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Swimming pools - Part 2: Safety requirements for operation

Schwimmbäder - Teil 2: Sicherheitstechnische Anforderungen an den Betrieb

Piscines - Partie 2 : Exigences de sécurité pour le fonctionnement

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Swimming pools - Part 2: Safety requirements for operation

Piscines - Partie 2 : Exigences de sécurité pour le fonctionnement

Schwimmbäder - Teil 2: Sicherheitstechnische Anforderungen an den Betrieb

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 136.

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COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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European foreword

This document (prEN 15288-2:2017) 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 document is currently submitted to the CEN Enquiry.

This document will supersede EN 15288-2:2008.

In relation to EN 15288-2:2008 the following main amendments have been made:

- a) introduction has been revised;
- b) scope has been revised by excluding EN 16582;
- c) normative references have been updated;
- d) definition “Indoor swimming pools” has been revised;
- e) definition “therapeutic pool” has been revised;
- f) definition “As Low As Reasonably Practicable” has been added;
- g) definition “harm” has been added;
- h) definition “hazard” has been added;
- i) definition “risk” has been added;
- j) definition “risk estimation” has been added;
- k) definition “risk analysis” has been added;
- l) definition “risk evaluation” has been added;
- m) definition “risk assessment” has been added;
- n) classification Type 3 pools has been revised;
- o) organizational and operational requirements have been fully revised;
- p) new table “Special risk factors and possible solutions to reduce the risk with reference to As Low As Reasonably Practicable” has been added;
- q) emergency plan has been added;
- r) new Clause “Verification of safety measures and/or protective measures” has been added;
- s) Annex A “Dye test” has been moved from to prEN 15288-1;
- t) new Annex A “List of possible hazards” has been added;
- u) new Annex B “Risk assessment” has been added;

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- v) new Annex C “Model of risk assessment” has been added;
- w) Bibliography has been updated.

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Introduction

This standard has been prepared principally to provide a reliable basis on which common expectations can be shared regarding specific characteristics of a swimming pool. The standard provides a framework for enhancing consumer protection and confidence by identifying hazards and putting controls in place to manage them, demonstrating compliance to customers and suppliers. The standard can reduce swimming pool accidents and illnesses to cut related costs and reduce the risk of prosecution and litigation. The standard can act to achieve cost savings, efficiencies and compatibility of pools throughout Europe. The use of this standard can engage and motivate staff with better, safer working conditions. Finally, this standard can be used to support public policy objectives and, where appropriate, offer an effective alternative to regulation.

This standard provides a means of review and assessment of the hazards associated with public swimming pools; their monitoring and assessment; and activities available for their control through education of users, and good operation and management. The standard includes both specific guideline values and good practices. It addresses a wide range of types of hazard, including hazards leading to drowning and injury, water quality, contamination of associated facilities and air quality. The intention of this standard is to provide a structured and methodical approach to meeting the needs of swimming pool safety.

It lists the main hazards gives ways in which these may be addressed, and states what actions a pool operator should take to attain the standard.

It is not intended that this standard should be used as a method of carrying out a risk assessment. Adopting and following this standard will undoubtedly assist in the carrying out of a risk assessment. And for completeness model risk assessment for a swimming pool is included in the Annex C. Pools come in a wide range of types, from water parks with thousands of visitors per day, through to communal pools, hotel pools, campsite pools and pools at guest houses, where bather loads may be much lower. Such a wide range implies a gradation of the safety requirements, which take into account the specific level of hazard. It should also be considered that in type 1 swimming pools the user would expect poolside supervision to be provided, while in other types the user would not expect it.

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This standard is concerned with swimming pool safety and recognizes the ISO guidance on safety thresholds that describe safety as freedom from unacceptable risk. Safety is achieved by reducing risk to a tolerable level. There is no complete absence of risk. In turn there is no product or system that is without some risk, which should be reduced to a tolerable risk.

Pool operators should also consider prEN 15288-1, as well as other European standards, national standards and regulations when using this document.

This European standard includes requirements, recommendations and notes for all existing pools and new pools. While compliance with requirements is mandatory, recommendations indicate best practices and notes give additional information and/or explanations.

1 Scope

This European standard specifies safety requirements for the operation of classified pools according to Clause 4. It is intended for those concerned with the operation and management of classified swimming pools. It provides guidance about the risks for staff and users associated with public swimming pools, by identifying the precautions needed to achieve safety.

This European standard has limited application to classified pools which consist of segregated areas of rivers, lakes or the sea. The requirements for safe working methods and supervision should be followed insofar as they are relevant.

