

# INTERNATIONAL STANDARD

# ISO 5912

Third edition  
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## Camping tents

*Tentes de camping*

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# Contents

Page

|  |           |
|--|-----------|
| Foreword.....  | iv        |
| <b>1 Scope.....</b>  | <b>1</b>  |
| <b>2 Normative references .....</b>  | <b>1</b>  |
| <b>3 Terms and definitions .....</b>   | <b>2</b>  |
| <b>4 Requirements .....</b>  | <b>4</b>  |
| 4.1 Overview .....   | 4         |
| 4.2 General requirements .....   | 4         |
| 4.2.1 Fabrics.....   | 4         |
| 4.2.2 Living room.....   | 4         |
| 4.2.3 Sleeping area.....   | 5         |
| 4.2.4 Storage space.....   | 5         |
| 4.2.5 Material connections .....   | 5         |
| 4.2.6 Ground-sheet.....  | 5         |
| 4.2.7 External plastics materials.....   | 6         |
| 4.2.8 Stability .....  | 6         |
| 4.2.9 Ventilation.....   | 6         |
| 4.2.10 Insect protection.....  | 7         |
| 4.2.11 Resistance to penetration by rain .....   | 7         |
| 4.2.12 Design of the inner tent .....  | 7         |
| 4.2.13 Tent exits.....   | 7         |
| 4.2.14 Dimensional stability of tents in synthetic fabrics .....                       | 7         |
| 4.2.15 Frame.....  | 7         |
| 4.2.16 Zip fasteners.....  | 8         |
| 4.2.17 Attachment devices .....  | 8         |
| 4.2.18 Tent and pole bags .....  | 8         |
| 4.2.19 Advice to occupiers.....  | 8         |
| 4.2.20 Accessories .....   | 9         |
| 4.3 Specific requirements for the different types of tent .....                        | 9         |
| 4.3.1 Sleeping tents.....  | 9         |
| 4.3.2 Touring tents .....  | 11        |
| 4.3.3 Residential tents .....  | 12        |
| <b>5 Testing.....</b>  | <b>13</b> |
| 5.1 Clear height and seats for tents of type S, class st, and tents of type T .....    | 13        |
| 5.2 Storage space.....   | 14        |
| 5.3 Zip fasteners .....  | 14        |
| 5.3.1 Determination of the lateral strength of the zip fastener .....                  | 14        |
| 5.3.2 Testing of behaviour under conditions of continuous reciprocating movement ..... | 15        |
| 5.4 Corrosion test.....  | 16        |
| 5.5 Ground fastening .....   | 16        |
| 5.6 Rain test .....  | 16        |
| 5.7 Material connection test.....  | 17        |
| 5.8 Resistance of plastic sheets to discolouration under the effect of moisture.....   | 17        |
| 5.9 Dimensional stability of tents in synthetic fabrics .....                          | 17        |
| <b>6 Instructions for use.....</b>   | <b>18</b> |
| <b>7 Marking.....</b>  | <b>19</b> |
| <b>Annex A (informative) Marking of tents.....</b>                                     | <b>20</b> |

## 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 third edition cancels and replaces the second edition (ISO 5912:1993) and ISO 5912:1993/Amd.1:1998, which have been technically revised.

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# Camping tents

## 1 Scope

This International Standard specifies the requirements on safety, performance and fitness for use of camping tents (called “tents” throughout the text).

It applies to types and classes of tents for camping and outdoor purposes as defined in 3.1.

NOTE For caravan awnings ISO 8936 and ISO 8937 apply. 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-A02:1993, *Textiles — Tests for colour fastness — Part A02: Grey scale for assessing change in colour*

ISO 105-B04:1994, *Textiles — Tests for colour fastness — Part B04: Colour fastness to artificial weathering: Xenon arc fading lamp test*

ISO 139:—<sup>1)</sup>, *Textiles — Standard atmospheres for conditioning and testing*

ISO 527-1:1993, *Plastics — Determination of tensile properties — Part 1: General principles*

ISO 527-3:1995, *Plastics — Determination of tensile properties — Part 3: Test conditions for films and sheets*

ISO 554:1976, *Standard atmospheres for conditioning and/or testing — Specifications*

ISO 1420:2001, *Rubber- or plastics-coated fabrics — Determination of resistance to penetration by water*

