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Awnings for leisure accommodation vehicles — Requirements and test methods

Auvents pour véhicules de loisirs habitables — Exigences et méthodes d'essai

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Contents

Page

Foreword iv

1 Scope 1

2 Normative references 1

3 Terms and definitions 2

4 Types of awning 4
4.1 Residential awning (Type R) 4
4.2 Touring awning (Type T) 4
4.3 Winter awning (Type W) 4

5 Requirements 4
5.1 General 4
5.2 Dimensions 4
5.3 Zip fasteners 5
5.4 Frame assembly 6
5.5 Guying and ground fastening 6
5.6 Metallic parts 6
5.7 Awning attachment to the leisure accommodation vehicle 6
5.8 Ventilation 6
5.9 Draught exclusion 7
5.10 Window-cover 7
5.11 Rain resistance 7
5.12 Resistance to roof load 7
5.13 Accessories 7
5.14 Warning notice 7
5.15 Means of escape 8

6 Testing 9
6.1 General 9
6.2 Zip fasteners 9
6.3 Awning frame 9
6.4 Ground anchorage 10
6.5 Awning attachment 11
6.6 Mud wall pegging points 11
6.7 Rain resistance 11

7 Marking 11

8 Information supplied by the manufacturer 12

Bibliography 13

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 8936 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 8936:2003) as well as the second edition of ISO 8937 (ISO 8937:2000) which have been technically revised.

Awnings for leisure accommodation vehicles — Requirements and test methods

1 Scope

This International Standard specifies requirements and test methods for awnings for leisure accommodation vehicles. It applies to the different types of awnings described in Clause 4.

This International Standard does not apply to sun awnings as defined in 3.4.

Requirements concerning flame retardant finishing of the fabric could not be included in this International Standard because of known disadvantages of that finishing in other respects. Manufacturers who want to inform the consumer about that characteristic may mark the awning in accordance with ISO 10966:2005, 4.14.

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

ISO 5912:2003, *Camping tents*

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

ISO 7253:1996[1)], *Paints and varnishes — Determination of resistance to neutral salt spray (fog)*

ISO 10966:2005, *Sports and recreational equipment — Fabrics for awnings and camping tents — Specification*

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

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

1) International Standard withdrawn and replaced by ISO 9227:2006.

3 Terms and definitions

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

3.1
awning
closeable tent used to extend the living area of a leisure accommodation vehicle, which may be free-standing or attached to the leisure accommodation vehicle

3.2
leisure accommodation vehicle
unit of living accommodation for temporary or seasonal occupation that may meet requirements for construction and use of road vehicles

[EN 13878:2003]

3.3
free-standing
⟨awning⟩ that will remain erected without support from a leisure accommodation vehicle

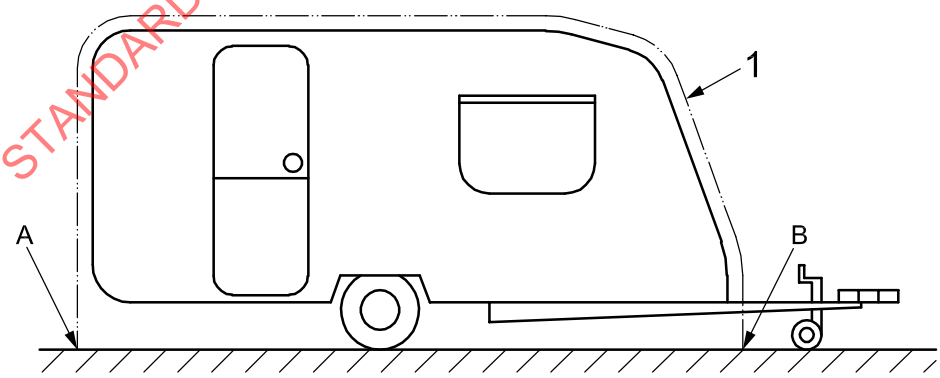
3.4
sun awning
temporary structure used with leisure accommodation vehicles to provide shelter from the sun, but is not designed or constructed to provide shelter from wind, rain or snow

NOTE A sun awning can be used with optional front and side panels to form an enclosure, but this enclosure would not meet the requirements of an awning as defined in this International Standard.

3.5
base area
area limited by the outside walls of the awning and the wall of the leisure accommodation vehicle measured at ground level

3.6
perimeter
distance from point A, up round the awning channel, usually fitted around the edge of the leisure accommodation vehicle and down to point B when the leisure accommodation is parked, on level ground, with all corner steadies in contact with the ground

See Figure 1.



