DIN EN 1069-1:2026-09 (E)

Water slides - Part 1: Safety requirements and test methods

Contents

Page

European foreword 5

Introduction 7

1 Scope 8

2 Normative references 8

3 Terms and definitions 9

4 Classification 12
4.1 Type 1 12
4.1.1 Type 1.1 12
4.1.2 Type 1.2 12
4.2 Type 2 12
4.3 Type 3 12
4.4 Type 4 12
4.5 Type 5 13
4.6 Type 6 13
4.6.1 Type 6.1 13
4.6.2 Type 6.2 13
4.7 Type 7 13
4.8 Special elements 13
4.8.1 Bowl 13
4.8.2 Element that allows lateral oscillation 13
4.8.3 Uphill element 13
4.8.4 Wild river 13

5 Materials and construction 13
5.1 General 13
5.2 Selection of materials 14
5.3 Certificates 14
5.4 Manufacturer and installer 14
5.5 Durability 14
5.6 Electrical installations 14

6 Design 14
6.1 Design guidelines 14
6.2 Design analysis 15
6.2.1 General 15
6.2.2 Preliminary risk assessment 15
6.2.3 Construction documents 16
6.3 Static calculations 16
6.3.1 General 16
6.3.2 Actions in the slide area 17
6.3.3 Actions on access, platforms and railings 21
6.3.4 Combination of actions and verification 21

7 Safety requirements for water slides 21
7.1 General 21
7.2 Entrapment 22
7.3 Surfaces 22

7.3.1 General ... 22
7.3.2 Surface of the slide proper ... 22
7.4 Corners and edges ... 22
7.5 Access to water slides ... 22
7.5.1 General ... 22
7.5.2 Stairs ... 22
7.5.3 Stepladders ... 22
7.5.4 Platform ... 23
7.5.5 Protection against falling ... 23
7.5.6 Slip resistance ... 24
7.6 Start section ... 25
7.7 Slide proper ... 25
7.7.1 General ... 25
7.7.2 Sliding path ... 25
7.7.3 Maximum acceleration on a sliding person ... 25
7.8 Tubes and covered sections ... 26
7.9 Final part ... 26
7.10 Landing device/landing area ... 26
7.10.1 General ... 26
7.10.2 Catch unit ... 26
7.10.3 Sofa unit ... 27
7.10.4 Splashdown areas ... 27
7.11 Accessories ... 27
7.11.1 Covers ... 27
7.11.2 Ride enhancement devices ... 28
7.11.3 Other constituent parts ... 28
7.12 Water supply ... 30
7.12.1 General ... 30
7.12.2 Water flow rate ... 30
7.13 Interference between users ... 30

8 Additional safety requirements for Types 1 to 7 and special elements ... 30
8.1 Slide proper ... 30
8.1.1 General ... 30
8.1.2 Type 1 ... 31
8.1.3 Type 2 ... 31
8.1.4 Type 3 ... 32
8.1.5 Type 4 ... 32
8.1.6 Type 5 ... 33
8.1.7 Type 6 ... 34
8.1.8 Type 7 ... 35
8.1.9 Requirements for special elements ... 35
8.2 Splashdown area ... 36
8.2.1 General and specific pools ... 36
8.2.2 Requirements for landing ... 37
8.3 Clearance zones ... 38
8.4 Interference between users and non-users ... 39

9 Check and test runs ... 39
9.1 General ... 39
9.2 Technical and physical checks ... 40
9.3 Practical test ... 40
9.3.1 General ... 40
9.3.2 Slide tester ... 40
9.3.3 Sliding conditions ... 40
9.3.4 Acceleration and speed measurements ... 40
9.4 Test report ... 41

10 Designation and marking ... 42
10.1 Designation ... 42
10.2 Marking ... 42

Annex A (normative) Splashdown areas 43

Annex B (normative) Use of stainless steels for water slides 49

B.1 General 49
B.2 Indoor swimming pools with disinfection with chlorine 49
B.2.1 General 49
B.2.2 Materials without regular cleaning 49
B.2.3 Materials with regular cleaning 49
B.2.3.1 General 49
B.2.3.2 Cleaning concept 50
B.2.3.3 Execution of the regular cleaning 50
B.2.3.4 Regular inspection 50
B.2.4 Outdoor swimming pools with disinfection with chlorine 50
B.3 Coatings and paintings 50

Annex C (normative) Design loads, accesses and platforms 51

C.1 Vertical imposed loads 51
C.2 Horizontal imposed loads 51
C.3 Stiffness 52
C.4 Stairs 52

Annex D (informative) Acceleration and speed measurements 54

D.1 Test devices 54
D.1.1 General 54
D.1.2 Acceleration measuring device 54
D.1.3 Maximum speed measuring device 54
D.2 Description of the acceleration test method 54

Bibliography 55