ISO 1421:1998, *Rubber- or plastics-coated fabrics — Determination of tensile strength and elongation at break*

ISO 2062:1993, *Textiles — Yarns from packages — Determination of single-end breaking force and elongation at break*

ISO 2409:1992, *Paints and varnishes — Cross-cut test*

ISO 2768-1:1989, *General tolerances — Part 1: Tolerances for linear and angular dimensions without individual tolerance indications*

ISO 4892-2:1994, *Plastics — Methods of exposure to laboratory light sources — Part 2: Xenon-arc sources*

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1) To be published. (Revision of ISO 139:1973)

## ISO 5912:2003(E)

ISO 4995:2001, *Hot-rolled steel sheet of structural quality*

ISO 7152:1997, *Camping tents and caravan awnings — Vocabulary and list of equivalent terms*

ISO 7253:1996, *Paints and varnishes — Determination of resistance to neutral salt spray (fog)*

ISO 8570:1991, *Plastics — Film and sheeting — Determination of cold-crack temperature*

ISO 8936:2003, *Caravan awnings — Safety requirements*

ISO 8937:2000, *Caravan awnings — Functional requirements and test methods*

ISO 9073-4:1997, *Textiles — Test methods for nonwovens — Part 4: Determination of tear resistance*

ISO 10966:1994<sup>2)</sup>, *Textiles — Fabrics for awnings and camping tents — Specification*

ISO 13934-1:1999, *Textiles — Tensile properties of fabrics — Part 1: Determination of maximum force and elongation at maximum force using the strip method*

ISO 13934-2:1999, *Textiles — Tensile properties of fabrics — Part 2: Determination of maximum force using the grab method*

ISO 13937-2:2000, *Textiles — Tear properties of fabrics — Part 2: Determination of tear force of trouser-shaped test specimens (single tear method)*

EN 12329:2000, *Corrosion protection of metals — Electrodeposited coatings of zinc with supplementary treatment on iron or steel*

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### 3 Terms and definitions

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

#### 3.1 Types and classes

##### 3.1.1

##### **sleeping tent (type S)**

tents which are in principle used for sleeping purposes and divided into two classes

##### 3.1.1.1

##### **tents of type S, class st**

standard-weight tents having a mass of > 2 kg plus 1 kg per person

##### 3.1.1.2

##### **tents of type S, class l**

lightweight tents having a mass of ≤ 2 kg plus 1 kg per person

##### 3.1.2

##### **touring tent (type T)**

tent for residential purposes suitable for repeated pitching and striking down

NOTE Striking is the act of dismantling and packing away a tent.

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2) Under revision.

**3.1.3****residential tent (type R)**

tent for residential purposes for long-term pitching and not designed for regular pitching and striking, i.e. spring until autumn without snow load

**3.2****pitching area**

total area necessary to pitch the tent on the ground (including guy ropes)

**3.3****base area**

area, limited by the outer tent walls, which contact the ground, except the mud wall

**3.4 usable area****3.4.1****living area of tents (types T and R)**

the part of the base area of a tent designated for living

**3.4.2****sleeping area**

the part of the base area of a tent designated for sleeping

**3.5****capacity**

the number of adults for which the tent is designed

**3.6****living room**

the part of the tent which is designated for cooking, standing, sitting (table and chairs) as well as for storage, with the exception of the storage space

**3.7****storage space**

the part of the tent which is designated for depositing luggage and/or clothing

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## 4 Requirements

### 4.1 Overview

For an overview of requirements see Table 1.

