SLOVENSKI STANDARD
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Playground equipment and surfacing - Part 7: Guidance on installation, inspection, maintenance and operation

Spielplatzgeräte und Spielplatzböden - Teil 7: Anleitung für Installation, Inspektion, Wartung und Betrieb

Équipements et sols d'aires de jeux - Partie 7 : Recommandations relatives à l'installation, au contrôle, à la maintenance et à l'utilisation

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EUROPEAN STANDARD

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Playground equipment and surfacing - Part 7: Guidance on installation, inspection, maintenance and operation

Équipements et sols d'aires de jeux - Partie 7 : Recommandations relatives à l'installation, au contrôle, à la maintenance et à l'utilisation

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This European Standard was approved by CEN on 13 January 2020.

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European foreword

This document (EN 1176-7:2020) has been prepared by Technical Committee CEN/TC 136 "Sports, playground and other recreational facilities and equipment", the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by October 2020, and conflicting national standards shall be withdrawn at the latest by October 2020.

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

This document supersedes EN 1176-7:2008.

EN 1176, *Playground equipment and surfacing*, consists of the following parts:

— Part 1: *General safety requirements and test methods*

— Part 2: *Additional specific safety requirements and test methods for swings*

— Part 3: *Additional specific safety requirements and test methods for slides*

— Part 4: *Additional specific safety requirements and test methods for cableways*

— Part 5: *Additional specific safety requirements and test methods for carousels*

— Part 6: *Additional specific safety requirements and test methods for rocking equipment*

— Part 7: *Guidance on installation, inspection, maintenance and operation*

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— Part 10: *Additional specific safety requirements and test methods for fully enclosed play equipment*

— Part 11: *Additional specific safety requirements and test methods for spatial network*

This part should be read in conjunction with EN 1176 (all parts) and EN 1177, *Impact attenuating playground surfacing — Methods of test for determination of impact attenuation*.

The following European Standards and Technical Reports and others might also apply:

— EN 14960 (all parts), *Inflatable play equipment — Safety requirements and test methods*

— EN 14974, *Skateparks — Safety requirements and test methods*

— EN 15312, *Free access multi-sports equipment — Requirements, including safety and test methods*

— EN 16630, *Outdoor fitness equipment — Safety requirements and test methods*

— CEN/TR 16598, *Collection of rationales for EN 1176 — Requirements*

— CEN/TR 16879, *Siting of playgrounds and other recreational facilities — Advice on methods for positioning and separation*

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— EN 16899, *Sports and recreational equipment — Parkour equipment — Safety requirements and test methods*

— CEN/TR 17207, *Playground and recreational areas — Framework for the competence of playground inspectors*

For requirements on the maintenance of fully enclosed play equipment, see EN 1176-10, *Playground equipment and surfacing — Part 10: Additional specific safety requirements and test methods for fully enclosed play equipment*.

The principal change from the previous edition of EN 1176-7 is that the guidance given in this part of EN 1176 has been updated in the light of experience of use of EN 1176-7:2008, for example by referring to other parts of EN 1176 when carrying out an inspection. This resulted in the following changes:

a) wording aligned with EN 1176-1;

b) recommendations mostly transformed into requirements;

c) inspection and maintenance revised split and into separate sections;

d) other CEN documents added to the European Foreword to show relation with this standard to the reader;

terms and definitions updated.

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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, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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1 Scope

This document is applicable to playground equipment, surfacing and ancillary items, e.g. gates, fences, benches, bins, shades, etc. It is intended for use by playground operators (see definitions 3.4) to assist them in developing an inspection and maintenance regime for each playground.

Note 1 The scope of the inspection and inclusion of the ancillary items will vary individually.

Note 2 Ancillary items are not included in the specific equipment-type parts of the EN 1176 series; hence they are not assessed for compliance with EN 1176 series and are subject to risk assessment.

This document establishes guidance on the installation, inspection, maintenance and operation of playground equipment and surfacing around the equipment.

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 1176-1:2017, *Playground equipment and surfacing — Part 1: General safety requirements and test methods*

EN 1177:2018, *Impact attenuating playground surfacing — Methods of test for determination of impact attenuation*

3 Terms and definitions

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For the purposes of this document, the terms and definitions given in EN 1176-1 and the following apply.

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

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

3.1
inspection
check to ensure the continuous safe use of a playground

Note 1 to entry: The purpose of an inspection is to assess the overall level of safety of the equipment and/or surfacing of the playground. The outcome of an inspection is reported in an inspection report and can result in preventive measures such as extra maintenance, repairs, etc.

3.2
maintenance
intervention that is required and/or undertaken to conserve, as nearly and as long as possible, the original condition of the equipment and surfacing while compensating for normal wear and tear

Note 1 to entry: The maintenance instructions are provided by the supplier as stated in EN 1176-1:2017, 6.1.4

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3.3
competent person
person, suitably trained, qualified by knowledge and practical experience to carry out the required task

Note 1 to entry: Levels of knowledge required by different levels of inspectors to be competent are given in e.g. CEN/TR 17207:2018, 5.1, and/or national specifications.

