TEST REPORT

EN 14960-1:2019

Inflatable play equipment Part 1: Safety requirements and test methods

Report Reference No. ..... :	08.05.19.0362.01
Compiled by (+ signature) ..... :	David Xu
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Date of issue ..... :	2019-09-03
Testing Laboratory ..... :	Anxin Product Test Service Co., Ltd
Address ..... :	Floor 2, Yuanjing Building, No.899, Sanyuanli Dadao, Guangzhou
Applicant's name ..... :	Guangzhou Powerful Toys Co.,Ltd
Address ..... :	No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China
Test specification:	
Standard ..... :	EN 14960-1:2019
Test procedure ..... :	SCT
Non-standard test method..... :	N/A
Test Report Form No. ..... :	EN 14960-1:2019
Test Report Form(s) Originator ..... :	SCT
Master TRF ..... :	2019-09
Test item description ..... :	Inflatable products
Trade Mark ..... :	N/A
Manufacturer ..... :	Guangzhou Powerful Toys Co.,Ltd
Address ..... :	No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China
Factory ..... :	Guangzhou Powerful Toys Co.,Ltd
Address ..... :	No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China
Model/Type reference ..... :	Jump airbag, Trampoline park airbag, BMX airbag landing, bumper ball, air track, inflatable wipeout, inflatable rodeo bull ride, inflatable mechanical surfboard, inflatable sports games, inflatable paintball bunker, inflatable football darts, inflatable tent, bubble tent, inflatable emergency tent, inflatable pool, inflatable football field, inflatable advertising, inflatable water slip n slide, inflatable yacht slide, inflatable obstacle, bouncer, castle, slide, fun city
Ratings ..... :	Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I

Copy of marking plate:

Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: Jump airbag Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China	Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: Trampoline park airbag Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China

Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: BMX airbag landing Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China	Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: bumper ball Maximum height of the user:2.0m; Maximum weight of each user: 100Kg Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China

Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: air track Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China	Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: inflatable wipeout Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China

Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: inflatable rodeo bull ride Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China	Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: inflatable mechanical surfboard Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China
Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: inflatable sports games Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China	Guangzhou Powerful Toys Co.,Ltd Inflatable products Model:inflatable paintball bunker Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China
Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: inflatable football darts Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China	Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: inflatable tent Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China

Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: bubble tent Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China	Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: inflatable emergency tent Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China
Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: inflatable pool Maximum height of the user:2.0m; Maximum weight of each user: 100Kg Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China	Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: inflatable water slip n slide Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China
Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: inflatable football field Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China	Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: inflatable advertising The power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China

Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: inflatable yacht slide Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China	Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: inflatable obstacle Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China
Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: bouncer Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China	Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: castle Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China
Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: slide Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China	Guangzhou Powerful Toys Co.,Ltd Inflatable products Model: fun city Maximum height of the user:2.0m; Maximum weight of each user: 100Kg; Maximum number of users: 0.5 user for each m^2; the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I Year of the manufacture:2019-09 The standard: EN 14960-1:2019 No.105, Fourth Building, No.99 Gaozeng Stent, Renhe Town, Baiyun Distrcit, Guangzhou, China

General remarks:

The test results presented in this report relate only to the object tested.
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"(See Enclosure #)" refers to additional information appended to the report.
"(See appended table)" refers to a table appended to the report.

Throughout this report a point is used as the decimal separator.

Summary of testing:

The submitted sample was complied with EN 14960-1:2019

Test item particulars:

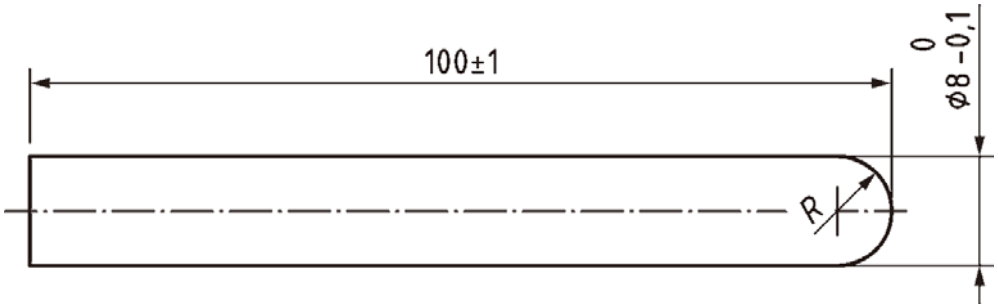
Classification of installation and use	:	Fixed appliance
Supply Connection	:	Non-detachable power cord with plug
Class of protection	:	Class I
	:	

Possible test case verdicts:

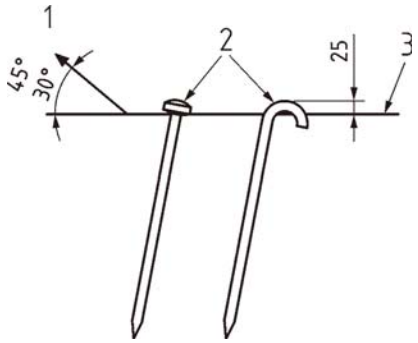
- test case does not apply to the test object	:	N/A
- test object does meet the requirement	:	P(Pass)
- test object does not meet the requirement	:	F(Fail)

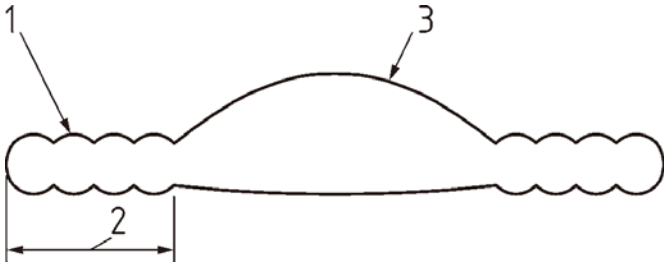
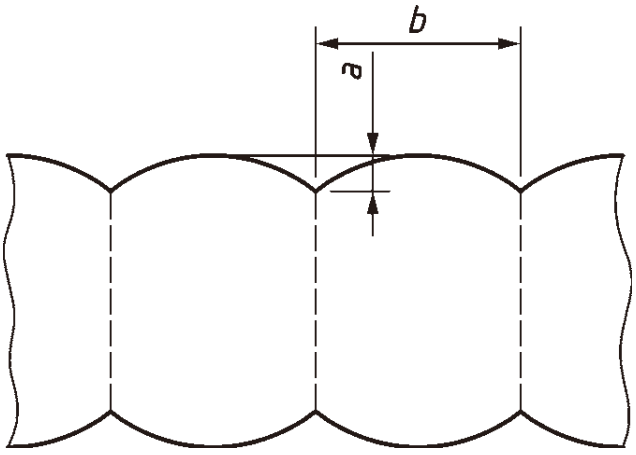
Testing .....:

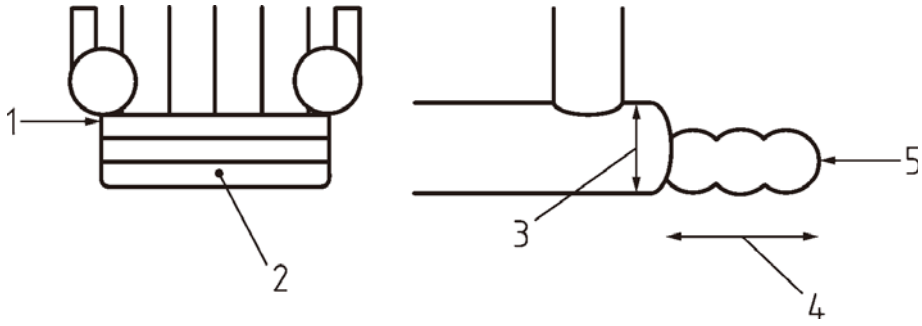
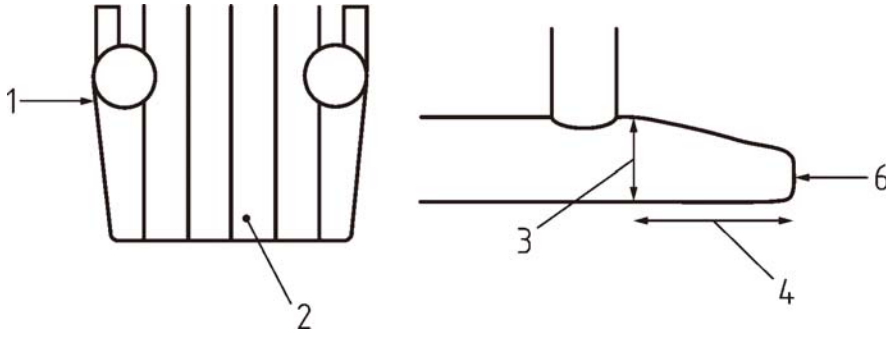
Date of receipt of test item	:	2019-08-15
Date (s) of performance of tests	:	2019-08-15 to 2019-09-03

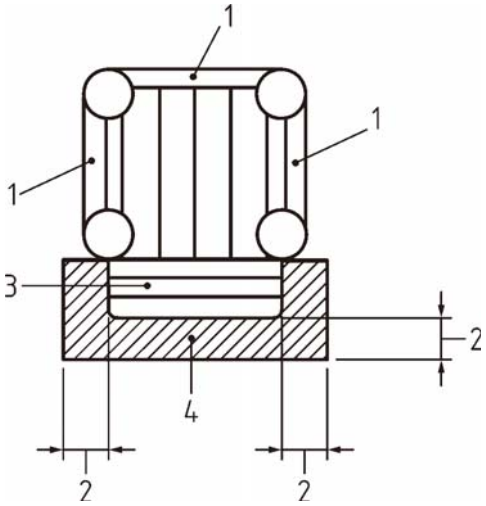
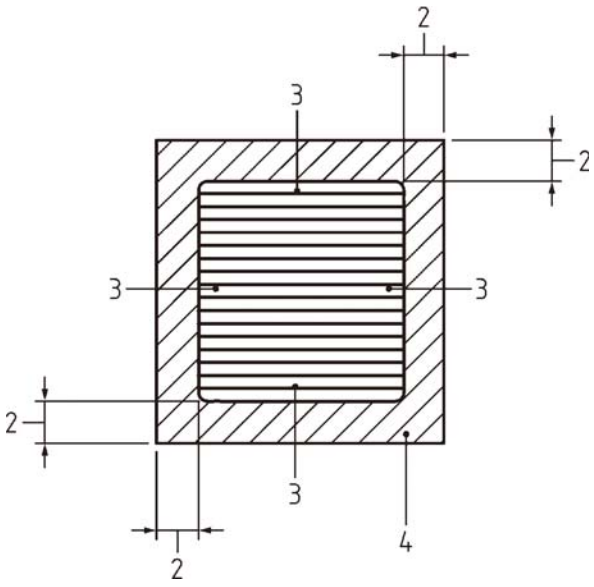
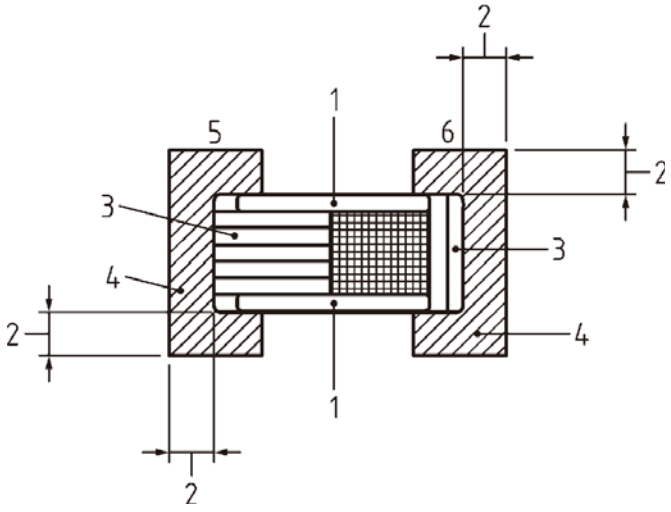
Clause	Requirement + Test	Result - Remark	Verdict
4	**Safety requirements**		—
4.1	**Materials**		P
4.1.1	**Fabrics**		P
	Fabrics shall be flame retardant.		P
	Fabrics, and joins in fabrics, shall be of adequate tear and tensile strength for the weight of the intended user and have sufficient air retention to enable the inflatable, when pressurized to the level specified in the operations manual, to resume its shape after distortion under load. Fabrics of:		P
	a) minimum tear strength 350 N (see test method Annex E),	359N	P
	b) minimum tensile strength 1 850 N (see EN ISO 1421),	2011N	P
	c) minimum coating adhesion 100 N (see EN ISO 2411),shall be used in those structural parts of the inflatable where force or stress is applied by the user.	110N	P
4.1.2	**Thread**		P
	Threads shall be non-rotting yarn and at least 88 N tensile strength. Stitching shall be lock-stitch. The length of individual stitches shall be a minimum of 3 mm and a maximum of 8 mm.	98N	P
4.1.3	**Netting**		P
	Retention netting is commonly used to define the playing area, to contain the users and to retain items of mobile play equipment such as balls. Retention netting shall not significantly impair visibility.		P
	Retention netting shall be strong enough to contain the largest/heaviest user for whom the inflatable is designed.		P
	In order to prevent users from climbing retention netting the mesh size, where the netting is more than 1 m vertical height and accessible to the user, shall be 30 mm or less to exclude users' feet.		P
	Where netting is used for roofs and is accessible to the user, the mesh size shall be small enough to prevent the 8 mm finger rod from passing through (see Figure 2).		P
	 **Figure 2 — 8 mm finger rod**		P