Key

1 perimeter

A rear ground point

B front ground point

Figure 1 — Perimeter

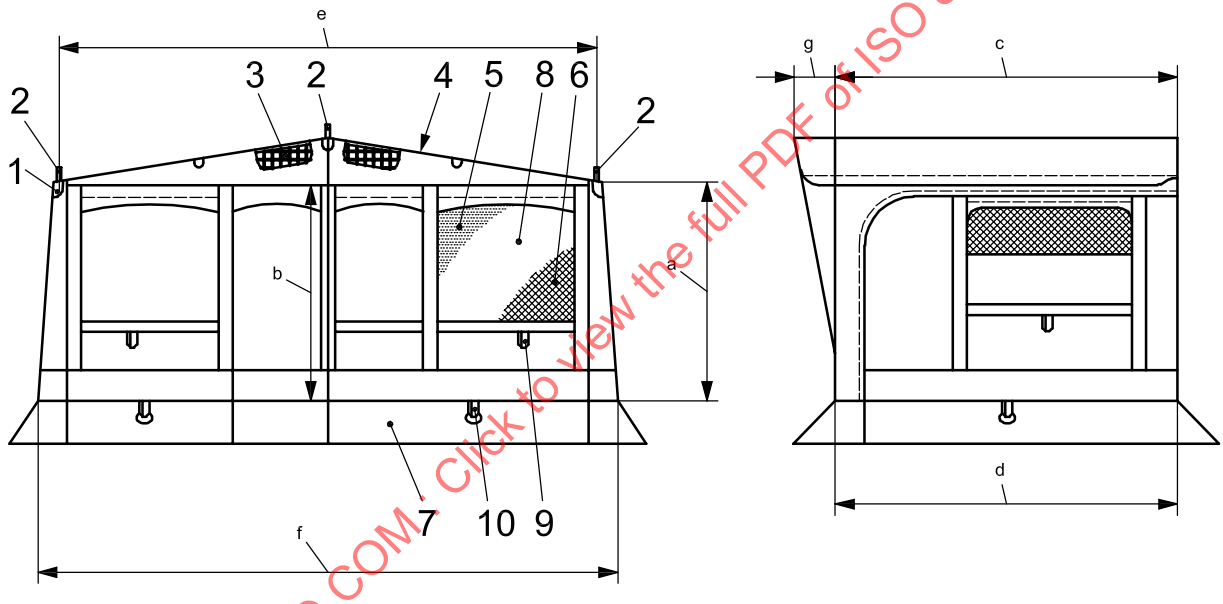
3.7
awning depth at ground level
horizontal distance between the base of the leisure accommodation vehicle side wall and the base of the front edges of the awning.

See Figure 2.

3.8
awning depth at roof level
horizontal distance between the leisure accommodation vehicle wall and the awning front wall at roof level

See Figure 2.

3.9
overall depth
horizontal distance between the leisure accommodation vehicle side wall and the foremost part of the awning, measured at right angles



Key

1 corner guying point
2 pole spike
3 vent (see ISO 7152)
4 roof
5 window cover
6 window ventilation
7 mud wall
8 window
9 storm guying point
10 ground anchorage

a Standing height.
b Entrance height.
c Awning depth at standing height.
d Awning depth at ground level.
e Awning width at standing height.
f Awning width at ground level.
g Canopy depth.

Figure 2 — Illustration of parts and components of awnings

4 Types of awning

4.1 Residential awning (Type R)

Awning suitable for all seasons including a light snow load and for a roof load as specified in 5.12 a).

4.2 Touring awning (Type T)

Awning suitable for repeated pitching and striking with a roof load as specified in 5.12 b).

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

4.3 Winter awning (Type W)

Awning suitable for a roof load as specified in 5.12 c).

5 Requirements

5.1 General

Awnings for leisure accommodation vehicles shall be made from fabrics meeting the requirements specified in ISO 10966.

5.2 Dimensions

5.2.1 Awning depth

At roof level, awnings shall have minimum awning depths as follows; type R: 200 cm; type T: 180 cm; type W 140 cm.

5.2.2 Awning width

Type W awnings shall have a minimum width at roof level of 150 cm.

5.2.3 Entrance dimensions

At least one entrance shall have a minimum height, measured from ground level, of 170 cm at the highest point and a minimum width of 50 cm.

5.2.4 Standing height

The standing height for type R awnings and type T awnings shall be a minimum of 180 cm, over 70 % of the base area.

