

<b>STN</b>	<b>Dočasné konštrukcie. Stany. Bezpečnosť.</b>	<b>STN EN 13782</b>  55 1002
------------	--	--

Temporary structure - Tents - Safety

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 09/15

Obsahuje: EN 13782:2015

Oznámením tejto normy sa ruší  
STN EN 13782 (55 1002) z júna 2006

**121600**

---

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, 2015  
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy  
rozmnožovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 13782**

April 2015

ICS 91.040.99

Supersedes EN 13782:2005

English Version

**Temporary structure - Tents - Safety**

Structure temporaire - Tentes - Sécurité

Fliegende Bauten - Zelte - Sicherheit

This European Standard was approved by CEN on 5 March 2015.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

## Contents

Page

Foreword.....	5
Introduction .....	6
1 Scope .....	7
2 Normative references .....	7
3 Terms and definitions .....	7
4 General requirements for design, analysis and examination .....	8
4.1 Design documents.....	8
4.2 Description of construction and operation .....	8
4.3 Construction drawings.....	8
5 Selection of materials.....	9
5.1 General.....	9
5.2 Selection of covering materials.....	9
5.3 Joining of covering materials.....	9
6 Principles of numerical analysis .....	10
6.1 General.....	10
6.2 Verification .....	10
7 Design actions .....	10
7.1 General.....	10
7.2 Permanent actions.....	11
7.3 Equivalent load .....	11
7.4 Variable actions .....	11
7.4.1 Live loads .....	11
7.4.2 Wind loads.....	12
7.4.3 Snow loads .....	15
7.4.4 Seismic forces.....	16
7.5 Load combinations .....	16
8 Verification of stability and equilibrium .....	16
8.1 General.....	16
8.2 Verification against overturning, sliding and lifting.....	17
8.2.1 Safety against overturning .....	18
8.2.2 Safety against sliding.....	18
8.2.3 Safety against lifting.....	19
8.3 Dead load for tent covers.....	19
8.4 Structures with primary load bearing structure .....	19
8.4.1 Ballast mountings for protection against wind suction loads .....	19
8.4.2 Wind bracings .....	19
8.4.3 Cladding forces on the structure due to wind .....	20
8.5 Membrane and pole tent .....	20
8.5.1 General.....	20
8.5.2 Pre-stressing .....	20
8.5.3 Design and construction details on membrane .....	21
8.6 Verification of load bearing capacity of technical textiles and their connections.....	21
8.7 Safety margin, safeguards.....	22
8.8 Post tensioning.....	23
9 Ground anchorages.....	23
9.1 General.....	23

9.2	Load bearing capacity of weight anchors.....	23
9.3	Load bearing capacity of rod anchors .....	23
9.4	Test loadings on site.....	26
9.5	Calculation of loading capacities .....	26
9.6	Further requirements .....	26
9.7	Ground support for packing.....	27
10	Other structural components .....	27
10.1	General .....	27
10.2	Design resistance .....	28
10.3	Synthetic fibre ropes.....	28
10.4	Ratchets.....	29
11	Manufacture and supply .....	29
11.1	General .....	29
11.2	Certificates .....	29
11.3	Observation of the design specification .....	29
11.4	Description of installation and operation procedures.....	30
12	Special design and manufacture criteria .....	30
Annex A (informative) Pressure coefficients for closed tents of round shape .....		31
Annex B (informative) Special design and manufacture criteria and operation.....		33
B.1	General .....	33
B.2	Escape routes .....	33
B.2.1	Common recommendations .....	33
B.2.2	Design of emergency exits .....	33
B.2.3	Layout of escape routes .....	33
B.3	Stairs.....	34
B.4	Burning behaviour.....	34
B.5	Textile connection .....	34
B.6	Heating and cooking systems.....	34
B.7	Electrical equipment .....	35
B.8	Fire extinguishers.....	35
Annex C (informative) Examination and approval .....		36
C.1	Examination .....	36
C.1.1	General .....	36
C.1.2	Qualification .....	36
C.2	Procedures for examination, test and approval .....	36
C.2.1	General .....	36
C.2.2	Identification .....	36
C.2.3	Initial approval of tents .....	37
C.2.3.1	General .....	37
C.2.3.2	Review of design and construction documents.....	37
C.2.3.3	Inspection of construction work.....	37
C.2.4	Inspection after repair, modification and accidents .....	37

<b>C.2.5</b>	<b>Report .....</b>	<b>37</b>
<b>C.3</b>	<b>Tent book.....</b>	<b>38</b>
<b>C.3.1</b>	<b>General.....</b>	<b>38</b>
<b>C.3.2</b>	<b>Content .....</b>	<b>38</b>
<b>C.4</b>	<b>Periodic thorough examination.....</b>	<b>38</b>
<b>C.5</b>	<b>Installation examination.....</b>	<b>39</b>
<b>C.5.1</b>	<b>General.....</b>	<b>39</b>
<b>C.5.2</b>	<b>Extent of installation examination .....</b>	<b>39</b>
	<b>Bibliography .....</b>	<b>40</b>

## Foreword

This document (EN 13782:2015) has been prepared by Technical Committee CEN/TC 152 “Fairground and amusement park machinery and structures - Safety”, the secretariat of which is held by UNI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2015, and conflicting national standards shall be withdrawn at the latest by October 2015.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 13782:2005.

The main changes in comparison to EN 13782:2005 are:

- a) chapters have been restructured and condensed in form and content;
- b) technical additions in reference to the Eurocodes;
- c) adjustments of the notations used in the Eurocodes;
- d) editorial corrections and changes.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## **Introduction**

The object of this European Standard is to provide safety requirements for tents. The safety requirements are aimed to safe-guard persons and objects against damage caused by design, manufacturing and operation of these structures.

These guidelines have been drawn up according to past experience and risk analysis.

Existing national rules concerning health and safety of workers remain untouched.

## 1 Scope

This European Standard specifies safety requirements which need to be observed at design, calculation, manufacture, installation, maintenance, of mobile, temporary installed tents with more than 50 m<sup>2</sup> ground area.

This European Standard applies also to multiple small tents which are normally not covered by this standard and will be installed close together and exceed 50 m<sup>2</sup> in sum.

NOTE Information is given in Annex C on Examination and Approval.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 818 (all parts), *Short link chain for lifting purposes — Safety*

EN 1090 (all parts), *Execution of steel structures and aluminium structures*

EN 1990, *Eurocode - Basis of structural design*

EN 1991-1-1, *Eurocode 1: Actions on structures - Part 1-1: General actions - Densities, self-weight, imposed loads for buildings*

EN 1991-1-3, *Eurocode 1 - Actions on structures - Part 1-3: General actions - Snow loads*

EN 1991-1-4, *Eurocode 1: Actions on structures - Part 1-4: General actions - Wind actions*

EN 1997-1, *Eurocode 7: Geotechnical design - Part 1: General rules*

EN 10204:2004, *Metallic products - Types of inspection documents*

EN 12385-1, *Steel wire ropes — Safety — Part 1: General requirements*

EN 12385-2, *Steel wire ropes — Safety — Part 2: Definitions, designation and classification*

EN 12385-3, *Steel wire ropes — Safety — Part 3: Information for use and maintenance*

EN 12385-4, *Steel wire ropes — Safety — Part 4: Stranded ropes for general lifting applications*

EN 15619, *Rubber or plastic coated fabrics - Safety of temporary structures (tents) - Specification for coated fabrics intended for tents and related structures*

ISO 2602, *Statistical interpretation of test results — Estimation of the mean — Confidence interval*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**