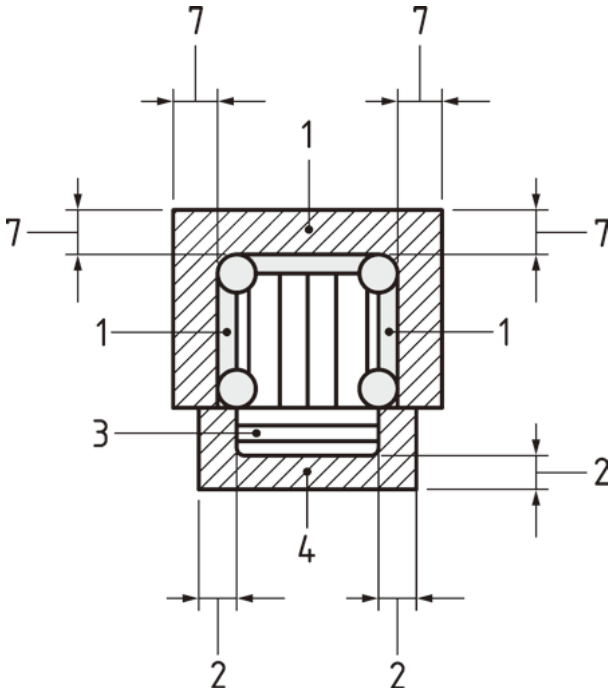
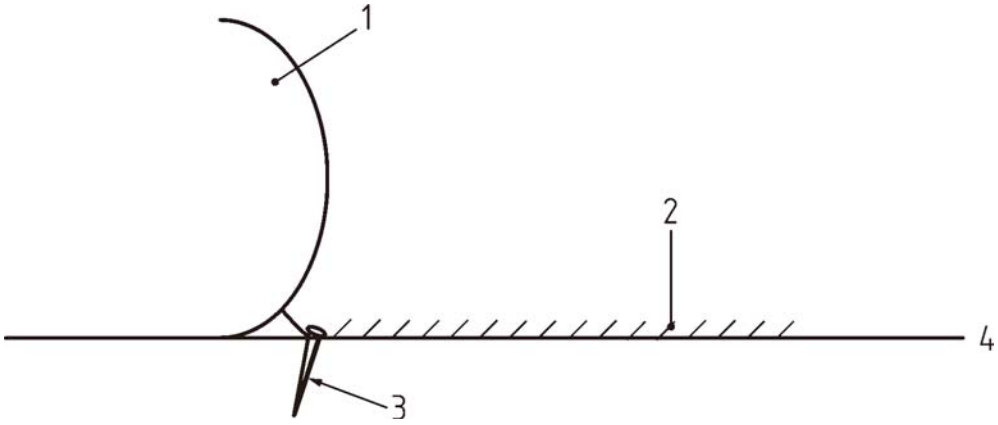
Clause	Requirement + Test	Result - Remark	Verdict
	Clamber netting (commonly laid on slopes to form foot and hand holds) shall be securely fixed to prevent lifting by the user. The rope from which it is made shall be at least 12 mm in diameter and shall be securely knotted. Strand ends shall be treated to prevent fraying. Care shall be taken when heat sealing so as not to form hard or sharp edges.		N/A
4.1.4	**Ropes**		N/A
	Ropes shall be fixed at both ends and the total amplitude of swing shall not exceed 20 % of the distance between the fixing points such that it shall not be possible to make a loop in the rope of large enough diameter to allow probe E to pass through (see Figure D.1).		N/A
	The rope diameter shall be between 18 mm and 45 mm.		N/A
	Fibre ropes (textile type) shall conform to EN ISO 9554 or EN ISO 2307. Alternatively, a works certificate shall be supplied stating the material used and the safe working load. Monofilament plastics ropes shall not be used.		N/A
4.1.5	**Zips**		P
	Zips shall withstand air pressures and tension generated within the structure. Zips used for entrances and exits shall be reliable, easy to use, able to open from both sides and shall allow access and egress by adults. Zips used for deflation purposes shall have the puller hidden from view (e.g. by a flap or pocket).		P
4.1.6	**Dangerous substances and decorative finishes**		P
	Dangerous substances shall not be used for inflatable play equipment in such a way that they can cause adverse health affects to the user. Paints and other decorative finishes shall conform to EN 71- 3.		P
4.2	**Design**		P
4.2.1	**Anchorage**		P
	The inflatable shall be provided with an anchorage and/or ballast system and any necessary accessories enabling the inflatable to be securely fixed to the ground. Each inflatable shall have at least six anchorage points.	More than six anchorage points	P
	The number of anchorage points shall be calculated in accordance with Annex A. They shall be distributed around the perimeter of the inflatable (see also 4.2.3) and shall be fitted with metal ends.		P
	The maximum wind- speed in which inflatables shall be used outdoors is 38 km/h (Force 5 on the Beaufort Scale); see Annex B.	Force 5	P

Clause	Requirement + Test	Result - Remark	Verdict
	When used outdoors, the inflatable shall be secured to the ground, preferably with ground stakes where the ground is suitable. Each anchorage point on the inflatable and all of the components of the anchorage and/or ballast system, e.g. ropes, webbings, metal attachments, stakes, weights, shall withstand a force of 1 600 N. The direction of the exerted force shall be at an angle to the ground of 30° to 45°. Ground stakes shall incline away from the direction of the exerted force. Ground stakes shall be a minimum of 380 mm in length and a minimum of 16 mm in diameter and their tops shall be rounded.		P
	The system shall expose no more than 25 mm of the stake above ground level (see Figure 3).		P
	When the inflatable is used indoors, the anchorage and/or ballast system should be used, when necessary, to maintain stability.		P
	 **Key** 1 direction of force 2 rounded tops 3 ground level **Figure 3 — Examples of ground stakes**		P
	On hard standing where ground stakes cannot be used, the inflatable shall be secured to the ground by equally effective method, e.g. attaching each of the anchorage points to fittings already in the ground, or to sandbags or other weights, if these are capable of supporting the 1 600 N load. If the inflatable is secured to a vehicle or other movable machinery, such vehicles or machinery shall be immobilised and be under the control of an operator.		P
4.2.2	**Structural integrity**		P
	The minimum air pressure inside the structural parts of the inflatable shall be 1 kPa (100 mm water gauge). Inflated chambers that are entered by the user are not considered to be structural parts of the inflatable, e.g. enclosed dome type inflatables. Pressure in the playing area of soft mountains shall be no greater than 0,25 kPa (25 mm water gauge), but shall maintain a pressure sufficient to prevent grounding. Pressure in the surrounding safety apron of soft mountains shall be at least 1 kPa (100 mm water gauge); see Figure 4.		P

Clause	Requirement + Test	Result - Remark	Verdict
	The depth of the trough on the surface of any platform shall be a maximum of 33 % of the width of the adjacent panel, measured when inflated (see Figure 5).		P
	Containing walls shall be vertical (90 ± 5)°. Towers that support containing walls shall be in the same plane. Containing walls and towers shall be strong enough to contain the largest and/or heaviest user for whom the inflatable is designed.		P
	Playing areas, surrounding safety aprons, steps and/or ramps shall support the weight of the largest and/or heaviest user for whom the inflatable is designed, without grounding. See Annex C for the test method.		P
	 **Key** 1 surrounding safety apron 2 tread depth 3 playing area **Figure 4 — Section through a soft mountain**		P
	 **Key** a depth of trough — measured when inflated b width of adjacent panel **Figure 5 — Trough depth**		P
4.2.3	**Access/egress**		P
	A step or ramp shall be wide enough to cover the entire access/egress aperture with overlap, according to Figure 6.		P
	A step or ramp shall have a tread depth of a minimum of 1,5 times the height of the adjacent playing area platform to which it is attached (see Figure 6).		P

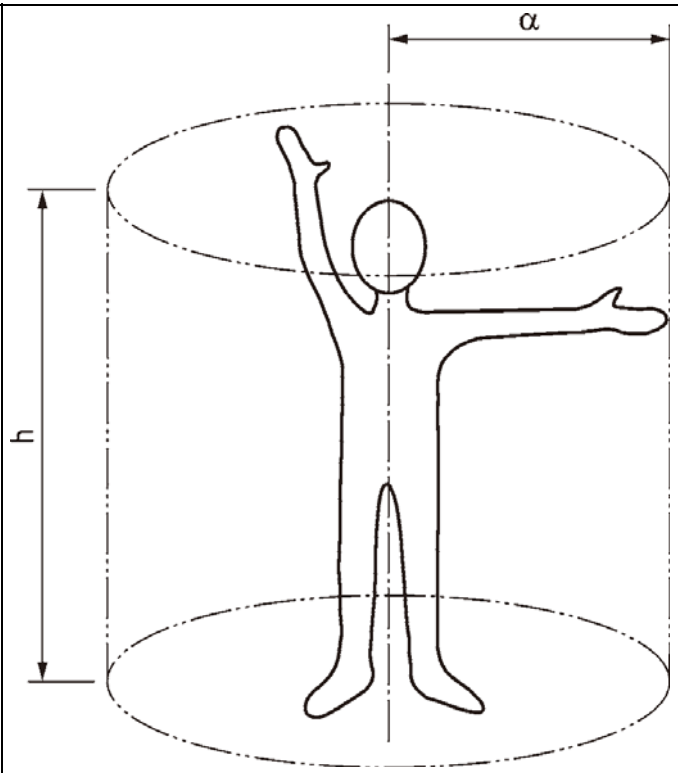
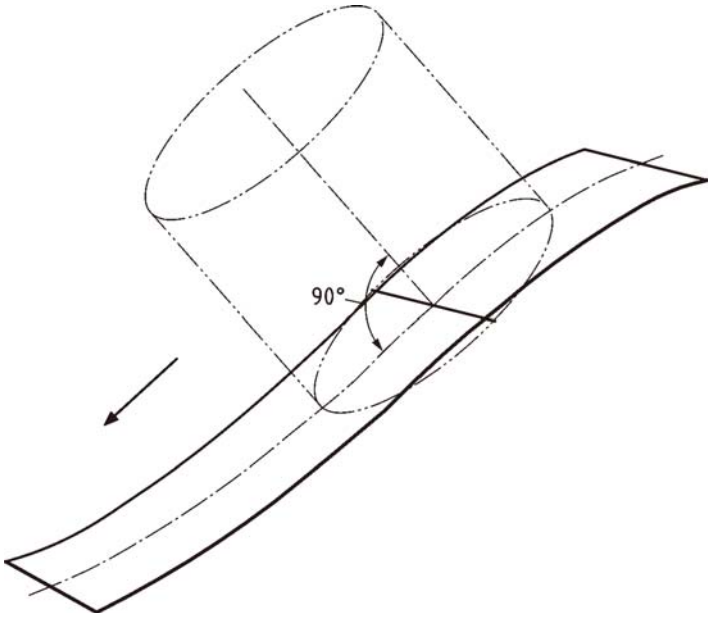
Clause	Requirement + Test	Result - Remark	Verdict
	The playing area of soft mountains shall be completely surrounded by an inflated safety apron. This safety apron shall have a minimum tread depth of 1,6 m or 0,5 times the height of the playing area measured from the ground when inflated and in the unloaded condition, whichever is greater.		P
	In the event of air supply failure, the deflation time shall be sufficient to allow users of the inflatable to be evacuated safely.		P
	Inflatables shall be designed to ensure that adults are able to gain access in order to assist users.		P
	On any open side, the free height of fall shall be no greater than 630 mm from the ground in the unloaded condition, (600 mm in the loaded condition).	Less than 630 mm from the ground	P
	On any open side, the extent of the impact area shall be at least 1,2 m. The surface in the impact area shall meet the requirements for impact attenuation so that the critical fall height of the surfacing, according to EN 1177, is at least 630 mm. The impact areas of adjacent inflatables and/or other play equipment shall not overlap.		P
	Materials such as soil, turf and sand have some impact attenuating properties. Impact absorbing mats may be used (see Figure 7). See also 4.2.8. Siting		P
	 **a) step detail**		P
	 **b) ramp detail** **Key** 1 overlap 2 open side 3 height of adjacent playing area platform 4 tread depth 5 step 6 ramp **Figure 6 — Step or ramp detail**		P

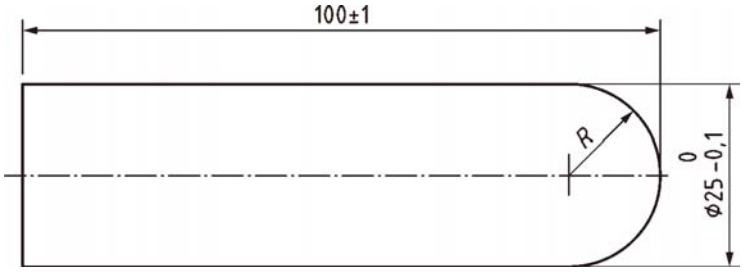
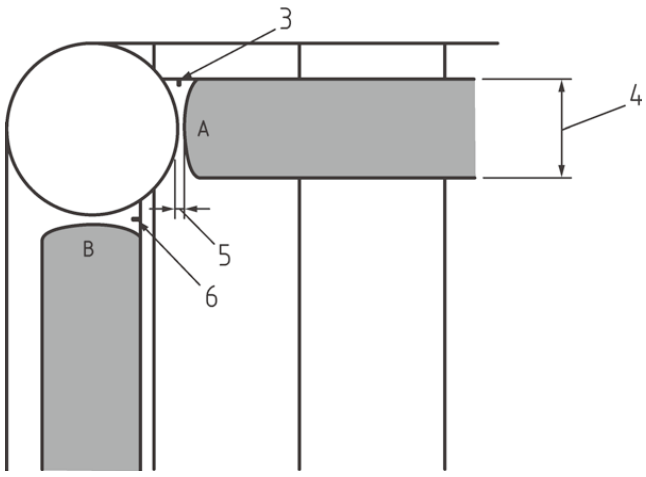
Clause	Requirement + Test	Result - Remark	Verdict
	 **a) Castle type**		P
	 **b) Flat-bed**		P
	 **c) Up and over slide**		P

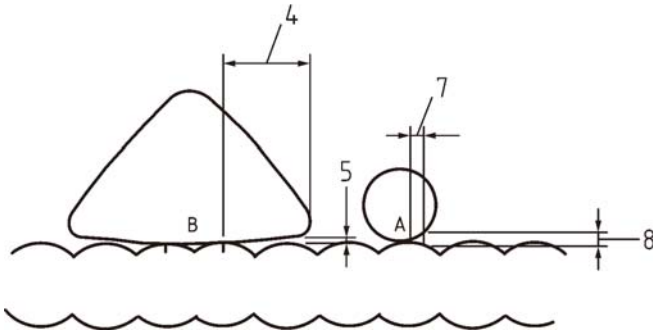
Clause	Requirement + Test	Result - Remark	Verdict
	 **d) Open top inflatable on hard standing** **Key** 1 walled side 2 at least 1,2 m 3 open side 4 impact area 5 exit 6 entrance 7 at least 1,5 m **Figure 7 — Impact areas**		P
	Anchorage points in impact areas shall be avoided if possible but, where necessary, anchorage points shall be connected to the bottom perimeter edge or seam of the inflatable and shall extend as short a distance as practicable from the inflatable (see Figure 8).		P
	 **Key** 1 side of inflatable 2 impact area 3 anchorage stake as close as practicable to the side of the inflatable 4 ground level **Figure 8 — Anchorage in an impact area**		P
	Totally enclosed inflatables shall have signs indicating exits, which shall be visible in all circumstances.		N/A

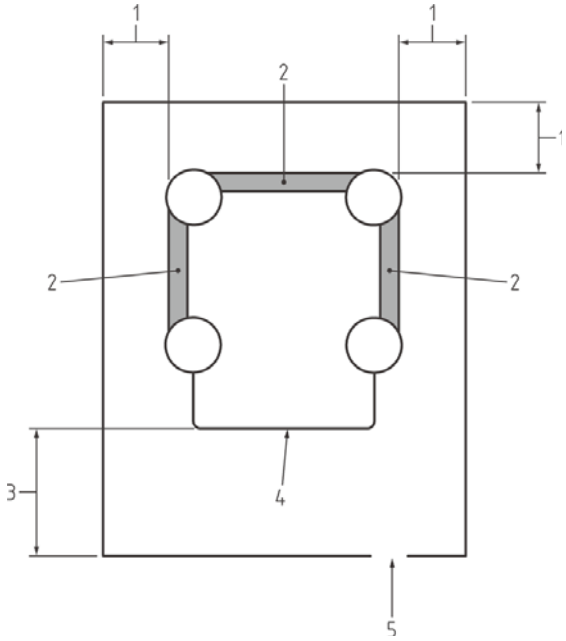
Clause	Requirement + Test	Result - Remark	Verdict
	When designed for more than 15 users, there shall be more than one exit, and users shall never be more than 5 m from an exit.		P
4.2.4	**Blowers**		P
	Blowers shall be protected to a minimum of IP23B as defined in EN 60529, except that the 8mm finger rod, as illustrated in Figure 2, shall be used instead of the jointed 12 mm test finger.		P
	The 8 mm finger rod may pass through the guard mesh but shall not, in any position, come into contact with any moving part, hot surface or exposed electrical connections.		P
	The blower shall be positioned at least 1,2 m from a walled side and 2,5 m from an open side. The connection tube shall be long enough to allow this.	More than 1.2m	P
	If a blower is sited inside the inflatable structure, it shall be at least 2,5 m from the playing area, safety apron, step and/or ramp.		N/A
	The blower, including cabling and controls, shall not be readily accessible to the public.		P
4.2.5	**Entrapment**		P
4.2.5.1	**General** Test probes shall be applied with a force of 222 N unless otherwise stated in the text.		P
4.2.5.2	**Entrapment of the head and neck**		P
	Inflatables shall be constructed so that any openings do not create head and neck entrapment hazards by either head first or feet first passage. Hazardous situations in which this type of entrapment can be encountered include the following:		P
	— completely bound openings through which a user may slide feet first or head first;		P
	— partially bound or V-shaped openings;		P
	— other openings (e.g. shearing or moving openings).		P
	a) **Completely bound openings**		P
	Accessible completely bound openings with a lower edge more than 600 mm above a platform shall be tested in accordance with D.2.1.		P
	Probes C or E shall not pass through any opening unless it also allows the passage of the large head probe D.		P
	b) **Partially bound and V-shaped openings**		P
	Partially bound and V-shaped openings with an entrance at 600 mm or more above a platform shall be constructed so that either:		P
	1) the opening is not accessible when tested in accordance with D.2.2, or		P

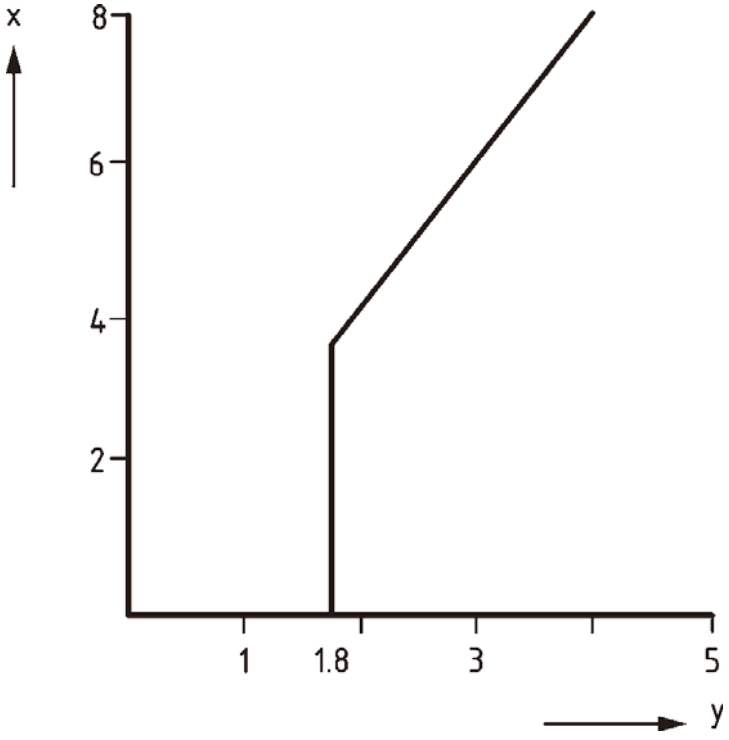
Clause	Requirement + Test	Result - Remark	Verdict
	2) if accessible at a position of 600 mm or more above a platform when tested in accordance with D.2.2, depending on the angular orientation range of the opening (see Figure D.4), shall conform to the following:		P
	Range 1: (template centre line ± 45° from vertical); when the template apex contacts the base of the opening, the depth of the opening shall be less than the length of the template to the underside of the shoulder section.		P
	Range 2: (template centre line from horizontal to + 45°); when the template apex contacts the base of the opening, the depth of the opening shall be less than the 'A' portion of the template. If the depth of the opening is greater than the 'A' portion of the template, all parts of the opening above the 'A' portion shall also allow insertion of the shoulder section of the template or probe D.		P
	Range 3: No template test requirements.		P
	c) **Other openings (e.g. shearing or moving openings)**		P
	Non-rigid members (for example ropes) shall not overlap if, by doing so, they create openings that do not conform to the requirements for completely bound openings.		P
4.2.5.3	**Entrapment of clothing/hair**		P
	Inflatables shall be constructed so that hazardous situations including:		P
	a) gaps or V-shaped openings in which a part of clothing can become trapped while or immediately before the user is undergoing a forced movement,		P
	b) protrusions, in which clothing entrapment can be encountered are not created.		P
	Slides shall be constructed so that openings located within the free space (see Figure 9) do not trap the toggle when tested in accordance with D.3.		P
	The cylindrical space is shown in Figure 9 and its dimensions are given in Table 1. In determining the free space, the possible movements of the equipment and the user shall be taken into account.		P
	Special consideration should be given when using elements of circular cross-section, e.g. round tubes or poles, to avoid clothing entanglement within the falling space.		P
	Roofs shall be constructed so that they do not trap the toggle when tested in accordance with D.3.		P
	Spindles and rotating parts shall be constructed so as to prevent entanglement of clothing or hair.		P