5.2.5 Awning perimeter size

For each awning, the range of perimeters within which it fits shall be indicated according to Table 1.

Table 1 — Awning perimeter sizes

Dimensions in centimetres

Size	Awning perimeter
1	595 to 619
2	620 to 644
3	645 to 669
4	670 to 694
5	695 to 718
6	719 to 742
7	743 to 766
8	767 to 790
9	791 to 814
10	815 to 839
11	840 to 864
12	865 to 889
13	890 to 914
14	915 to 939
15	940 to 964
16	965 to 989
17	990 to 1 014
18	1 015 to 1 039
19	1 040 to 1 064
20	1 065 to 1 089
21	1 090 to 1 114
22	1 115 to 1 139
23	1 140 to 1 164
24	1 165 to 1 189
25	1 190 to 1 234

5.3 Zip fasteners

5.3.1 The minimum transverse tear strength of the zip fasteners determined in accordance with 6.2 shall be:

a) 700 N for zip fasteners in all load-bearing outside walls (e.g. wind load-bearing walls);

b) 300 N for zip fasteners for windows and window covers.

5.3.2 At least one of the pullers of the zip fasteners at each entrance shall be near the ground in the closed position. In addition they shall be capable of being operated from inside and outside.

5.4 Frame assembly

5.4.1 If the frame is a rigid assembly then it shall be partly adjustable.

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

The upper part of a joint shall overlap the lower part, to avoid the ingress of water.

5.4.2 Frames which are not connected by spring links or other means shall be permanently marked or supplied with a detailed frame plan.

5.4.3 Rigid frame-angled joints, when tested in accordance with 6.3.2 shall be free from damage or permanent deflection.

5.4.4 Any parts of the frame which are accessible during use shall be free of sharp edges.

5.4.5 It shall be possible to place all pole spikes of the frame tubes approximately in the vertical position or they shall be fitted with appropriate protection.

5.5 Guying and ground fastening

5.5.1 Ground fastening systems shall have a minimum breaking strength of 350 N, when tested in accordance with 6.3.

5.5.2 Awning roofs shall have at least one guying point at each front corner.

When tested in accordance with 6.4, the guying system, including eyelet, upper and lower fastening and tensioning device (without ground tensioners), shall resist a minimum breaking strength of 500 N.

NOTE A higher strength has been chosen for the guying system than for the fastening system, in order to allow for ageing, as these parts cannot be replaced.

5.5.3 The distance between adjacent ground fastening points shall not exceed 75 cm (type T awnings), 65 cm (type R awnings) or 50 cm (type W awnings).

At the base of the zip fasteners, a method shall be provided to relieve the lateral tension on the zip.

5.6 Metallic parts

All metal parts shall be such that there is no change at the end of the test in accordance with 6.3.3, except a minor discolouration. In the case of enamelled or coated frame components, under the varnish there shall be no infiltration of more than 0,5 mm in accordance with ISO 7253.

5.7 Awning attachment to the leisure accommodation vehicle

If the awning is provided with a channel cord it shall fit to the channel of the leisure accommodation vehicle.

When tested in accordance with 6.5, it shall not be possible to pull the channel cord out of the channel.

5.8 Ventilation

By the suitable choice of materials and product design, an awning shall enable circulation of air to prevent the build-up of toxic gases and reduce condensation.

5.9 Draught exclusion

5.9.1 External mud wall

External mud walls where fitted shall have pegging points which are a maximum of 75 cm (type T awnings), 65 cm (type R awnings) and 50 cm (type W awnings) apart. The pegging points shall be resistant to tearing. This condition is fulfilled if the pegging points withstand the test in 6.6 without damage.

5.9.2 Internal mud wall

Internal mud walls where fitted shall have a minimum height of 30 cm and shall overlap where they meet.

5.9.3 Draught strip and wheel cover

The awning shall be supplied with a draught strip and a wheel cover which provide wind protection for the awning.

5.10 Window-cover

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 or other continuous fasteners are used. The cover shall be provided with attachment points with a minimum distance of 90 cm apart horizontally.

5.11 Rain resistance

When testing in accordance with 6.7, no water shall penetrate the awning interior after a permissible light sprinkling during the first 120 s.

5.12 Resistance to roof load

Awnings, when tested in accordance with 6.3.1, shall withstand the following loads without damage or changes reducing the functional capacity.

a) Type R: 200 N/m^2

b) Type T: 50 N/m^2

c) Type W: 750 N/m^2

5.13 Accessories

Sufficient suitable pegs shall be supplied to meet the requirements specified in 5.5.3 and 5.9.1 and for all guyliners and storm straps supplied with the awning.