**Table 1 — Overview of requirements and corresponding clauses**

| Requirements                      | All types of tents | Only sleeping tents | Only touring tents | Only residential tents |
|-----------------------------------|--------------------|---------------------|--------------------|------------------------|
| Living room                       | 4.2.2              |                     | 4.3.2.1            | 4.3.3.1                |
| Sleeping area                     | 4.2.3              | 4.3.1.1             | 4.3.2.2            | 4.3.3.2                |
| Storage space                     | 4.2.4              | 4.3.1.2             | 4.3.2.3            | 4.3.3.3                |
| Material connections              | 4.2.5              |                     |                    |                        |
| Ground-sheet                      | 4.2.6              |                     |                    |                        |
| Mud wall                          |                    |                     |                    | 4.3.3.4                |
| Window                            |                    |                     |                    | 4.3.3.5                |
| Window-cover                      | 4.2.7.1            |                     |                    | 4.2.7.1                |
| Stability                         | 4.2.8              | 4.3.1.3             |                    | 4.3.3.6                |
| Ventilation                       | 4.2.9              |                     |                    |                        |
| Insect protection                 | 4.2.10             |                     |                    |                        |
| Resistance to penetration by rain | 4.2.11             |                     |                    |                        |
| Design of the inner tent          | 4.2.12             | 4.2.12              |                    |                        |
| Tent exit                         | 4.2.13             |                     |                    |                        |
| Dimensional stability             | 4.2.14             |                     |                    |                        |
| Fabric                            | 4.2.1              |                     |                    |                        |
| Material                          | 4.2.6.4, 4.2.7.3   |                     |                    |                        |
| Frame                             | 4.2.15             |                     |                    |                        |
| Zip fastener                      | 4.2.16             | 4.3.1.4             | 4.3.2.5            | 4.3.3.7                |
| Attachment device                 | 4.2.17             |                     |                    |                        |
| Tent and pole bag                 | 4.2.18             |                     |                    |                        |
| Advice to occupiers               | 4.2.19             |                     |                    |                        |
| Accessories                       | 4.2.20             | 4.3.1.5             | 4.3.2.6            | 4.3.3.8                |

### 4.2 General requirements

#### 4.2.1 Fabrics

Tents shall be made from fabrics meeting the requirements specified in ISO 10966.

#### 4.2.2 Living room

For requirements for the living room see 4.3.2.1 and 4.3.3.1.



### 4.2.3 Sleeping area

For dimensions for the sleeping area see 4.3.1.1, 4.3.2.2 and 4.3.3.2. The sleeping area shall have a ground-sheet as specified in 4.2.6.

### 4.2.4 Storage space

All tents shall have a storage space suitable for the intended capacity.

### 4.2.5 Material connections

Material connections (e.g. by bonding or sewing) shall have at least the tensile strength of the fabrics connected when tested according to 5.7, and, in the case of different materials, that of the material having the lower tensile strength.

### 4.2.6 Ground-sheet

#### 4.2.6.1 Form and height

The ground-sheet shall be in the form of an open box with a turned-up outer edge height of at least 10 cm.

#### 4.2.6.2 Fastening

At least one ground fastening shall be provided for each corner. For entrance walls of inner tents having a width of more than 200 cm, an additional fastening shall be provided which can also be fixed at the lower edge of the cloth or directly above the ground.

The fastening shall be designed to enable pitching and dismantling of the tent at temperatures between  $-5\text{ }^{\circ}\text{C}$  and  $+40\text{ }^{\circ}\text{C}$ .

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#### 4.2.6.3 Protective measures

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Points on the ground-sheet which are in contact with frame parts shall be suitably protected.

#### 4.2.6.4 Material requirements

The materials used for ground-sheets shall comply with Tables 2 and 3.

**Table 2 — Minimum requirements for ground-sheets**

| Property                           | Plastic foil |              | Coated fabrics |              |
|------------------------------------|--------------|--------------|----------------|--------------|
|                                    | Requirement  | Test method  | Requirement    | Test method  |
| Resistance to tearing              | 2 daN        | ISO 9073-4   | 3 daN          | ISO 13937-2  |
| Resistance against cold crack      | <sup>a</sup> | <sup>a</sup> | <sup>a</sup>   | <sup>a</sup> |
| Resistance to penetration by water | 150 hPa      | ISO 1420     | 150 hPa        | ISO 1420     |

<sup>a</sup> For requirements and test method see ISO 10966.

**Table 3 — Minimum requirements for the tensile strength of ground-sheets**

| Materials with an elongation break of |               |         | Test method  |                |
|---------------------------------------|---------------|---------|--------------|----------------|
| < 20 %                                | (20 to 200) % | > 200 % | Plastic foil | Coated fabrics |
| 120 daN                               | 65 daN        | 20 daN  | ISO 527-3    | ISO 1421       |

**4.2.7 External plastics materials**

**4.2.7.1 Window-covers**

Windows which are not rainproof shall be provided with a window-cover which overlaps the window on all sides by at least 10 cm. On the periphery, the cover shall be provided with attachment points (e.g. toggles) at maximum intervals of 35 cm. These requirements do not apply when zip fasteners are used.