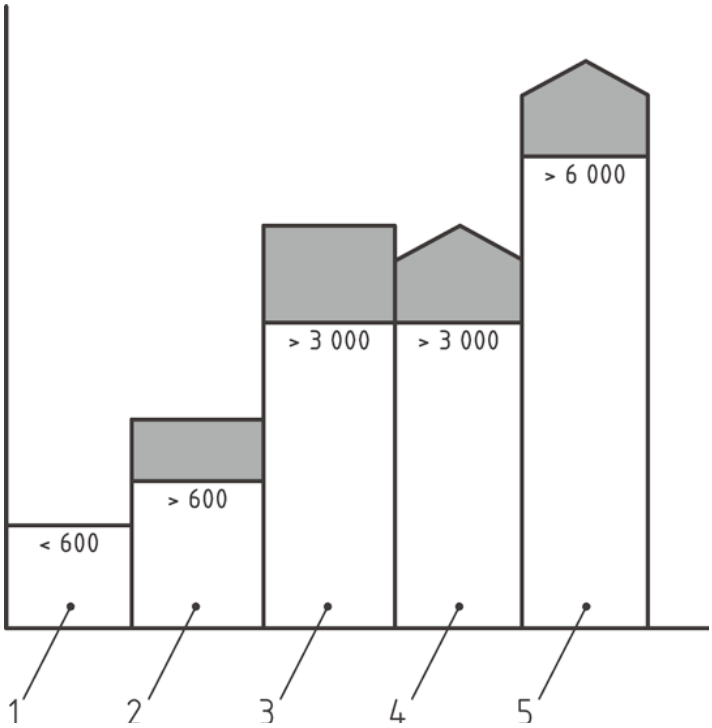
Clause	Requirement + Test	Result - Remark	Verdict
	 **a) Standing user**		P
	 **b) Example of a slide** **Figure 9 — Free space**		P
	Table 1 — Dimensions of the cylinder for the determination of the free space Type of use / **Radius** α / **Height** h Standing / 1 000 / 1 800 Sitting / 1 000 / 1 500 Hanging / 500 / 300 above and 1 800 below hanging position NOTE In case of hanging, h = 300 because of the possibility that the user pulls himself or herself up.		P
4.2.5.4	**Fingers entrapment**		P

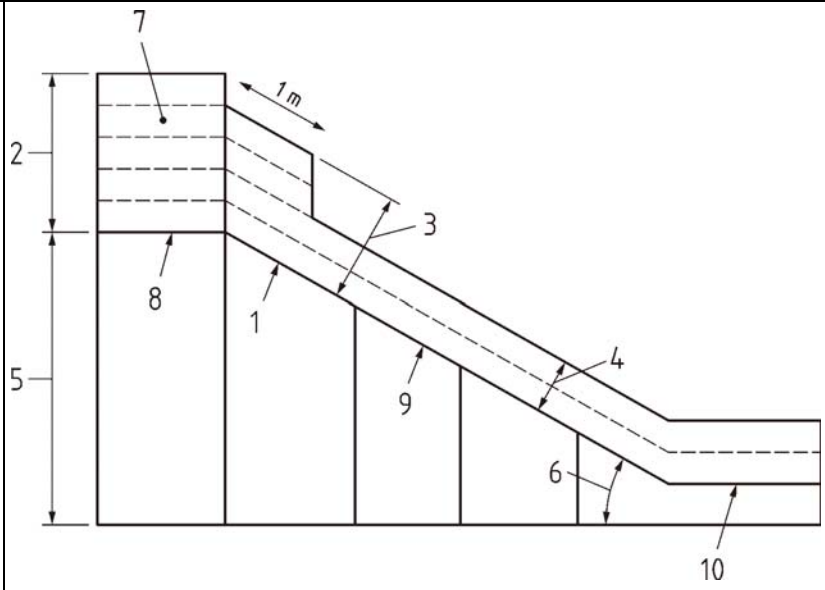
Clause	Requirement + Test	Result - Remark	Verdict
	Inflatables shall be constructed so that there are no hazardous gaps in which fingers can be trapped while the rest of the body is moving or continuing in motion involuntarily, e.g. sliding, bouncing.		P
	Openings within the free space, where the user is subjected to forced movement, and holes which have a lower edge more than 1,0 m above the platform when tested in accordance with Annex D (D.4), shall conform to one of the following requirements:		P
	a) 8 mm finger rod (see Figure 2), when applied with a force of 30 N, shall not pass through the minimum cross section of the opening and the profile of the opening shall be such that the rod cannot be locked in any position when set in motion as given in Figure D.10; or		P
	b) if the 8 mm finger rod passes through the opening, the 25 mm finger rod (see Figure 10), when applied with a force of 30 N shall also pass though the opening provided that the opening does not permit access to another finger entrapment site.		P
	 **Figure 10 — 25 mm finger rod**		P
4.2.5.5	**Body entrapment**		P
	Adjacent inflated surfaces shall be more than 120 mm apart if the aperture formed is more than 200 mm deep (see Figure 11).		P
	1  **a) Wall to tower attachment at A forms an entrapment point. Wall to tower attachment at B does not form an entrapment point**		P

Clause	Requirement + Test	Result - Remark	Verdict
	2  **b) Large slide at B forms an entrapment point. The ball fixed at A does not form an entrapment point** **Key** 1 walled castle viewed from above 5 less than 120 mm 2 section across playing area 6 wall to tower attachment point 3 wall to tower attachment point 7 less than 200 mm 4 more than 200 mm 8 more than 120 mm **Figure 11 — Entrapment**		P
	Inflatable tunnels:		P
	— An inflatable tunnel of 75 cm length or less shall, for the purposes of this standard, be regarded as a squeeze.		P
	— A tunnel of between 75 cm and 2,0 m length shall be of at least 50 cm internal diameter.		P
	— A tunnel of more than 2,0 m length shall be of at least 75 cm internal diameter.		P
	Inflatable squeeze:		P
	— A squeeze shall not be longer than 75 cm.		P
	— The diameter of the initial opening shall be at least 40 cm.		P
	— The smallest aperture of the squeeze shall allow the large head probe to pass through with the application of a force of 222 N.		P
	— The entire length of the inner squeeze panel shall be capable of being expanded to at least 40 cm diameter.		P
4.2.6	**Hard objects, sharp angles and edges**		P
	There shall be no hard and/or sharp angles or edges in any part of the inflatable accessible to the users (e.g. outside seams with a raw edge, square inflated corners, sharp-pointed cones).		P
	Users shall not be able to come into contact with any hard object placed inside or adjacent to the inflated structure while it is in use or during accidental deflation.		P
	Any hard object positioned over the playing area and supported by air pressure shall have an additional independent support system.		P
4.2.7	**Electrical installations**		P
	Electrical installations shall conform to applicable national standards/regulations.		P

Clause	Requirement + Test	Result - Remark	Verdict
	Controls of electrical installations shall not be readily accessible to the public.		P
	Electrical cables shall be secured away from users and the public.		P
4.2.8	**Siting**		P
	The inflatable shall be sited well away from possible hazards such as overhead power lines or other obstacles with hazardous projections (e.g. fences and/or trees).		P
	The inflatable shall not be erected on a site with more than a 5 % slope in any direction.		P
	The site shall be cleared of debris and/or sharp objects on, or embedded in, the surface.		P
	If, for crowd-control purposes, a perimeter fence is used, it shall be at least 1,8 m from walled sides and at least 3,5 m from open sides. A gateway shall be 1,0 m wide (see Figure 12).		P
	When inflatables are sited on hard standing and operated with fewer than one supervisor per inflatable, the impact area shall be extended to a width of 1,5 m so that any hard standing onto which a user might be liable to fall from a height greater than 630 mm in the unloaded condition shall be covered with impact attenuating material commensurate with the critical fall height measured from the ground to the relevant fall height, e.g. top of the wall. This requirement shall not be necessary if all such places from which a user might be liable to fall onto hard standing are securely and permanently covered so as to contain the user (see Figure 7 d)).		P
	 **Key** 1 at least 1,8 m 2 walled side 3 at least 3,5 m 4 open side 5 1 m gateway **Figure 12 — Positioning of perimeter fence**		P

Clause	Requirement + Test	Result - Remark	Verdict
	A clear area, free of any obstacle that could cause injury, shall be maintained around the inflatable. The extent of this clear area shall be established by dividing the height of the highest platform by two. The minimum clear area shall be 1,8 m on walled sides and 3,5 m on open sides (see Figure 13).		P
	An exception to this rule is when an inflatable with inflated walls is sited directly against a solid wall or walls, for example the walls of a building. In such a case, the solid wall(s) shall be 2,0 m higher than the highest platform height unless the platform has a permanent roof. Use of this exception shall not result in the creation of additional hazards.		P
	 **Key** x height of highest platform y extent of clear area **Figure 13 — Clear area around inflatable**		P
4.2.9	**Containment**		P
	Containing wall height shall be measured from the surface of the platform to the top of the wall, at 90° to the platform.		P
	Walls for containing users, known as outside walls, are required where the platform height is greater than 0,6 m.		P
	Inflatables with a platform height between 0,6 m and 3,0 m shall have a containing wall height equal to at least the height of the user. Containing walls of 1,8 m height are sufficient for users of any height.	More than 1.8m	P

Clause	Requirement + Test	Result - Remark	Verdict
	Inflatables with a platform height between 3,0 m and 6,0 m shall have a containing wall height at least 1,25 times the height of the user, or the platform area shall be permanently roofed to contain the user.		P
	Inflatables with a platform height over 6,0 m shall have containing walls and a permanent roof fitted (see Figure 14).		N/A
	The minimum internal height of such containing walls and permanent roof, measured from the surface of the platform to the under-side of the roof, shall be at least 0,75 m.		P
	 **Key** 1 no containing walls required 2 containing walls required of user height 3 containing walls required 1,25 times user height 4 alternative to 3, add a permanent roof 5 both containing walls and permanent roof required **Figure 14 — Containing wall heights on platforms**		P
4.2.10	**Wall heights on slopes**		P
	Slopes of less than 30° shall be treated as a platform.		P
	Containing wall heights on slopes shall be measured from the surface of the slope to the top of the wall, at 90° to the slope.		P
	The height of the containing walls on the slope of a slide or climbing ramp of more than a 30° inclination shall be, for the first metre at the top, at least the height of the user and for the remainder, at least 50 % of the height of the user (see Figure 15).	The containing walls height were more than 1.0m; and the containing walls of the first metre at the top surrounded by network;	P

