

Nederlandse norm

# **NEN-EN 15312+A1**

(en)

Free access multi-sports equipment -  
Requirements, including safety and test  
methods

Vervangt NEN-EN 15312:2007;  
NEN-EN 15312:2007/Ontw. A1:2009

ICS 97.220.40  
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Als Nederlandse norm is aanvaard:  
 - EN 15312:2007+A1:2010,DT

Voorbeeld  
 Preview

Normcommissie 330042 "Sportartikelen"

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Voor de in deze norm vermelde normatieve verwijzingen bestaan in Nederland de volgende equivalenten:

<u>vermelde norm</u>	<u>Nederlandse norm</u>	<u>titel</u>
EN 636	NEN-EN 636	Triplex - Specificaties
EN 1176-1:2008	NEN-EN 1176-1:2008	Speeltoestellen en bodemoppervlak van speelplaatsen - Deel 1: Algemene veiligheidseisen en beproevingsmethoden
EN 1271	NEN-EN 1271	Sportveldtoestellen - Volleybaltoestellen - Functionele en veiligheidseisen, beproevingsmethoden
EN 1991-1-3	NEN-EN 1991-1-3+NB	Eurocode 1: Belastingen op constructies - Deel 1-3: Algemene belastingen - Sneeuwbelasting
EN 1991-1-4	NEN-EN 1991-1-4+NB	Eurocode 1: Belastingen op constructies - Deel 1-4: Algemene belastingen - Windbelasting
EN 1991-1-5	NEN-EN 1991-1-5+NB	Eurocode 1: Belastingen op constructies - Deel 1-5: Algemene belastingen - Thermische belasting
EN ISO 1806	NEN-EN-ISO 1806	Visnetten - Bepaling van de breekkracht van de maas van het netwerk
EN ISO 2062	NEN-EN-ISO 2062	Textiel - Garens uit verpakkingen - Bepaling van de breekkracht en de rek bij breuk van een garen met gebruik van een constante tempo van een uitbreidingsbeproefer
EN ISO 2307	NEN-EN-ISO 2307	Touwen - Bepaling van zekere fysieke en mechanische eigenschappen
ISO 8793	-	-

Voorbeeld  
Preview

English Version

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

Equipements sportifs en accès libre - Exigences, y compris de sécurité et méthodes d'essai

Frei zugängliche Multisportgeräte – Anforderungen, einschließlich Sicherheit und Prüfverfahren

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**EN 15312:2007+A1:2010 (E)****Foreword**

This document (EN 15312:2007+A1:2010) has been prepared by Technical Committee CEN/TC 136 <sup>A1</sup> "Sports, playground and other recreational facilities and equipment" <sup>A1</sup>, the secretariat of which is held by DIN.

This document shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2011 and conflicting national standards shall be withdrawn at the latest by March 2011.

This document includes Amendment 1, approved by CEN on 2010-07-30.

This document supersedes EN 15312:2007.

The start and finish of text introduced or altered by amendment is indicated in the text by tags <sup>A1</sup> <sup>A1</sup>.

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Preview



## 1 Scope

This European Standard is applicable to free access multi-sports equipment and combinations intended for permanent installation (not temporary), which includes, but not exclusively, equipment for sports such as badminton, basketball, football, handball, hockey, table tennis, tennis, volleyball.

This European Standard specifies requirements, including safety, for the equipment itself as well as for its installation, inspection and maintenance. This European Standard is applicable to multi-sports equipment intended for individual and collective public use primarily by children and teenagers.

This type of equipment is not intended for use by very young children, e.g. less than 36 months.

This European Standard is not applicable to playground equipment as defined in EN 1176-1, free access facilities used for roller sports equipment (see EN 14974), fitness trails, artificial climbing structures (see **A1** EN 12572-1, EN 12572-2 and EN 12572-3 **A1**).

This European Standard does not deal with beach equipment, the ground surfaces the local environment and any feature outside the multi-sports equipment.

This European Standard does not include any specific requirements other than for access and egress for disabled users.