Guys shall be of a length sufficient to allow it to be fixed at least 100 cm from the base of the awning.

Separate bags shall be supplied for the awning fabric, the poles and the pegs.

5.14 Warning notice

A permanent legible notice, at least in English and French, giving simple safety advice shall be attached inside the tent in a position where it can be easily and readily seen.

It is recommended that the notice also be written in the language of the country in which the tent will be sold.

The minimum dimensions of the notice shall be 7 cm × 15 cm for each language.

The letters for the heading “Safety precautions” shall be at least twice as high as the letters for the remainder of the text.

The heading shall be in red letters, the remainder of the text shall be black on a white background.

The following wording and layout of the notice shall be used:

a) English

Safety precautions

Camp safely. Follow these common-sense rules:

- Do not place hot appliances near the walls, roof or curtains
- Always observe the safety instructions for these appliances
- Never allow children to play near hot appliances
- Keep exits clear
- Make sure you know the safety precaution arrangements on the site
- Whilst the awning is in use it is necessary that vents be kept open in order to allow air to circulate and to avoid the build up of toxic gases.

b) French

Conseils de securité

Pour faire du camping en toute sécurité, il faut suivre ces règles pleines de bon sens:

- Ne pas placer d'appareils chauds à proximité des parois, du toit ou des rideaux
- Bien respecter les consignes de sécurité de ces appareils
- Ne jamais permettre aux enfants de jouer aux alentours des appareils chauds
- Dégager les entrées
- Se renseigner sur les dispositifs et mesures prévus sur le terrain en cas d'incendie
- Lorsque l'auvent est utilisé, les aérations doivent être laissées ouvertes afin de permettre à l'air de circuler et d'empêcher l'accumulation de gaz toxiques.

5.15 Means of escape

Awnings having a base area of more than 5 m^2 shall have one exit and a further means of escape directly to the outside.

6 Testing

6.1 General

If no specific test is indicated in this International Standard, the requirements specified in Clause 5 shall be satisfied in a suitable way, for example by measurement.

6.2 Zip fasteners

Test in accordance with 5.3 of ISO 5912:2003.

6.3 Awning frame

6.3.1 Test of load capacity

See Figure 3.

The whole roof area of the awning shall be covered by profiled soft-foam layers with a thickness of 6 cm and a density of approximately 35 kg/m^3.

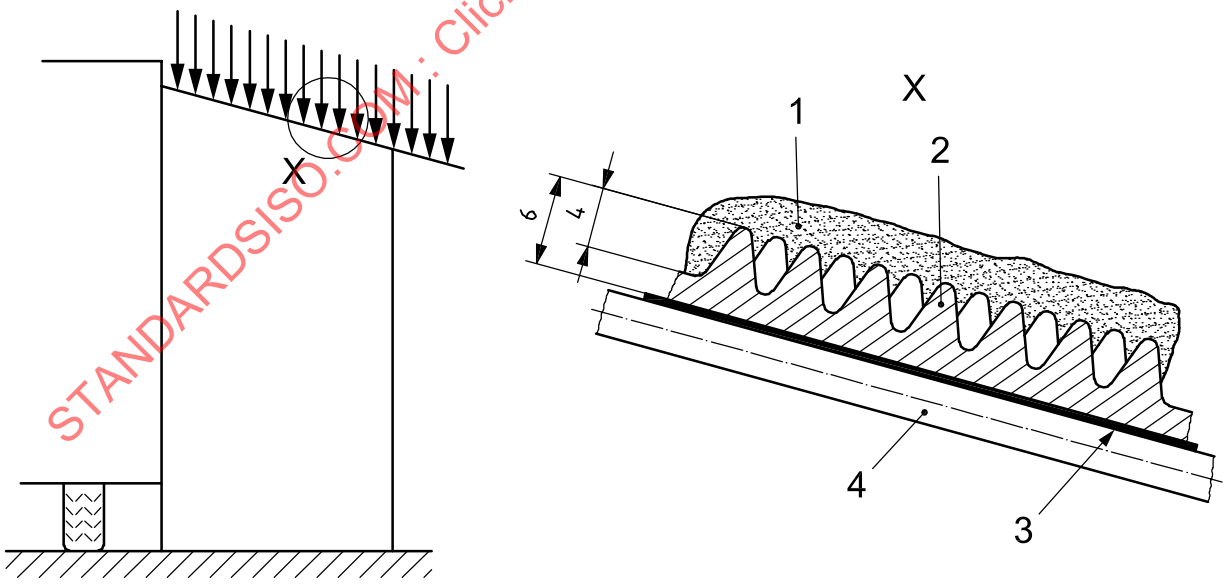
The layers shall be fixed and the smooth side of the layers shall touch the awning roof.