Clause	Requirement + Test	Result - Remark	Verdict
	On a slope or climbing ramp over 6,0 m high, containing walls and a permanent roof shall be fitted. The minimum internal height of such containing walls and roof, measured from the surface of the slope to the under-side of the roof, shall be 75 cm.		N/A
	On bounce/slide combinations, where the highest platform height is 1,5 m or lower (measured from the ground) and provided that users are forced to sit or crouch on entering the slide, containing walls for the highest 750 mm of the slope shall be at least 50 % of user height and for the remainder of the slope at least 300 mm.		P
	 **Key** 1 first metre of slope 6 more than 30° 2 wall height 7 wall 3 user height 8 platform surface 4 50 % of user height 9 sliding surface 5 platform height 10 run-out **Figure 15 — Containing wall heights on slopes**		P
4.2.11	**Run-out**		P
	All slides shall include a run-out section at the bottom which shall have an average inclination of not more than 10°.		P
	The length of the run-out section, measured from the end of the radius or angle at the bottom of the sliding section, shall be a minimum of 50 % of the height of the highest platform of the slide, measured from the ground and in any case, a minimum of 300 mm.	The length of the run-out section more than of 50 % of the height of the highest platform of the slide	P
	When a stop-wall is fitted at the end of the run-out section, 50 cm shall be added to the length of the run-out. The height of a stop-wall shall be at least user height. The height of the containing walls on the sides of a run- out section, if fitted, shall be at least 50 % of the user height.		N/A

Clause	Requirement + Test	Result - Remark	Verdict
4.2.12	**Ventilation**		P
	The playing area shall be well-ventilated.		P
4.3	**Number of users**		P
	To determine the maximum safe number of users allowed to play on an inflatable at one time, the designer shall consider all circumstances which might affect the safe number.		P
	These include:		P
	a) height of the user;	Maximum height of the user:2.0m	P
	b) size of the playing area;		P
	c) type of activity, e.g. bouncing, sliding;		P
	d) inflated shapes mounted on the playing area;		P
	e) access and egress.		P
	This list is not exhaustive.		P
4.4	**Supervision**		P
	An inflatable shall not be used without supervision.		P
	When an inflatable is unattended, it shall be deflated and the power source disabled.		P
	The controller shall determine the number and suitability of supervisory personnel required to operate inflatables safely by considering matters such as the maximum number of users marked on inflatables, the age of the users, the environment in which inflatables are being used, the visibility of playing areas and the information provided by the manufacturer/supplier. Supervisory personnel consists of one operator and as many attendants as determined by the controller. Supervisory personnel shall be easily recognized.		P
5	**Test methods and reports**		—
	Before testing, the equipment shall be assembled according to the manufacturer's/supplier's instructions. Testing shall be carried out using the most appropriate method, e.g. measurement, visual examination, practical tests.		P
	Test reports shall be prepared in accordance with EN ISO/IEC 17025:2017, 7.8.2.1 and include, at least,		P
	the following:		P
	a) number and date of this European Standard;		P
	b) details of the equipment tested;		P
	c) details of the condition of the equipment including any defects observed;		P
	d) test results.		P
	Test reports shall be supplied upon request to owners/controllers/operators.		P

Clause	Requirement + Test	Result - Remark	Verdict
6	**Information to be provided by the supplier/manufacturer**		—
6.1	**General product information**		P
	The supplier/manufacturer shall provide information in the appropriate language(s) of the country in which the equipment is to be installed and used. The information shall:	English	P
	a) be printed legibly and in a simple form;		P
	b) be conveyed using illustrations wherever possible;		P
	c) include, at least, details of installation, operation, inspection and maintenance.	See the manual	P
6.2	**Pre-information**		P
	The supplier/manufacturer shall provide information concerning the safety of the equipment prior to accepting an order. This information shall include, at least, the following where relevant:		P
	a) height clearance and space required to operate the equipment safely;		P
	b) surfacing requirement;		P
	c) overall packed dimensions and weight;	See the manual	P
	d) intended age range or height range and number of users allowed;	Minimum age of 3 years old	P
	e) certification of conformity with this standard.		P
6.3	**Installation information**		P
	The supplier/manufacturer shall provide installation information which shall include, at least, the following:		P
	a) list of equipment;	See the manual	P
	b) method of anchorage and number of anchor points;		P
	c) maximum safe wind speed;	less than 38km/h	P
	d) siting, height and space requirement;		P
	e) maximum allowable slope of the site;	5^0	P
	f) crowd control measures;		P
	g) need to keep users off of the inflatable during inflation and deflation;		P
	h) type and size of blower required.		P
6.4	**Operating information**		P
	The supplier/manufacturer shall provide operating information which shall include, at least, the following information and instructions: Need for/to:		P
	a) constant supervision;	Check the toy every use	P
	b) admit users to the inflatable in a controlled and safe manner;		P
	c) restrict the maximum height of the user to the design height;	Maximum height of the user 2.0m	P

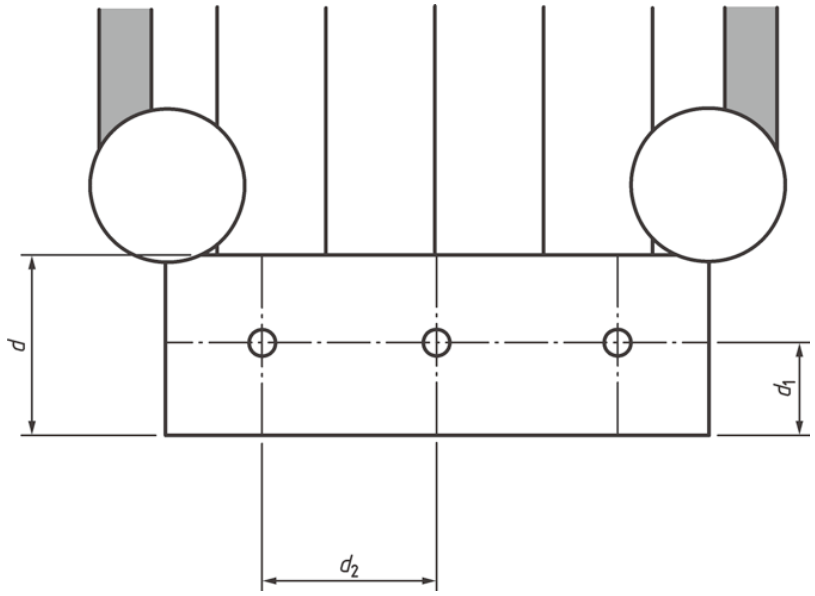
Clause	Requirement + Test	Result - Remark	Verdict
	d) restrict the maximum number of users at one time to the design number;	Maximum number of users: 0.5 user for each m^2	P
	e) use at least the minimum number of operating personnel;	two operating personnel	P
	f) users to remove their footwear;		P
	g) users to remove hard, sharp or dangerous objects from their person;		P
	h) users to remove glasses when practicable;		P
	i) prohibit the consumption of food, drink and gum;		P
	j) keep the entrance free from obstruction;		P
	k) prohibit the users from climbing or hanging on the containing walls;		P
	l) prohibit somersaults and rough play;		P
	m) operator and/or attendants to watch the activity on the inflatable constantly;		P
	n) operator and/or attendants to use a whistle or other signal to attract the attention of the users;		P
	o) operator and/or the attendants to separate larger, more boisterous users from smaller ones;		P
	p) inflatable to be evacuated during re-fuelling of a blower powered by an internal combustion engine.		P
	The supplier/manufacturer shall also provide information on what to do in the event of an emergency or accident.		P
6.5	**Inspection and maintenance information**		P
	The supplier/manufacturer shall provide information on the inspection and maintenance of the equipment. The information shall specify the type and frequency of inspections.		P
7	**Inspection, maintenance and alteration**		—
7.1	**Inspection**		P
7.1.1	**General** Inflatable play equipment shall be inspected at suitable intervals to ensure that deterioration in the equipment is detected and remedied in good time.		P
7.1.2	**Routine Inspection**		P
	The controller shall carry out, or appoint a person to carry out, routine inspection.		P
	Routine inspection shall be carried out before use each time the equipment is made available for use.		P
	The check shall include that:		P
	— site is suitable;		P
	— all anchorages are secure and in place;		P
	— ancillary equipment is in position (e.g. impact-absorbing mats);		P
	— there are no significant holes or rips in the fabric or seams;		P
	— correct blower is being used;		P

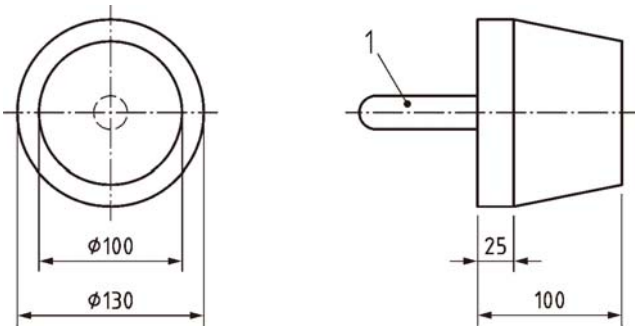
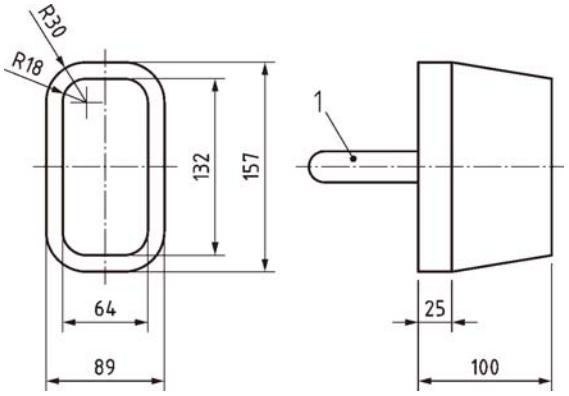
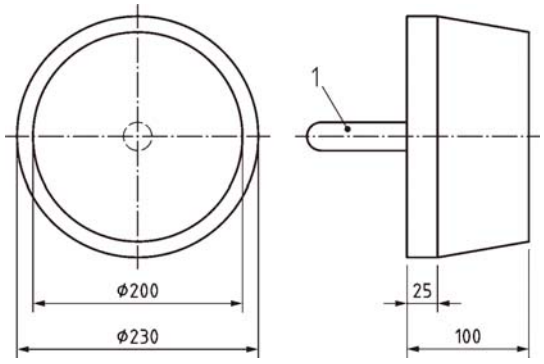
Clause	Requirement + Test	Result - Remark	Verdict
	— internal air pressure is sufficient to give a firm and reliable footing;		P
	— there are no exposed electrical parts and no wear on cables;		P
	— plugs, sockets, switches, etc. are not damaged;		P
	— connection tube and blower are firmly attached to each other;		P
	— blower is safely positioned and its mesh guards are intact.		P
	The equipment shall not be used by the public until any defects identified in the routine inspection have been rectified.		P
7.1.3	**Annual inspection**		P
	The controller shall ensure that an annual inspection is carried out by an inspection body which shall include any part of the inflatable and its ancillaries which may affect safe operation of the equipment. It shall include checks of:		P
	— previous inspection reports and certificates where appropriate;		P
	— identification of the inflatable and blower (e.g. serial numbers);		P
	— anchorage system for wear, rips or chafing;		P
	— type and number of ground anchors or ballast for conformity with the design specification;		P
	— inflatable structure for wear or rips in the fabric;		P
	— walls and towers (when fitted) for firmness and uprightness;		P
	— internal air pressure to be sufficient to give a reliable and firm footing;		P
	— internal ties for wear and tear, particularly at loose or exposed ends;		P
	— bed seams, wall-to-bed seams and wall-to-tower connections;		P
	— mesh guards at the inlet and outlet of the blower;		P
	— condition of the impellor and blower casing;		P
	— condition of electrical wiring and/or installations;		P
	— presence of the fuel cap (petrol-engined blowers).		P
	Inspection of some of these items may need to be done inside the inflatable. The above list is not exhaustive.		P
7.2	**Maintenance**		P
7.2.1	**General** Carrying out of repairs while the equipment is in use shall be avoided.		P
7.2.2	**Routine maintenance**		P
	Preventative measures to maintain levels of safety and performance. Such measures include:		P
	— cleaning the inflatable;		P

