2 Tent performance level

4.2.1 Level 1

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

Tent designed for use in mainly moderate weather conditions.

EXAMPLE Poor (wet and windy) weather conditions; not intended for extreme or mountain conditions.

4.2.3 Level 3

Tent designed for use in all weather conditions.

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

5 Calculation of sleeping capacity

5.1 General

Sleeping capacity is determined by using test area 1 for Cat. A tents (see 5.2 as well as Table 1 and Figure 1) and test area 2 for 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 Cat. A tents

Test area is measured at a height of 5 cm.

Table 1 — Dimensions of test area 1

Dimensions in centimetres

l_1	l_2	l_3	l_4	l_5
35	30	195	35	58

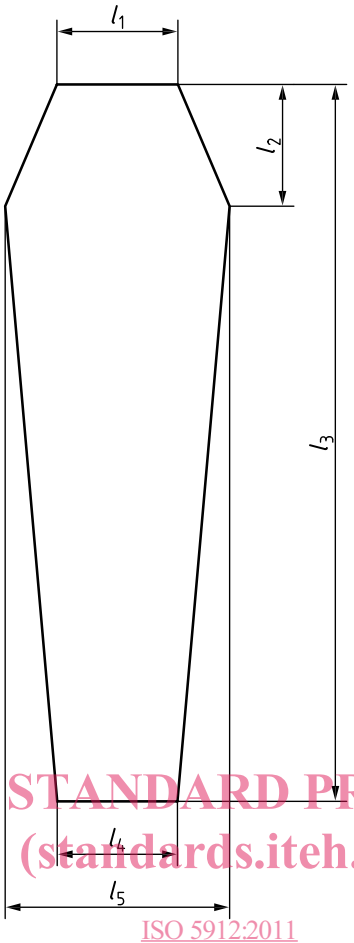

Figure 1 — Test area 1

5.3 Test area 2 for Cat. B tents

Rectangular 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.

Table 2 — Requirements for fabrics and their connections

		Cat. A			Cat. B		
		Level 1	Level 2	Level 3	Level 1	Level 2	Level 3
Tear resistance according to ISO 13937-2 [a] N	outer tent, coated	10	10	15	10	15	20
	outer tent, uncoated	10	10	15	15	20	25
	inner tent	8	8	12	8	9	13
	groundsheet	12	12	15	12	15	20
Breaking strength according to ISO 13934-2 [a] N	outer tent, coated	250	300	400	300	400	500
	outer tent, uncoated	250	300	400	300	400	500
	inner tent	150	200	300	200	300	400
	groundsheet	250	300	400	300	400	500
	plastic windows	100	150	200	100	150	200
Resistance to penetration by water according to ISO 811 [ab] kPa	outer tent, coated	15	15	25	15	20	30
	groundsheet	15	30	50	15	30	50
Weatherability according to ISO 105-B04 [a] (measured against blue wool)	outer tent, coated	3	3-4	4	3	3-4	4
	outer tent, uncoated	3	3-4	4	3	3-4	4
	plastic windows	3	3-4	4	3	3-4	4
Colour fastness according to ISO 105-X12 [a] (wet test)	outer tent, coated	3-4	4	5	3-4	4	5
	outer tent, uncoated	3-4	4	5	3-4	4	5
	inner tent	3-4	4	5	3-4	4	5
	groundsheet	3-4	4	5	3-4	4	5
	plastic windows	3-4	4	5	3-4	4	5
Resistance to puncture according to EN 388 [a] N	groundsheet	10	15	15	10	15	20

Table 2 (*continued*)

		Cat. A			Cat. B		
		Level 1	**Level 2**	**Level 3**	**Level 1**	**Level 2**	**Level 3**
Resistance to cold crack according to ISO 4675:1990, 9.1. 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
NOTE Manufacturers of products complying with this International 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.							
[a] If not stated otherwise, the tests shall be carried out at standard atmosphere in accordance with ISO 139.							
[b] 1 kPa = 1 000 Pa = 10 mbar = 101,971 62 mmH_2O = 10,197 162 cmH_2O.							

6.1.1.2 Dimensional stability

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

6.1.1.3 Flammability

6.1.1.3.1 General

If the fabrics of a camping tent are claimed to have flame retardant properties they shall be tested when new and shall comply as required to 6.1.1.3.2, 6.1.1.3.3 and 6.1.1.3.4. See Table 2, Note 1 for information about the use of applied chemical finishes to produce flame retardant properties.

6.1.1.3.2 Outer tent material

When tested in accordance with ISO 6941:2003, Procedure A (using a 10 s ignition time, surface 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 afterflame time exceeding 10 s, and the average afterflame time shall not exceed 6 s.

6.1.1.3.3 Inner tent material

When tested in accordance with ISO 6941, Procedure A (using a 10 s ignition time, surface ignition), no marker threads shall be severed, there shall be flaming debris on no more than two of the tested samples, there shall be no flame to either vertical edge of the test specimen, no single sample shall show afterflame exceeding 20 s, and the average afterflame time shall not exceed 12 s. Should a single sample fail, the test shall be repeated once more; if the fabric fails a second time then the fabric is deemed to have failed the test.

6.1.1.3.4 Groundsheet

When tested in accordance with ISO 6925, the radius of burn shall be less than 35 mm.