This is a free page sample. Access the full version online.

NSAI Standards

Irish Standard
I.S. EN 13782:2015

Temporary structure - Tents - Safety

© CEN 2015 No copying without NSAI permission except as permitted by copyright law.

This is a free page sample. Access the full version online.

I.S. EN 13782:2015

Incorporating amendments/corrigenda/National Annexes issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard — national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation — recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

This document replaces/revises/consolidates the NSAI adoption of the document(s) indicated on the CEN/CENELEC cover/Foreword and the following National document(s):

NOTE: The date of any NSAI previous adoption may not match the date of its original CEN/CENELEC document.

This document is based on:	*Published:*
EN 13782:2015	2015-04-22

This document was published under the authority of the NSAI and comes into effect on:	ICS number:
2015-05-09	91.040.99
	NOTE: If blank see CEN/CENELEC cover page

NSAI	T +353 1 807 3800	Sales:
1 Swift Square,	F +353 1 807 3838	T +353 1 857 6730
Northwood, Santry	E standards@nsai.ie	F +353 1 857 6729
Dublin 9	W NSAI.ie	W standards.ie

Údarás um Chaighdeáin Náisiúnta na hÉireann

This is a free page sample. Access the full version online.

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

© 2015 CEN All rights of exploitation in any form and by any means reserved worldwide for CEN national Members.

Ref. No. EN 13782:2015 E

This is a free page sample. Access the full version online.

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

This is a free page sample. Access the full version online.

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

This is a free page sample. Access the full version online.

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

This is a free page sample. Access the full version online.

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.

This is a free page sample. Access the full version online.

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.

This is a free page sample. Access the full version online.

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^2 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^2 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*

3 Terms and definitions

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

3.1
tent
mobile, temporary installed structure enclosed with covers (textiles, foils) or partly with rigid elements

Note 1 to entry: It can be built as an enclosed or open building i.e. marquee, tent-hall, booth.

SAI GLOBAL

This is a free preview. Purchase the entire publication at the link below:

Product Page

Looking for additional Standards? Visit Intertek Inform Infostore

Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation