

# DIN EN 1069-1:2019-11 (E)

## Water slides - Part 1: Safety requirements and test methods (includes Amendment A1:2019)

---

<b>Contents</b>		<b>Page</b>
European foreword .....		5
Introduction .....		6
<b>1</b>	<b>Scope .....</b>	<b>7</b>
<b>2</b>	<b>Normative references .....</b>	<b>7</b>
<b>3</b>	<b>Terms and definitions .....</b>	<b>8</b>
<b>4</b>	<b>Classification .....</b>	<b>11</b>
4.1	Type 1 .....	11
4.1.1	Type 1.1 .....	11
4.1.2	Type 1.2 .....	11
4.2	Type 2 .....	11
4.2.1	Type 2.1 .....	11
4.2.2	Type 2.2 .....	11
4.3	Type 3 .....	11
4.4	Type 4 .....	12
4.5	Type 5 .....	12
4.6	Type 6 .....	12
4.6.1	Type 6.1 .....	12
4.6.2	Type 6.2 .....	12
4.7	Type 7 .....	12
4.8	Type 8 .....	12
4.9	Type 9 .....	12
4.10	Type 10 .....	12
<b>5</b>	<b>Materials and construction .....</b>	<b>13</b>
5.1	General .....	13
5.2	Selection of materials .....	13
5.3	Certificates .....	13
5.4	Manufacturer and installer .....	13
5.5	Durability .....	13
5.6	Electrical installations .....	13
<b>6</b>	<b>Design .....</b>	<b>14</b>
6.1	Design guidelines .....	14
6.2	Design analysis .....	14
6.2.1	General .....	14
6.2.2	Preliminary risk analysis .....	14
6.2.3	Construction documents .....	15
6.3	Static calculations .....	15
6.3.1	General .....	15
6.3.2	Actions in the slide area .....	16
6.3.3	Actions on Access, Platforms and Railings .....	20
6.3.4	Combination of actions and verification .....	20
<b>7</b>	<b>Safety requirements for water slides .....</b>	<b>21</b>
7.1	General .....	21
7.2	Entrapment .....	21

7.3	Surfaces .....	21
7.3.1	General .....	21
7.3.2	Surface of the slide proper .....	21
7.4	Corners and edges .....	21
7.5	Access to water slides .....	21
7.5.1	General .....	21
7.5.2	Stairs .....	22
7.5.3	Stepladders .....	22
7.5.4	Platform .....	22
7.5.5	Protection against falling .....	22
7.5.6	Slip resistance .....	24
7.6	Start section for Types 2 to 10 .....	24
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 .....	25
7.9	Final part .....	25
7.9.1	General .....	25
7.9.2	Landing device/Landing area .....	26
7.10	Splashdown areas .....	27
7.11	Accessories .....	27
7.11.1	Covers .....	27
7.11.2	Ride enhancement devices .....	27
7.11.3	Other constituent parts .....	28
7.12	Water supply .....	29
7.12.1	General .....	29
7.12.2	Water flow rate .....	30
7.13	Interference between users .....	30
7.14	Interference between users and non-users .....	30
8	Additional safety requirements for Types 1 to 10 .....	31
8.1	Slide proper .....	31
8.1.1	Type 1 .....	31
8.1.2	Type 2 .....	31
8.1.3	Type 3 .....	33
8.1.4	Type 4 .....	33
8.1.5	Type 5 .....	33
8.1.6	Type 6 .....	34
8.1.7	Type 7 .....	34
8.1.8	Type 8 .....	35
8.1.9	Type 9 .....	35
8.1.10	Type 10 .....	35
8.2	Splashdown area .....	35
8.2.1	Acceleration .....	35
8.2.2	General and specific pools .....	35
8.2.3	Requirements for landing .....	36
8.3	Clearance zones .....	38
9	Check and test runs .....	39
9.1	General .....	39
9.2	Technical and physical checks .....	39
9.3	Practical test .....	39
9.3.1	General .....	39
9.3.2	Slide tester .....	39
9.3.3	Sliding conditions .....	39
9.3.4	Acceleration and speed measurements .....	40
9.4	Test report .....	40
10	Designation and marking .....	41
10.1	Designation .....	41
10.2	Marking .....	41

<b>Annex A (normative) Splashdown areas .....</b>	<b>42</b>
<b>Annex B (normative) Use of stainless steels for water slides .....</b>	<b>49</b>
<b>B.1 General .....</b>	<b>49</b>
<b>B.2 Indoor swimming pools with disinfection with chlorine .....</b>	<b>49</b>
<b>B.2.1 General .....</b>	<b>49</b>
<b>B.2.2 Materials without regular cleaning .....</b>	<b>49</b>
<b>B.2.3 Materials with regular cleaning .....</b>	<b>50</b>
<b>B.2.3.1 General .....</b>	<b>50</b>
<b>B.2.3.2 Cleaning concept .....</b>	<b>50</b>
<b>B.2.3.3 Execution of the regular cleaning .....</b>	<b>50</b>
<b>B.2.3.4 Regular inspection .....</b>	<b>50</b>
<b>B.2.4 Outdoor swimming pools with disinfection with chlorine .....</b>	<b>50</b>
<b>B.3 Coatings and paintings .....</b>	<b>51</b>
<b>Annex C (normative) Design loads, accesses and platforms .....</b>	<b>52</b>
<b>C.1 Vertical imposed loads .....</b>	<b>52</b>
<b>C.2 Horizontal imposed loads .....</b>	<b>52</b>
<b>C.3 Stiffness .....</b>	<b>53</b>
<b>C.4 Stairs .....</b>	<b>53</b>
<b>Annex D (informative) Acceleration and speed measurements .....</b>	<b>55</b>
<b>D.1 Test devices .....</b>	<b>55</b>
<b>D.1.1 General .....</b>	<b>55</b>
<b>D.1.2 Acceleration measuring device .....</b>	<b>55</b>
<b>D.1.3 Maximum speed measuring device .....</b>	<b>55</b>
<b>D.2 Description of the acceleration test method .....</b>	<b>55</b>
<b>Bibliography .....</b>	<b>56</b>