National and/or local legislation may apply.

This standard is not applicable for domestic swimming pools according to EN 16582 (all parts).

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.

prEN 15288-1:2017, *Swimming pools — Part 1: Safety requirements for design*

EN ISO 12100, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100)*

ISO 7001, *Graphical symbols — Public information symbols*

3 Terms and definitions

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

3.1

pool/swimming pool

facility, with one or more water areas, intended for swimming, leisure or other water-based physical activities

3.2

indoor swimming pool

one or more constructed water areas for bathing enclosed in a building, covered by a roof (fixed or moveable)

Note 1 to entry: A pool under a shelter is not considered an indoor swimming pool.

3.3

outdoor swimming pool

one or more constructed open-air water areas for bathing

3.4

public use

use of an installation open to everyone or to a defined group of users, not designated solely for the owner's/proprietor's/operator's family and guests, independently from paying an entrance fee

3.5

therapeutic pool

specially designed to provide medical and physical care under control of a competent person

Note 1 to entry: Pools destined for fitness and related activities are not considered therapeutic pools.

3.6**pool basin**

water tank where water-related activities can take place

3.7**pool surround**

walkable area around a pool basin, to do with the use of the basin itself, such as circulation areas, areas of entry and exit, etc.

3.8**pool operator**

designated person/organisation responsible for the operation of the pool in terms of health and safety

3.9**staff areas**

areas only the staff have access to

3.10**pool technical staff**

trained and competent people responsible for operating the technical equipment

3.11**supervision**

assistance to the users and/or surveillance from trained and competent personnel to ensure safe pool operation

3.12**pool supervisory staff**

trained and competent persons (e.g. lifeguards) responsible for the supervision of users in the controlled area

3.13**poolside supervision**

action of supervising users in water and on the pool surround

3.14**As Low As Reasonably Practicable****ALARP**

judgement of the balance of risk and benefit taking into account the sacrifice of time, effort and money that could be spent reducing a risk to zero

3.15**harm**

physical injury or damage to health

3.16**hazard**

potential source of harm

3.17**risk**

combination of the probability of occurrence of harm and the severity of that harm

prEN 15288-2:2017 (E)**3.18****risk estimation**

defining likely severity of harm and probability of its occurrence

3.19**risk analysis**

combination of the specification of the limits of the machine, hazard identification and risk estimation

3.20**risk evaluation**

judgement, on the basis of risk analysis, of whether the risk reduction objectives have been achieved

3.21**risk assessment**

overall process comprising a risk analysis and a risk evaluation

4 Classification**4.1 Swimming pool type 1**

Pool where the water-related activities are the main business (e.g. communal pools, leisure pools, water parks) and whose use is “public” according to 3.5.

4.2 Swimming pool type 2

Pool which is an additional service to the main business (e.g. hotel pools, campsite pools, club pools, therapeutic pools, school pools) and whose use is “public” according to 3.5.

4.3 Swimming pool type 3

All pools of public use according to 3.5 except: log/standards/sist/d8f03ae2-edd0-45dd-b2a8-a8869044f8b3/sist-en-15288-2-2019

— pools type 1;

— pools type 2.

EXAMPLES Diving tower, military training pools, rescue training pools, scuba diving pools.

5 Safety management system**5.1 General requirements**

The management of swimming pools consists of the operation and supervision of the premises, the technical plant and equipment, the features and the water-related activities of the users.

In a swimming pool different types of supervision can be required — e.g. of the general swimming pool facility, dry activity areas, children’s areas, saunas, and of the swimming pool users.

The staff of a pool normally performs one or more of the following functions:

- a) management and administration;
- b) poolside supervisory staff;
- c) technical staff;
- d) teaching and coaching staff;
- e) cleaning, servicing and selling and other generic staff.

The role of management is to plan, organize and define safe systems of work, implement the procedures satisfactorily, provide appropriate training, monitor and review

To manage safety effectively, the organization shall plan and coordinate its approach. The cornerstone of this approach is a safety management system.

The requirements stated below may not be fully applicable, but the relevant principles are always valid and shall be followed by the pool operator depending on the size and complexity of the facility and the organization.

The safety management system shall include:

- a) a safety policy;
- b) organizing and planning the Pool Safety Operating Procedures (PSOPs);
- c) procedures dealing with non-conformances and corrective actions;
- d) documentation of records and processes to monitor, measure, review and improve the health and safety management policy.

5.2 Safety policy

The organization shall define and document a policy for the general operation and safety of the swimming pool.