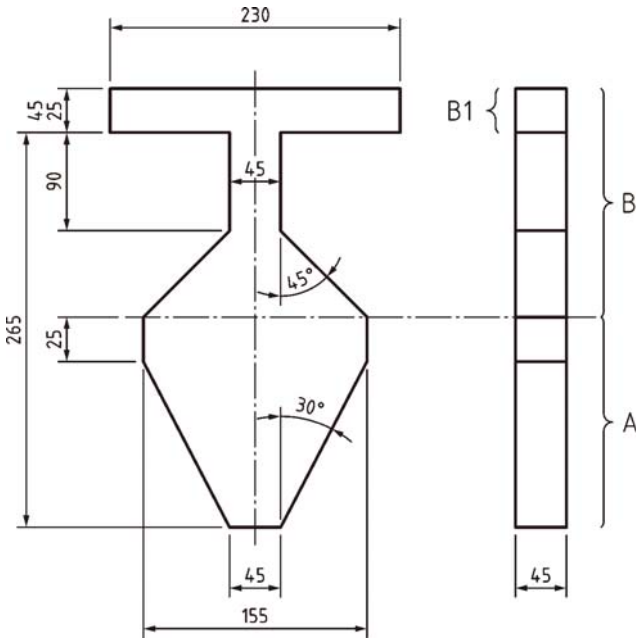
Clause	Requirement + Test	Result - Remark	Verdict
	— removal of debris and contaminants;		P
	— rust control on the blower;		P
	— cleaning the blower air intake.		P
7.2.3	**Corrective maintenance**		P
	Measures to correct defects or to re-establish the necessary levels of safety. Such measures include:		P
	— replacement of worn or defective parts;		P
	— repair of splits or delaminated seams;		P
	— repair of holes and cuts;		P
	— repair or replacement of defective structural components.		P
7.3	**Alteration** Alteration to any part of the equipment that could affect its essential safety shall only be carried out after consultation with the supplier/manufacturer or a competent person. The equipment shall only be put into use again when alterations have been inspected and passed by an inspection body.		P
8	**Marking**		—
	Each inflatable shall be legibly and permanently marked with, at least, the following:		P
	— type and size of blower required;	the power input of blower: 220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I	P
	— maximum height of user;	Maximum height of the user:2.0m	P
	— maximum number of users;	Maximum number of users: 0.5 user for each m^2	P
	— unique identifying number(s);		P
	— year of manufacture;	2019-08	P
	— name and address of one of either the supplier/manufacturer, importer or authorized representative;		P
	— number and date of this European Standard.		P
	Connection tube(s) shall be marked so as not to be confused with any other tube(s), e.g. inspection tubes, deflation tubes.		P
	These markings shall all be clearly visible when the equipment is in use.		P
	Each blower shall be legibly and permanently marked with, at least, the following:		P
	— type and size;		P
	— unique identifying number;		P
	— year of manufacture;		P
	— name and address of the supplier/manufacturer;		P
	— number and date of this European Standard.		P

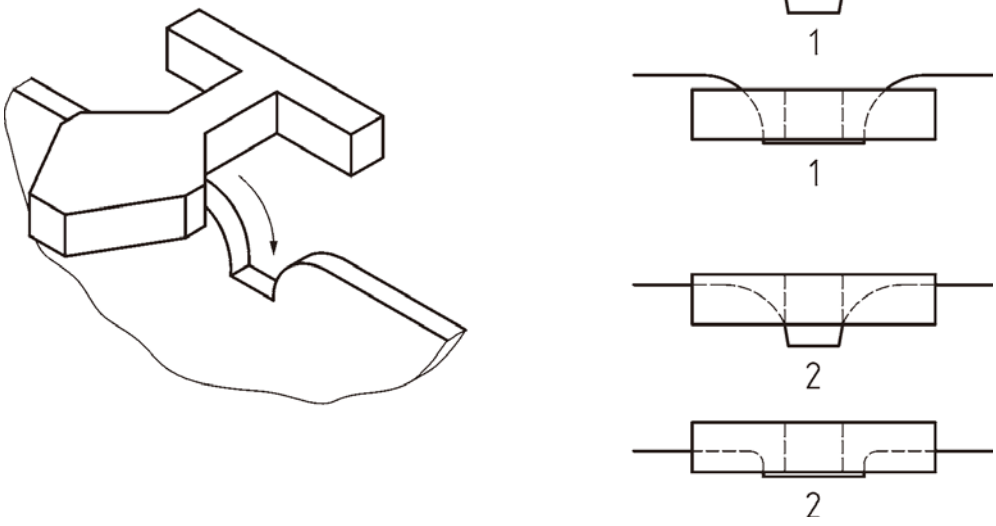
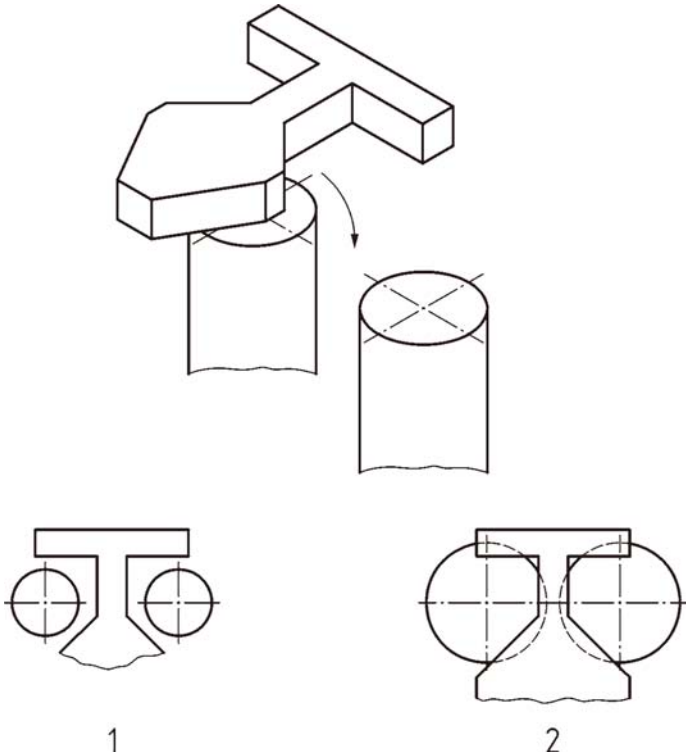
Clause	Requirement + Test	Result - Remark	Verdict
	These markings shall all be clearly visible when the equipment is in use.		P
9	**Documentation**		—
	The controller shall keep available documentation and records relating to the safety of the equipment. These shall include:		P
	— information provided by the supplier/manufacturer;		P
	— certificate of inspection and testing;		P
	— records of inspection;		P
	— records of maintenance;		P
	— records of alteration;		P
	— accident reports.		P
Annex A	**Calculation of number of anchor-points**		—
	The number of anchor-points required shall be calculated independently for each side using the following formulae and values:		P
	First calculate *F*, which is the force working on each side. $F = C_W \frac{\rho}{2} V^2 A$		P
	This calculation shall be repeated for each side		P
Annex B	**The Beaufort Scale of wind force**		—
	The Beaufort Scale is a scale for measuring the strength or velocity of wind where the various strengths are represented by numbers. It was formulated in 1805 by Sir Francis Beaufort and has since then been periodically revised. It ranges from 0 (calm) when the wind is less than 1 mph (1,61 km/h) to 12 (hurricane) when the wind exceeds 73 mph (117,72 km/h).		P
	Table B.1 — The Beaufort Scale of wind force		P

