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BSI Standards Publication

Water slides

Part 1: Safety requirements and test methods

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National foreword

This British Standard is the UK implementation of EN 1069-1:2017. It supersedes BS EN 1069-1:2010, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee SW/136/8, Swimming pools and aquatic equipment.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Wasserrutschen - Teil 1: Sicherheitstechnische Anforderungen und Prüfverfahren

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European foreword

This document (EN 1069-1:2017) 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of an identical text or by endorsement, at the latest by February 2018, and conflicting national standards shall be withdrawn at the latest by February 2018.

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 1069-1:2010.

EN 1069, *Water slides*, consists of the following parts:

— *Part 1: Safety requirements and test methods*

— *Part 2: Instructions*

In relation to EN 1069-1:2010 the following main amendments have been made:

a) the document has been editorially revised;

b) the definition water slide (3.3) and water level (3.13) have been revised;

c) requirement for water slide Type 6.2 revised;

d) under 5.6 "Electrical installations" a reference to HD 60364-7-702 has been added;

e) values for Table 1 "Partial factors for Ultimate Limit combinations" and Table 2 "Partial factors for serviceability combinations" have been changed;

f) new Table 3 "Partial factors for combinations of accidental actions" and Table 4 " Combination factors ψ_0 and ψ_2" have been added;

g) Figure 5 Stepladders for water slide access deleted and requirements for access to water slides (7.5) revised;

h) Figure 6 replaced by Figure 3 of EN 13451-1:2011+A1:2016;

i) an example for calculation has been added to 7.7.3 "Maximum acceleration on a sliding person";

j) the value for X in Figure 8 "Cross section of Type 1" has been changed;

k) Table 8 "Height of fall and water depth in splashdown area for type 1 and type 2" and Table 9 "Falling distance and water depth in a splashdown area for Types 3, 4, 6, 7, 8, 9 and 10" have been revised;

l) Table 8 has been replaced by a graph (see Figure 15);

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m) values for water flow rate in 8.3 "Water flow" have been changed and Clause 8.3 moved to 7.12.2 Water flow rate;

n) Requirements in 9.3.2 "Slide tester" have been changed;

o) Figure A.1 and A.2 have been revised;

p) values for type 4 in Table A.2 "Dimensions of splashdown area for Types 3 and 4" have been changed;

q) values for type 6.2 in Table A.3 "Dimensions of splashdown area for Type 6" have been changed;

r) Annex D is now informative and a subclause on a maximum speed measuring device was added (D.1.3).

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, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

The market for water slides is extremely wide and specific and still developing. It is impossible to define an all-embracing safety specification, including dimensions and design requirements as required by a standard, without limiting the design possibilities and preventing innovative and new but safe products.

This European Standard is intended to establish safety requirements and design guidance rules to serve anyone involved with water slides, especially designers, manufacturers, operators and users, to ensure safe and more efficient products. Its basic approach is the consciousness that the sliding action usually implies for the users a higher risk level than using a pool. For certain aspects of design, manufacturing, installation, operation and use only specific guidelines, without any technical specification, are given, which should be taken into consideration and be fulfilled in order to ensure safety for operators and users.

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1 Scope

This European Standard is applicable to all water slides installed in swimming pools of public use.

This Standard specifies general safety requirements for water slides in swimming pools of public use and specific requirements for defined types of water slides. These specific safety requirements are also applicable to undefined types as far as possible.

These requirements concern safety and the technical rules for design, calculation and testing.

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 1069-2:2017, *Water slides — Part 2: Instructions*

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 1991-1-3:2003, *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 10088-1, *Stainless steels - Part 1: List of stainless steels*

EN 10088-2, *Stainless steels - Part 2: Technical delivery conditions for sheet/plate and strip of corrosion resisting steels for general purposes*

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

EN 13451-1:2011+A1:2016, *Swimming pool equipment - Part 1: General safety requirements and test methods*

EN 13451-2, *Swimming pool equipment - Part 2: Additional specific safety requirements and test methods for ladders, stepladders and handle bends*

EN 13451-3, *Swimming pool equipment — Part 3: Additional specific safety requirements and test methods for inlets and outlets and water/air based water leisure features*

EN 15288-1:2008+A1:2010, *Swimming pools - Part 1: Safety requirements for design*

EN 15288-2, *Swimming pools - Part 2: Safety requirements for operation*

EN 22768-1, *General tolerances - Part 1: Tolerances for linear and angular dimensions without individual tolerance indications (ISO 2768-1)*

EN ISO 9606-1, *Qualification testing of welders - Fusion welding - Part 1: Steels (ISO 9606-1)*

EN ISO 13857:2008, *Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs (ISO 13857:2008)*