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Outdoor furniture - Seating and tables for camping, domestic and contract use - Part 3: Mechanical safety requirements for tables

Mobilier d'extérieur - Sièges et tables à usages
domestique, collectif et de camping - Partie 3 :
Exigences de sécurité mécanique pour les tables

Außenmöbel - Sitzmöbel und Tische für Camping-,
Wohn- und Objektbereich - Teil 3: Mechanische
Sicherheitsanforderungen für Tische

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 207.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
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Contents	Page
European foreword	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Test conditions	5
5 Safety requirements	5
5.1 General safety requirements	5
5.2 Holes in tubular/rigid components	6
5.3 Shear and compression points	6
5.3.1 General	6
5.3.2 Shear and compression points when setting up and folding	6
5.3.3 Shear and compression points under influence of non-electrically powered mechanisms	6
5.3.4 Shear and compression points during use	6
5.4 Stability	7
5.4.1 General	7
5.4.2 Stability under vertical load	7
5.4.3 Stability for tables with extension elements	7
5.4.4 Stability of tables designed to support a parasol	7
5.5 Strength and durability	7
5.5.1 General	7
5.5.2 Glass	8
5.5.3 Test sequences and parameters	8
5.5.4 Requirements	10
6 Information for use	10
7 Test report	10
Annex A (normative) Test methods for finger entrapment and shear and compression	11
Annex B (informative) Additional test recommendations	17
Annex C (informative) Purchase information (guidelines)	19

European foreword

This document (prEN 581-3:2024) has been prepared by Technical Committee CEN/TC 297 “Furniture”, the secretariat of which is held by UNI.

This document is currently submitted to the CEN Enquiry.

This document will supersede EN 581-3:2017.

prEN 581-3:2024 includes the following significant technical changes with respect to EN 581-3:2017:

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[oSIST prEN 581-3:2024](https://standards.iteh.ai/catalog/standards/sist/ebf087e6-b4e8-4035-b88f-6fd12246a2f2/osist-pren-581-3-2024)

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prEN 581-3:2024(E)

1 Scope

This document specifies requirements for the safety, strength durability and stability of all types of outdoor tables for use by adults, including those with glass in their construction.

It does not apply to street furniture.

It does not apply to office, worktables and desks and tables and laboratory worktops for educational institutions for which other EN standards exist.

With exception of the stability tests, this document does not provide assessment of the suitability of any storage features included in outdoor tables.

It does not include requirements for electrical safety.

It does not include requirements for the resistance to ageing, degradation.

This document has three annexes:

- Annex A (normative) Test methods for finger entrapment.
- Annex B (informative) Additional test requirements.
- Annex C (informative) Test severity in relation to application.

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.

EN 1730:2012, *Furniture — Tables — Test methods for the determination of stability, strength and durability*

EN 12150-1+A1:2019, *Glass in building — Thermally toughened soda lime silicate safety glass — Part 1: Definition and description*

EN 12600:2002, *Glass in building — Pendulum test — Impact test method and classification for flat glass*

3 Terms and definitions

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

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

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

3.1

outdoor table for camping use

table for outdoor use foldable or knock-down and light-weight, intended for use in connection with camping and travelling

3.2

outdoor table for domestic use

table for outdoor use intended for private use in places without public access

3.3**outdoor table for contract use**

table for outdoor use intended for non-private use in places with public access

3.4**street furniture**

outdoor furniture used in public space, permanently fixed to the ground or any structure (e.g., bus stop, wall...) or not able to be manually removed

3.5**accessible part**

part to which access can easily be gained by the user when the table is in its intended configuration of use and for which the probability of unintentional user contact is high, including all parts 500 mm in from the edges users are likely to sit at and 200 mm from all other edges

3.6**part accessible during setting up and folding**

part to which access can only be gained when setting up and folding the table

3.7**extension element**

components that can be pulled out and pushed in

EXAMPLE Drawers, suspended pocket files, keyboard trays.

3.8**ancillary surface**

surface additional to the main surface intending for occasional use as part of a table top

4 Test conditions

General test conditions shall be in accordance with EN 1730:2012, Clause 4.

The tests shall be carried out on the same sample and in the order in which they are listed in Table 2.

5 Safety requirements**5.1 General safety requirements**

The table shall be designed so as to minimize the risk of injury to the user.

All parts of the table with which the user comes into contact during intended use, shall be designed so that physical injury and damage are avoided.

This requirement is met when:

- a) edges which are directly in contact with the user are rounded or chamfered,
- b) all other edges and corners accessible during intended use are free from burrs and/or sharp edges.

Movable and adjustable parts shall be designed so that injuries and inadvertent operation are avoided.

It shall not be possible for any load bearing part of the bed to come loose unintentionally.

It shall not be possible for any load bearing part of the table to come loose unintentionally.

prEN 581-3:2024(E)**5.2 Holes in tubular/rigid components**

There shall be no holes in the ends of tubular components or holes in rigid components in accessible parts between 8 mm and 12 mm, unless the depth of penetration is less than 10 mm. This requirement is fulfilled if there is no hazard present when tested in accordance with A.1.

5.3 Shear and compression points**5.3.1 General**

The requirements contained in 5.3.2, 5.3.3 and 5.3.4 do not apply to electrically operated furniture.

NOTE The requirements for electrically operated furniture will be provided in prEN 17684, which is under development.