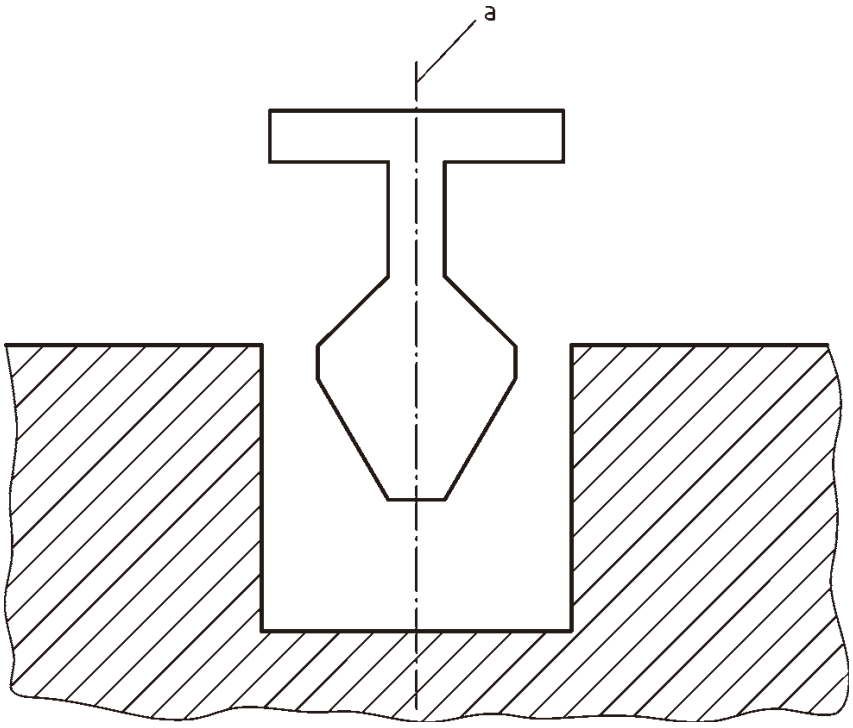
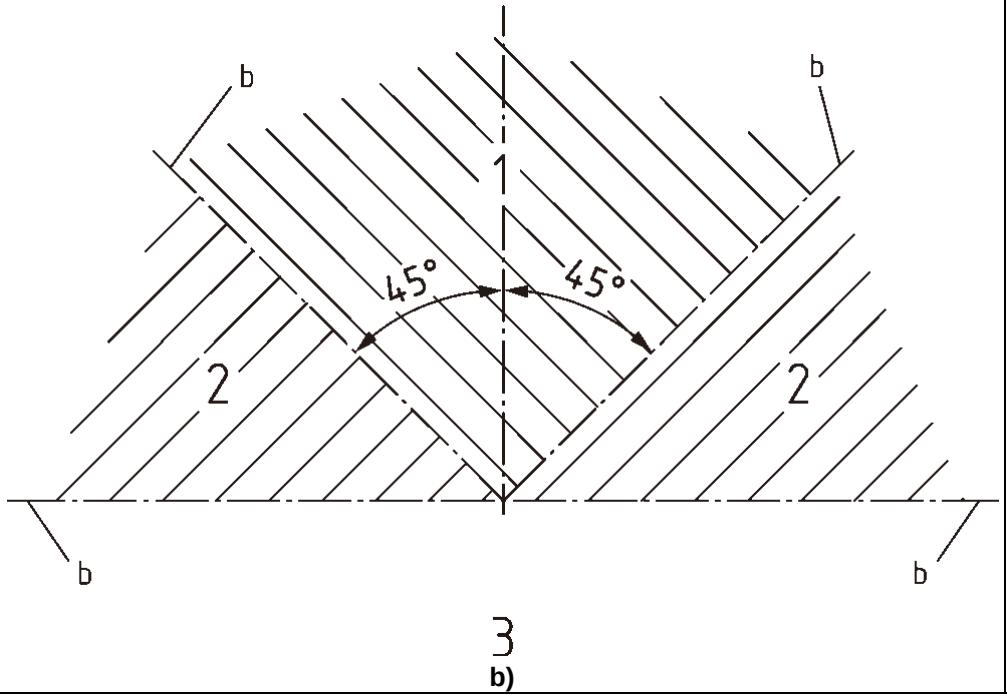
Force	Description	Identification	Wind speed	
			mph	km/h
0	Calm	Smoke rises vertically.	< 1	< 1
1	Light air	Direction of wind shown by smoke drift, but not by wind vanes.	1 to 3	1,1 to 5,5
2	Light breeze	Wind felt on face; leaves rustle, wind vanes moved by wind.	4 to 7	5,6 to 11
3	Gentle breeze	Leaves and small twigs are in constant motion. The wind extends a light flag.	8 to 12	12 to 19
4	Moderate breeze	Raises dust and loose paper. Small branches are moved.	13 to 17	20 to 28
5	Fresh breeze	Small trees in leaf begin to sway.	18 to 24	29 to 38
6	Strong breeze	Large branches in motion. Whistling heard in telegraph wires. Umbrellas difficult to use.	25 to 30	39 to 49
7	Near gale	Whole trees in motion. Inconvenience felt when walking against wind.	31 to 38	50 to 61
8	Gale	Twigs break off trees. Walking impeded.	39 to 46	62 to 74
9	Strong gale	Slight structural damage occurs. Chimney pots and slates are dislodged.	47 to 54	75 to 88
10	Storm	Trees uprooted. Considerable structural damage occurs.	55 to 63	89 to 102
11	Violent storm	Widespread damage occurs.	64 to 72	103 to 117
12	Hurricane	—	> 73	> 118

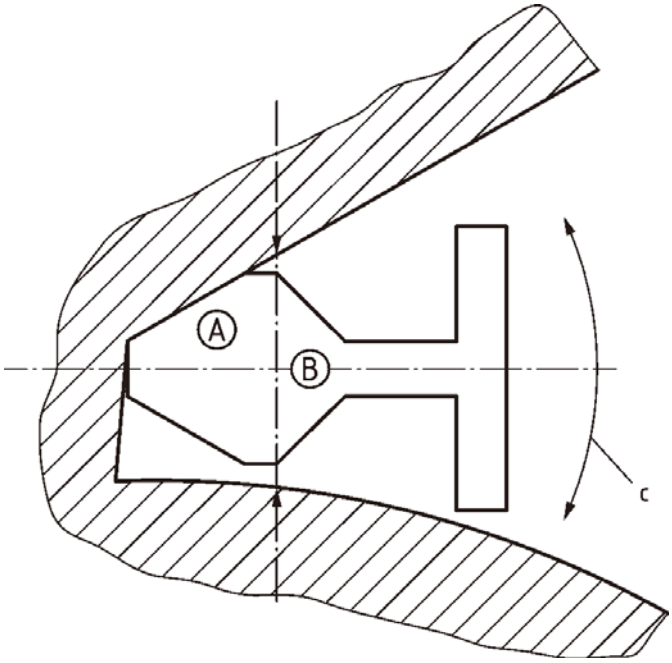
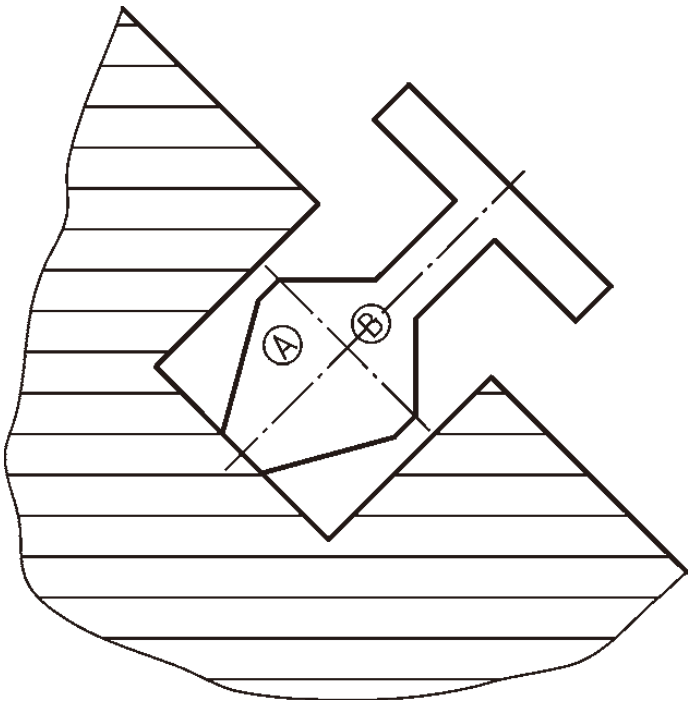
Clause	Requirement + Test	Result - Remark	Verdict
Annex C	**Test method for grounding**		—
	 **Key** If d > 1 m then $d1$ = 0,5 m If d < 1 m then $d1$ = 1/2 d 1 m = $d2$ **Figure C.1 — Positioning of test weights**		P
	a) Draw an imaginary 1,0 m square grid on the surface to be tested, starting 0,5 m from the edge. In cases where d is less than 1,0 m, the testing point shall be in the middle of d.		P
	b) Place the weight indicated in the Table C.1, in turn, onto each point where the grid lines intersect.		P
	c) Spread the weight applied at each point over a circle of 36 cm diameter.		P
	Table C.1 — Weights **Designed for user height** | **1,0 m** | **1,2 m** | **1,5 m** | **1,8 m** **Weight to be applied** | 25 kg | 35 kg | 65 kg | 85 kg		P
Annex D	**Test methods for entrapment**		—
D.1	**General** Unless stated otherwise, tolerances of the probes in this annex are as follows: a) ± 1 mm for dimensions; and b) ± 1° for angles.		P
	In situations of doubt when using the probes relating to the tolerance an accurate measurement should be made to ensure the opening is in accordance with the nominal dimension of the probe.		P
	All tests shall be performed in the most onerous way.		P
D.2	**Head and neck entrapment**		P
D.2.1	**Completely bound openings**		P

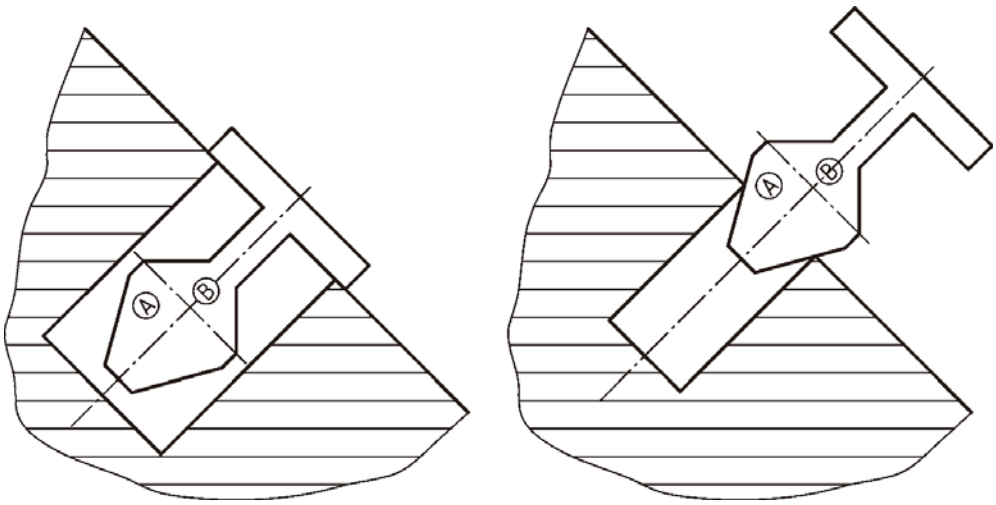
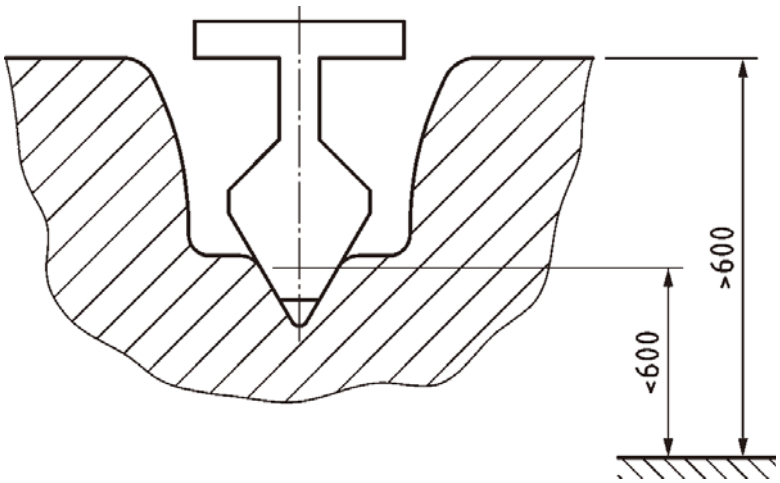
Clause	Requirement + Test	Result - Remark	Verdict
D.2.1.1	**Apparatus** Probes, as illustrated in Figure D.1.		P
	 **a) Probe E (small head)**		P
	 **b) Probe C (torso)**		P
	 **c) Probe D (large head)** **Key** 1 handle **Figure D.1 — Probes for determination of head and neck entrapment in completely bound openings**		P
D.2.1.2	**Procedure**		P
	Apply successively the probes as illustrated in Figure D.1 to each relevant opening. Record and report the passage of any probe through the opening. If any of the probes are not freely passing through the opening apply a force of (222 ± 5) N to the probe. When the torso probe is used, it is safer to force the body through the opening first because if the body passes through then the head will also pass through.		P