This policy could include e.g.:

- a) management statement taking into account the safety and health approach at the highest level;
- b) safety and health responsibilities and tasks attributed to the employees;
- c) written procedures (see 5.3);
- d) training and evaluation of the employees;
- e) periodical evaluation of the compliance of the facility.

The organization shall ensure that this policy is communicated, implemented and maintained throughout the relevant parts of the organization.

The PSOPs may be integrated with other aspects of the organization's business in order to demonstrate an integrated approach to health and safety management.

5.3 Organization and planning the PSOPs

Facility operators play a key role and are responsible for the good operation and management of the swimming pool environment. This shall include the preparation of and compliance with a pool safety plan, which consists of a description of the system, its monitoring and maintenance, normal operating procedures, procedures for specified incidents, a generic emergency plan and an emergency evacuation procedure. There shall be written procedures which detail the routine and appropriate safety standards, tasks and responsibilities for operating the swimming pool.

The PSOPs shall also include the organization chart which shall detail the lines of authority, individual responsibilities and the allocation of functions for all those involved in ensuring pool safety, their training and competency. Details and descriptions of the pool(s) shall include the dimensions, depth and features of the pool(s).

NOTE This information is often best communicated diagrammatically.

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The principal hazards shall be divided into three broad areas:

- a) physical – the building and equipment (see Clause 6);
- b) activity and pool operation (see Clause 6);
- c) people – the pool users (see Clause 6).

5.4 Non-conformance, corrective and preventive action

The organization shall establish and maintain procedures for defining responsibility and authority in order to deal with non-conformances and potential non-conformances in a timely and appropriate fashion. This shall include:

- a) handling and investigating non-conformances;
- b) taking action to mitigate any impacts from non-conformances;
- c) initiating and completing corrective and preventive action.

Any corrective or preventive action taken to eliminate the causes of actual or potential non-conformances shall be appropriate to the magnitude of the problem and commensurate to the risk.

Records of significant non-conformances and corrective or preventive actions taken shall be maintained.

5.5 Monitoring, measurement and analysis, review and improvement**5.5.1 General**

The organization shall define the routine performance monitoring requirements for the operation of the pool. These requirements should be suitable and sufficient to provide useful data on compliance to the required standards. This might include routine patrols of the pools and ancillary areas to monitor for hygiene, housekeeping, user behaviour and lifeguard performance.

5.5.2 Measurement and analysis

Measuring the adequacy of the operating system and the degree of compliance to establish operating standards is crucial and this shall include:

- a) assessment of the individual (e.g. lifeguard) and overall operational performance;
- b) compliance to operational plans, procedures and performance requirements;
- c) the success (or otherwise) of corrective and preventive actions;
- d) the management of incidents and emergencies;
- e) feedback from users of the pool and other stakeholders on pool safety issues.

5.5.3 Review

The organization shall formally review the operation of the health and safety management system to ensure it achieves the defined safety policy objectives. This review shall be carried out at planned intervals of normally no less than one year or if the operation changes significantly.

Evidence can be provided of pool safety performance from the measurement process.

5.5.4 Improvement

The review shall include assessing opportunities for improvement and the need for changes to the pool health and safety management system to ensure it remains suitable, adequate and effective.

NOTE This might include updating the Pool Safety Operation Procedures in response to new industry guidance or revised training programmes or improved record keeping.

5.5.5 Record system

A records system shall be established and managed.

Records shall be clearly identifiable.

Records shall be maintained to provide evidence that the requirements have been complied with and of the effective operation of the health and safety management system with regard to swimming pool safety. Such records shall include details of:

- a) training;
- b) review and improvement meetings;
- c) incidents, accidents and subsequent investigations;
- d) accident/incident trend analysis;
- e) risk assessments;
- f) changes to PSOPs;
- g) inspection and equipment checks;
- h) any other information that might demonstrate compliance to the requirements of this standard. Records shall be retained for a suitable and defined period of time in order to be used by the pool operator for trend analysis.

NOTE Retention periods will be defined based on legal requirements, knowledge preservation purposes and for effective trend analysis of performance.

6 List of hazards

In every swimming pool a list of possible hazards shall be identified by the operator. The identification of the possible hazards and related measures during operation is a precondition for defining procedures according to the safety requirements see Clause 7, for reducing the risks.

Possible hazards can be as follows, but not limited to:

- a) pool operation (see Table A.1);
- b) pool users (see Table A.2);
- c) mobile pool equipment (see Table A.3);
- d) fixed pool equipment (see Table A.4);
- e) structure, building, pool design (see Table A.5);
- f) technical system (see Table A.6);