**4.2.7.2 Mud walls and windows**

For requirements see 4.3.3.4 and 4.3.3.5.

**4.2.7.3 Material requirements**

The material requirements shall be as specified in Table 4.

**Table 4 — Minimum requirements for plastic windows, window-covers and mud walls**

| No. | Property               | Requirement                 | Test method |
|-----|------------------------|-----------------------------|-------------|
| 1   | Resistance to tearing  | 2 daN                       | ISO 9073-4  |
| 2   | Elongation at break    | 200 %                       | ISO 527-3   |
| 3   | Cold-crack temperature | - 20 °C                     | ISO 8570    |
| 4   | Weatherability         | see ISO 10966:1994, Table 8 | ISO 4892-2  |
| 5   | Colour fastness        | Value 4                     | see 5.8     |

After testing in accordance with ISO 4892-2, the values measured for No. 1, 2 and 3 shall at least correspond to 85 % of the values required for the new product.

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**4.2.8 Stability**

**4.2.8.1** The tent shall be provided with suitable attachment devices to secure it to the ground.

**4.2.8.2** Provision shall be made for storm guys.

**4.2.8.3** The pitched, fully pegged and guyed tent, with all doors and windows closed, shall be able to withstand a wind speed of 15 m/s in any direction. After application of the load, the tent shall return to its original shape and position without any damage.

The fulfilment of this requirement has to be verified by a suitable test or by calculation.

NOTE A specified test or calculation method was not available at the stage of developing this International Standard.

**4.2.9 Ventilation**

By the suitable choice of materials and product design, a tent shall enable a permanent circulation of air to reduce condensation.

Sufficiently large areas of inner tents for double skin tents, or the fabric used for a single skin tent shall be manufactured from a material permeable to water vapour (see ISO 10966).

In the case of double-skin tents, the space between the inner and outer tent shall be sufficient to provide effective ventilation.

Single-skin sleeping tents made of non-breathable fabrics shall provide permanent openings totalling at least 100 cm<sup>2</sup> per person. These shall be situated as high as possible and on opposite sides of the tent.

#### 4.2.10 Insect protection

All doors and openings in inner tents shall be protected against insects.

Permanent openings shall be secured by mosquito nets with a maximum hole size of 0,1 cm × 0,1 cm. Doors and openings for inner tents shall be insect proof when they are closed.

#### 4.2.11 Resistance to penetration by rain

The resistance of the tent shall be such that no water penetrates the tent interior except a light mist during the first 2 min, when the rain test according to 5.6 is carried out.

The outer fabric of the tent shall not come into contact with the inner fabric unless designed to do so, e.g. pole sleeves of geodesic tents.

#### 4.2.12 Design of the inner tent

Tents of type S, class I, shall have at least two pockets for small belongings attached to a wall.

The inner tent of all other types shall have at least one such pocket per person.

#### 4.2.13 Tent exits

4.2.13.1 Tents with a capacity of four or more persons or a base area of more than 12 m<sup>2</sup> shall have an exit with a minimum area of 0,9 m<sup>2</sup> and a minimum width of 50 cm. Where two exits are provided, this size requirement only applies to the first.

4.2.13.2 Tent exits may be closed using a zip fastener (see 4.2.16) or any other system, provided that they can be opened easily from the bottom, if the exit is higher than 100 cm.

#### 4.2.14 Dimensional stability of tents in synthetic fabrics

It shall be possible to take down the tent in a situation with a relative humidity of (0 to 5) %, without considerably more strength being required than with the higher relative humidity. Any parts of the tent intended to reduce the tension on the fabric can be used, if necessary.

Test according to 5.9.

#### 4.2.15 Frame

4.2.15.1 All metal parts shall be such that there is no change at the end of the test according to 5.4, except a minor discolouration. In the case of enamelled or coated frame components, there shall be no infiltration under the varnish of more than 0,5 mm according to ISO 7253.

4.2.15.2 The frame parts shall be clearly marked to facilitate the pitching, the only exception to this being, if the frame parts for a tent can only be assembled in one form.

If two frame components are fitted together, the lower component shall not become detached when subjected to twice its own weight in a vertical position.

The tubular connection of the frame components to be fitted together shall have a minimum length of two times the outside diameter.