## 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.

**A1** EN 636, *Plywood — Specifications* **A1**

**A1** EN 1176-1:2008 **A1**, *Playground equipment and surfacing — Part 1: General safety requirements and test methods*

EN 1271, *Playing field equipment — Volleyball equipment — Functional and safety requirements, test methods*

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 2-4: General actions — Wind actions*

EN 1991-1-5, *Eurocode 1: Actions on structures — Part 1-5: General actions — Thermal actions*

**A1** *deleted text* **A1**

EN ISO 1806, *Fishing nets — Determination of mesh breaking force of netting (ISO 1806:2002)*

EN ISO 2062, *Textiles — Yarns from packages — **A1** Determination of single-end breaking force and elongation at break using constant rate of extension (CRE) tester (ISO 2062:2009) **A1***

EN ISO 2307, *Fibre ropes — Determination of certain physical and mechanical properties (ISO 2307:2005)*

ISO 8793, *Steel wire ropes — Ferrule secured eye terminations*

**EN 15312:2007+A1:2010 (E)****3 Terms and definitions**

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

**3.1 free access multi-sports equipment**  
equipment with which it is possible to practice one or more-sports where the access to the facilities is neither regulated nor necessarily supervised

**3.2 goal**  
defined opening or area which forms the target for ball games, usually comprising two uprights and one crossbar

NOTE The net is optional.

**3.3 basketball equipment**  
equipment comprising the following components: one backboard-one ring; the supporting frame; stability devices

NOTE The net is optional.

**3.4 multi-sports surround**  
element surrounding the area where ball games are played and which is designed to limit the motion of the user and/or the area of play

NOTE A multi-sports surround is e.g. a fence or a ball rebound wall; ball games are e.g. hockey, football.

**3.5 ball stop-screen**  
flexible or rigid fence or screen for restricting a ball from going in a specific direction

NOTE It is important that the location of the area of play accounts for the risks of balls leaving it. If the area of play is located next to a road, a ball stop screen may minimize the risk of players having to recover the ball from the road. It is equally important that other activities (e.g. playground area, artificial climbing structure) are protected from ball impact.

**4 General requirements****4.1 Materials**

Materials  $\boxed{A_1}$  shall  $\boxed{A_1}$  be selected and protected such that the structural integrity of the equipment manufactured from them is not affected before the next relevant maintenance inspection.

NOTE The provisions relating to certain materials in this European Standard do not imply that other equivalent materials are unsuitable in the manufacture of multi-sports equipment.

The selection of materials and their use should be in accordance with the appropriate European Standards where applicable.

Particular care should be taken in the choice of materials where equipment is to be used in extreme climatic or atmospheric conditions.

Where very low or very high temperatures can be anticipated care should be taken with material selection to avoid possible hazards through direct skin contact.

$\boxed{A_1}$  In the choice of a material or substance for equipment, consideration should be given to the eventual disposal of the material or substance having regard to any possible environmental toxic hazard.  $\boxed{A_1}$

**A1)** NOTE Information on the identification and classification of such substances can be found in the Directive 67/548/EEC (classification, packaging and labelling of dangerous substances) [10] as well as in the Regulation (EC) no.1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) [11]. **A1)**

## 4.2 Structural integrity

Structural integrity of the equipment, including stability, shall be assessed by one of the following unless otherwise stated in Clause 5:

- a) calculation, carried out in accordance with Annexes A and B,
- b) physical testing, in accordance with Annex C, or
- c) a combination selected from either a) or b).

When calculations are carried out in accordance with Annex B, no limit states shall be exceeded at combinations of loads as given in B.2.

When tested in accordance with Annex C, the equipment shall not show any cracks, damage or excessive permanent deformation.

For some equipment, these specific calculations or tests are not always appropriate, but the structural integrity shall be at least equivalent.

For a family of products, the structural integrity for the worst case of the intended combinations shall be proved.

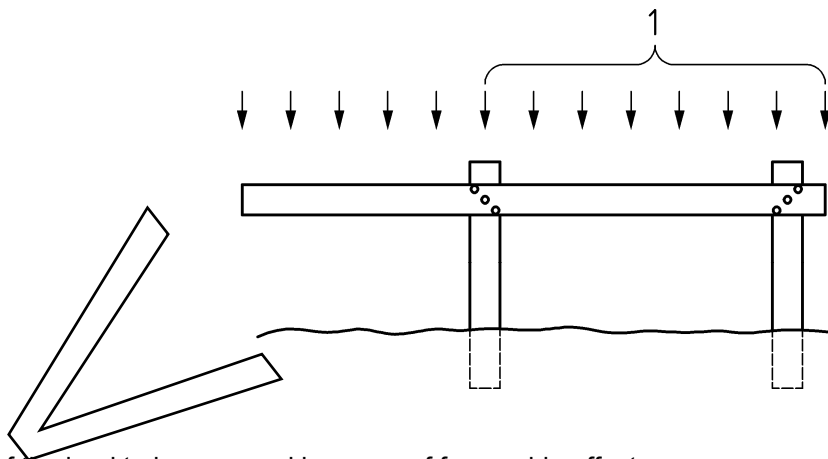
Each structure shall resist both the permanent and variable loads acting on equipment and parts of equipment as described in Annex C.