Note 2 to entry: A competent person might be the operator, inspector, employee of the manufacturer or else.

3.4
operator
person or organization that owns, operates, oversees and/or is responsible for the playground in its entirety

Note 1 to entry: The owner/operator might be different legal entities but for the purpose of this document they are referred to as operator.

3.5
risk assessment
overall process comprising a risk analysis and a risk evaluation and which is part of a risk management process

3.6
safe
state of being protected from recognized hazards that are likely to cause harm

[SOURCE: CEN ISO/TR 20183:2017, 2.1]

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3.7
safety
freedom from unacceptable risk, but not *safe*

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[SOURCE: CEN ISO/TR 20183:2017, 2.2 - modified: reference to 2.1 deleted]

4 General

4.1 When the level of safety of the equipment and/or surfacing present an unacceptable risk, access and use of playground equipment shall be prevented.

NOTE Some examples of situations where the level of safety is insufficient:

— the installation of the equipment is not complete;

— when impact attenuating surface is not yet installed;

— where maintenance cannot ensure a continuing level of safety;

— parts of the product are damaged.

4.2 Maintenance and inspection records shall be kept by the operator.

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5 Installation

5.1 Playground equipment and surfacing shall be installed in a safe way, also to meet, for example, national or local building and safety regulations.

5.2 Playground equipment and surfacing shall be installed in accordance with the manufacturer's instructions (see EN 1176-1:2017, Clause 6), if applicable. Alterations to parts of a piece of equipment or structure that could affect the essential safety of the equipment should only be carried out after consultation with the manufacturer or a competent person.

5.3 On completion of a new playground or after significant modifications on equipment or surfacing, a post installation inspection shall be carried out by a competent person to assess the overall level of safety.

NOTE 1 It is advisable to assess the equipment's foundations, heights, areas etc. prior to the surfacing installation.

NOTE 2 Examples for modifications are:

— changes and renewal on equipment or their positioning;

— structural modifications on equipment, e.g. adding new platforms, posts, etc.

6 Inspection

6.1 General

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Inspections shall be the basis for preventive and corrective maintenance.

NOTE 1 The frequency of the inspection might vary from the frequency given in this document when an assessment of the frequency has been made by a competent person.

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Playground including playground equipment and surfacing shall be inspected as follows:

a) Post installation inspection;

   inspection usually undertaken prior to the opening of a playground for public use, intended to assess the equipment and its environment for the overall level of safety on the playground;

b) Routine visual inspection;

   inspection intended to identify obvious hazards that can result from normal use, vandalism or weather conditions, at the frequency specified by the operator;

   NOTE 2 Typical hazards can take the form of broken parts or broken bottles.

   NOTE 3 For playgrounds subject to heavy use or vandalism, daily inspection of this type can be necessary.

   NOTE 4 Examples of visual inspection points are cleanliness, ground surface finishes, missing parts etc.

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c) Operational inspection;

inspection, more detailed than routine visual inspection, to check the operation and stability of the equipment;

This inspection shall be every 1 month to 3 months, or as indicated by the manufacturer/in the manufacturer's instructions. The frequency depends on amount and intensity of use in the area and equipment's durability.

NOTE 5 Examples of operational inspection points are cleanliness, equipment ground clearances, ground surface finishes, exposed foundations, sharp edges, missing parts, excessive wear (of moving parts), adequate level of impact attenuation and structural integrity.

d) Annual main inspection;

inspection intended to establish the overall level of safety of equipment, foundations and playing surfaces;

e.g. compliance with the relevant part(s) of EN 1176 and/or risk assessment, including any changes made as a result of the assessment of safety measures (see 8.2.1), effects of weather, presence of rot, decay or corrosion, and any change in the level of safety of the equipment or surfacing as a result of repairs made or added or replaced components.

NOTE 6 The annual main inspection might involve excavation. If excavation is not possible, other methods can be used, e.g. the resistograph method for detecting rotting of wood. Additional measures might be necessary to detect other possible deterioration of the structure and the surfacing (e.g. checking for appropriate level of impact attenuation). Technical support can be required where components require dismantling to assess their condition.

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The equipment shall be inspected by competent persons (see CEN/TR 17207 or national regulations/standards for obtaining the level of competence).

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NOTE 7 The level of competence required will vary with the task performed in the inspection and the need for specific competence using measurement equipment (e.g. for impact attenuation tests according to EN 1177).

6.2 Specific recommendations

6.2.1 Securing unsafe situations

If serious defects that put safety at risk are discovered during inspection, these shall be notified to the operator without delay. If the operator cannot make the equipment safe it shall be secured against access and use, e.g. immobilisation, removal or fencing the equipment and its surrounding impact area, until repair or replacement is completed.

Where a piece of equipment is to be removed from the site, any anchorages or foundations left in the ground shall be removed or safeguarded and the site made safe.

When play equipment relies on one post for its stability, special attention shall be paid at the inspection, e.g. by monitoring degradation and, if necessary, decommissioning the item before the end of its operating life.

Reinforced materials shall be replaced or repaired when the fibres become visible due to wear or damage. This particularly applies to slides.