A quantity of sand, the weight of which is calculated by multiplying the projected roof area in square metres by the roof load specific to the type of awning (see 5.12), shall be provided.

The calculated quantity of sand shall be distributed uniformly over the profiled foam layers.

The loading time shall be 1 h.

Dimensions in centimetres



Key

1 sand
2 profiled soft-foam layer
3 roof fabric
4 roof pole

Figure 3 — Test of load capacity

6.3.2 Frame-angled joints

In order to test assembly of the frame-angled joints, the test specimen is to be mounted as shown in Figure 4.

At a distance of 100 cm from the frame-angled joints, 500 reciprocating movements are carried out with a force of 100 N and a frequency of 30/min.

6.3.3 Corrosion

Subject the framework for 36 h to a salt spray test in accordance with ISO 7253, or for 192 h to a test in accordance with EN 12329.

Dimensions in centimetres

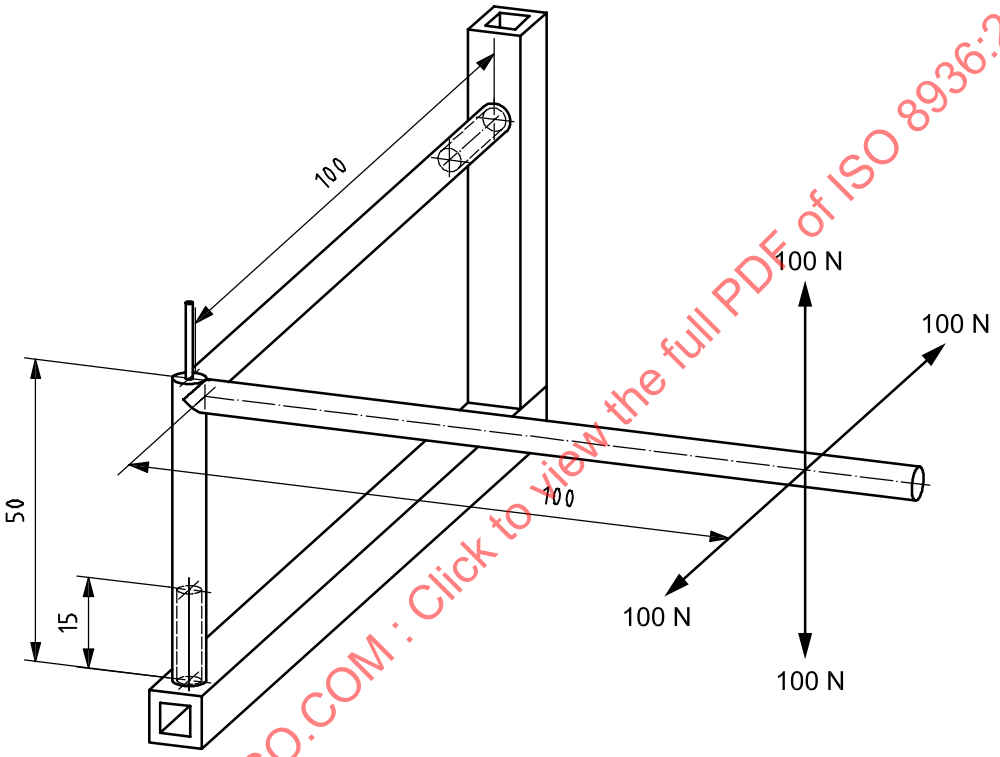


Figure 4 — Test of assembly of frame-angled joints

6.4 Ground anchorage

6.4.1 The ground tensioner and its fastening shall be taken from the awning fabric in the form of a strip having a width of 5 cm (three test specimens). The test specimen shall be clamped into a tensile testing machine, with the awning fabric on one side and the ground tensioner on the other side. The lower fastening elements is the eyelet of a wire peg which is drawn through the ground tensioner and fixed to the clamping device of the tensile testing machine.

The test is carried out in accordance with ISO 13934-1 (with corresponding adjustment of the clamping) at a test speed of 10 cm/min. Indicate the force at which fracture occurs and the point where the test specimen has torn.

6.4.2 The tensile force shall be tested in accordance with ISO 2062.