5.3.2 Shear and compression points when setting up and folding

Unless 5.3.3 or 5.3.4 are applicable, shear and compression points that are created only during setting up and folding are acceptable, because the user can be assumed to be in control of his/her movements and to be able to cease applying the force immediately upon experiencing pain.

The edges of parts moving relative to each other and creating shear and compression points shall be as specified in 5.1.

5.3.3 Shear and compression points under influence of non-electrically powered mechanisms

With the exception of operation of doors, flaps and extension elements, there shall be no areas where the distance between two accessible parts moving relative to each other can be less than 25 mm, and more than 8 mm in any position during movement that could present a risk of injury to the user, created by parts of the furniture operated by non-electrically powered mechanisms, e.g.: mechanical springs and gas lifts.

This requirement is fulfilled if there is no hazard present when tested in accordance with A.2.2.

5.3.4 Shear and compression points during use

With the exception of operation of doors, flaps and extension elements, there shall be no areas where the distance between two accessible parts moving relative to each other can be less than 18 mm, and more than 8 mm in any position that could present a risk of injury to the user, created by loads applied during normal use.

The loads applied during normal use are the loads used for the mechanical tests in EN 1730:2012 and parameters in Table 2 as listed below:

- Vertical static load on main surface divided by (1.5);
- Vertical static load on ancillary surface;
- Horizontal durability test.

This requirement is fulfilled if there is no hazard present when tested in accordance with A.2.3.

5.4 Stability

5.4.1 General

When assessing the stability of a table, reference shall be made to Clause 7.1 of EN 1730:2012.

Tables that can be set to heights both above and below 950 mm shall be tested to both 5.4.2.1 and 5.4.2.2.

5.4.2 Stability under vertical load

5.4.2.1 Test for tables that are or can be set to a height \leq 950 mm

The table shall be set to the height most likely to cause overturning, but not more than 950 mm. The table shall not overturn when tested according to Clause 7.2.2 of EN 1730:2012 using the forces specified within Table 2.

5.4.2.2 Test for tables that are or can be set to a height $>$ 950 mm

The table shall be set to the height most likely to cause overturning, but not less than 950 mm. The table shall not overturn when tested according to Clause 7.2.3 of EN 1730:2012 using 50 % of the forces specified within Table 2.

5.4.3 Stability for tables with extension elements

Load each extension element with the load specified in Table 1.

The table shall not overturn when tested according to Clause 7.3 of EN 1730:2012 using the forces specified within Table 2.

Table 1 — Loads in extension elements

Components	Load		
	Camping	Domestic	Non domestic
extension elements		0,2 kg/dm ³	0,5 kg/dm ³

5.4.4 Stability of tables designed to support a parasol

The table shall not overturn when tested according to Clause 7.4 of EN 1730:2012 using the forces specified within Table 2.

5.5 Strength and durability

5.5.1 General

The requirement depends on the type of table:

- Type 1 tables have a height of the main surface more than 600 mm but equal or less than 950 mm above the floor surface and a surface area greater than 0.3 m².
- Type 2 tables have a height of a main surface more 950 mm above the floor surface and a surface area greater than 0.3 m².
- All other tables are considered as Type 3.

Assembly fittings shall be tightened before testing, further tightening shall not take place unless specifically required by the manufacturer's instructions for use.

prEN 581-3:2024(E)**5.5.2 Glass****5.5.2.1 General**

Where glass is incorporated into the design of a tabletop, it should fulfill the requirements of 5.5.2.2 or 5.5.2.3.

It is recommended that camping tables should not contain glass.

5.5.2.2 Safety glass

For glass to be considered to be “safety glass” when tested in accordance with Table 2, Test 5 – Vertical impact test for glass table tops, either:

- the manufacturer, importer or retailer, provides verification that the glass fulfils the requirements in EN 12150-1:2015+A1:2019, Clause 8, fragmentation test; or where the mode of breakage (b) according to EN 12600:2002 is Type B or Type C, or
- the glass has been tested in accordance with EN 12150-1:2015+A1:2019 Clauses 8.3 and 8.4 (fragmentation test) with a minimum particle count of 40 particles in any 50 mm × 50 mm square, in derogation that the test has been performed on one full size sample of the glass, as used in the product.

5.5.2.3 Other glass

Where glass does not satisfy the requirements of 5.5.2.1 it shall be considered to be “other glass” when tested in accordance with Table 2, Test 5– Vertical impact test for glass table tops

5.5.3 Test sequences and parameters**Table 2 — Test sequence and test parameters**

Test	Reference	Test parameters			
		Specification	Camping	Domestic	Contract
1. Vertical static load on main surface ^{a, b, c}	EN 1730:2012, 6.3.1	Specified force, N			
		Type 1	300	750	1 000
		Type 2	-	500	500
		Type 3	150	300	500
		Cycles	10	10	10
2- Additional vertical static load test where the main surface has a length > 1 600 mm ^{a, b}	EN 1730:2012, 6.3.2	Specified force, N	500	750	1 000
		Cycles	10	10	10
3. Vertical static load on ancillary surface	EN 1730:2012, 6.3.3	Specified force, N	100	200	300
		Cycles	10	10	10
4. Horizontal durability test ^a	EN 1730:2012, 6.4.1 and 6.4.2	Specified mass, kg	Manufacturer's specified load with a minimum of 15	50	50
		Specified force Fa-d, N	100	150	300
		Cycles:	5 000	10 000	20 000