NOTE 1 No allowance for accidental loads, i.e. loads produced by fire, collision by vehicles or earthquake, need to be made for multi-sports equipment.

NOTE 2 The loads associated with fatigue are in general much smaller than the loads in combination with the appropriate load factors when calculated according to B.2. Therefore, the equipment does not need to be verified for fatigue, in general.

Structural parts shall resist the worst case loading condition.

NOTE 3 In order to achieve this, it can be necessary to remove that part of the user load causing favourable effects, as shown in Figure 1.



**Key**  
 1 part of the load to be removed because of favourable effects

**Figure 1 — Example of removal of that part of the user load which causes a favourable effect**

**4.3 Finish of equipment**

Wooden equipment shall be made of wood with a low susceptibility to splintering. The surface finish of equipment made of other materials (e.g. glass fibre) shall be non-splintering.

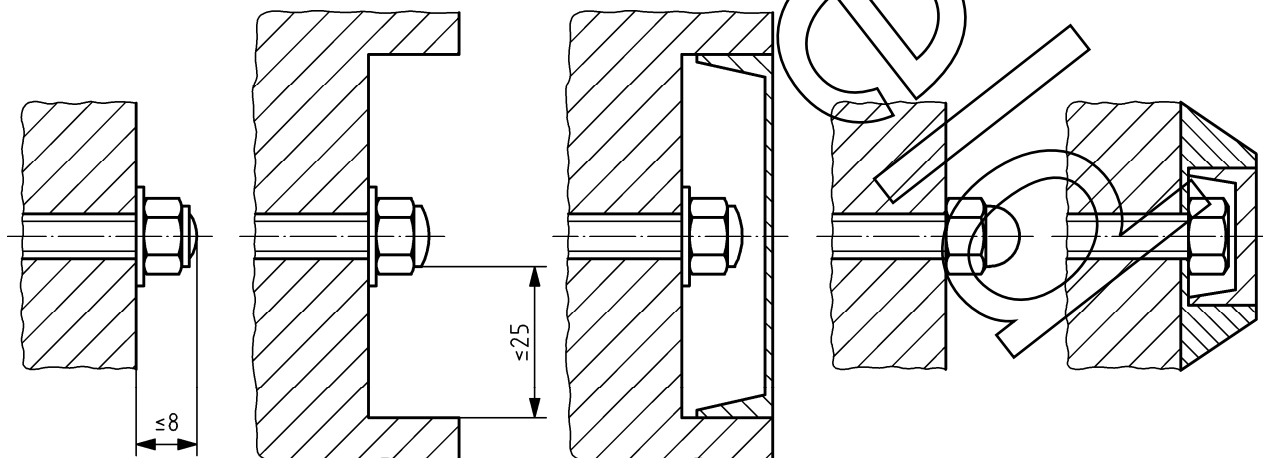
Rough surfaces should not present any risk of injury.

There shall be no protruding nails, projecting wire, rope terminations or pointed or hard and sharp-edged parts within any accessible part of the equipment. Corners, edges and projecting parts within any accessible part of the equipment that project more than 8 mm, and which are not shielded by adjacent areas that are not more than 25 mm from the end of the projecting part, shall be rounded off. The minimum radius of the curve shall be 3 mm.

Protruding bolt threads within any accessible part of the equipment shall be permanently covered, e.g. dome-headed nuts. Nuts and bolt heads that project less than 8 mm shall be free from burrs. All welds shall be ground smooth.

NOTE Figure 2 shows examples of protection for nuts and bolts.

Dimensions in millimetres



**Figure 2 — Examples of protection for nuts and bolts**

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