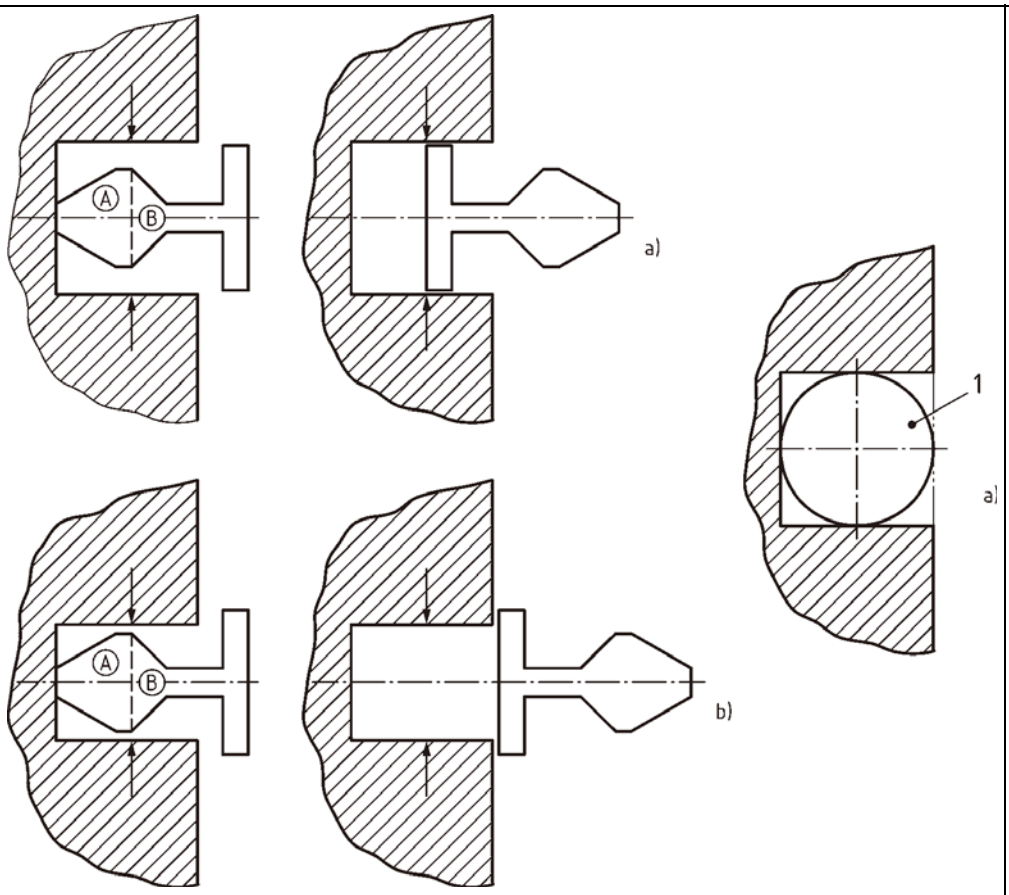
Clause	Requirement + Test	Result - Remark	Verdict
	Apply the probe with the axis perpendicular to the plane of the opening.		P
D.2.2	**Partially bound and V-shaped openings**		P
D.2.2.1	**Apparatus** Test template, as illustrated in Figure D.2.		P
	 **Key** A 'A' portion of probe B 'B' portion of probe B1 shoulder section **Figure D.2 — Test template for assessment of head and neck entrapment in partially bound and V-shaped openings**		P
D.2.2.2	**Procedure**		P
	Position the 'B' portion of the test template between and perpendicular to the boundaries of the opening, as shown in Figure D.3. Record and report whether the template fits within the boundaries of the opening or if it cannot be inserted to its full thickness.		P
	If the test template can be inserted to a depth greater than the thickness of the template (45 mm), apply the 'A' portion of the test template, so that its centre line is orientated to check the extremities of the opening as well as the centre line.		P
	Ensure that the plane of the test template is parallel and applied in line with the opening, as shown in Figure D.4.		P
	Insert the test template along the opening until its motion is arrested by contact with the boundaries of the opening. Record and report the results including the angle of the template centre line relative to the vertical and horizontal axes (see Figure D.4) as this will determine the pass/fail requirements given in 4.2.5.2. See Figure D.5 and Figure D.6 for examples of the assessment for the different angular ranges		P

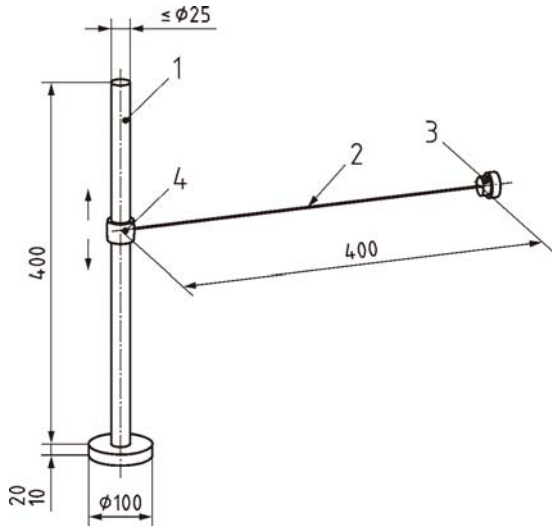
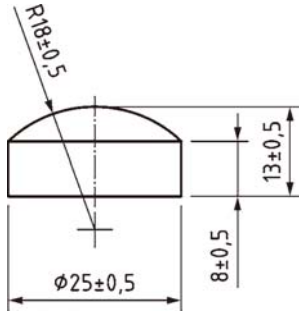
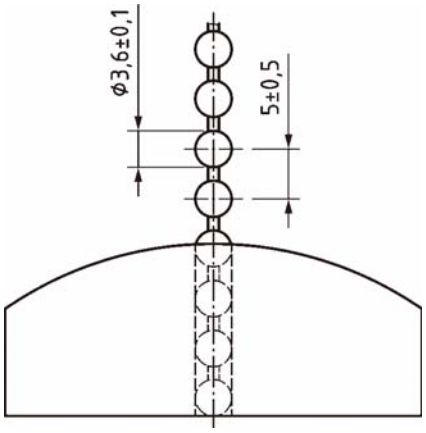
Clause	Requirement + Test	Result - Remark	Verdict
	 **a)**		P
	 **Key** 1 accessible 2 not accessible **Figure D.3 — Method of insertion of the 'B' portion of the test template**		P

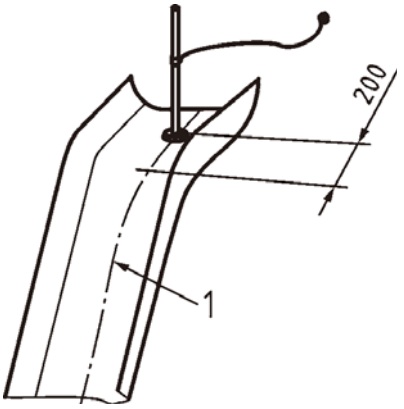
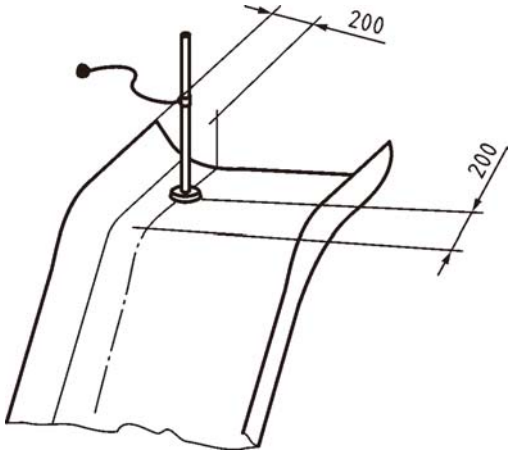
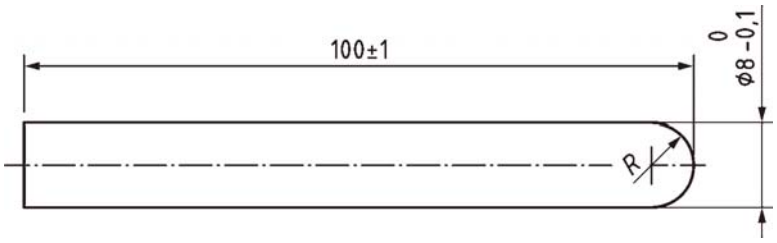
Clause	Requirement + Test	Result - Remark	Verdict
	 **a)**		P
	 **b)**		P

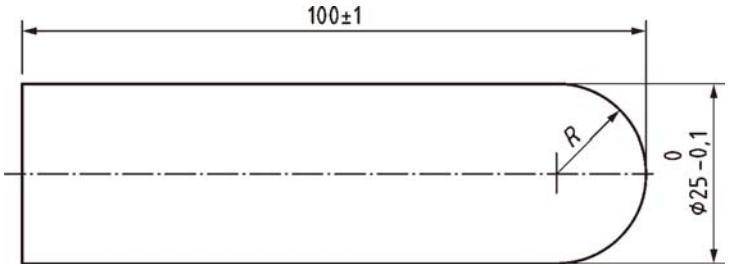
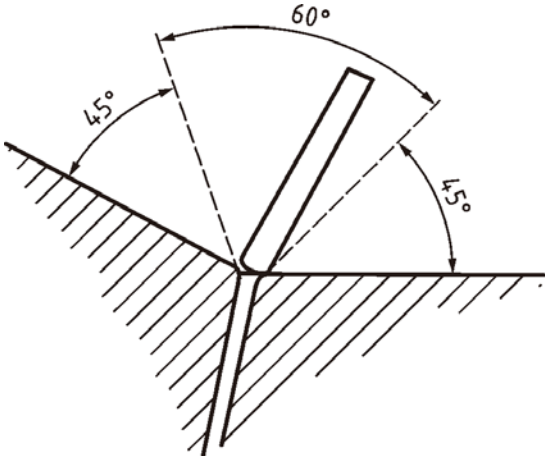
Clause	Requirement + Test	Result - Remark	Verdict
	 **c)** **Key** 1 range 1 2 range 2 3 range 3 a insertion angle for assessing the range b template centre line c check all insertion angles **Figure D.4 — Checking all insertion angles to determine range**		P
	 **a) Passes if front section fully enters aperture to a maximum depth of (template shoulder depth) 265 mm**		P

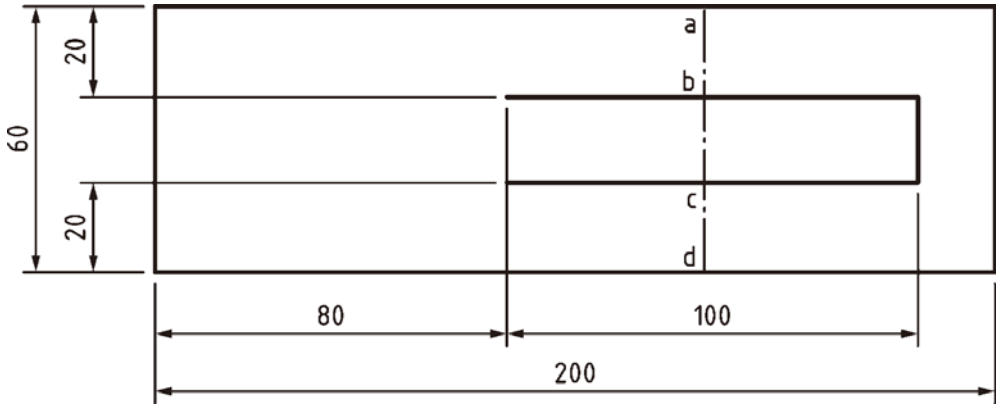
Clause	Requirement + Test	Result - Remark	Verdict
	 **b) Fail**		P
	 **c) Pass** **Key** > 600 mm = more than 600 mm above the playing surface < 600 mm = less than 600 mm above the playing surface **Figure D.5 — Range 1 method of insertion of the 'A' portion of the test template**		P

Clause	Requirement + Test	Result - Remark	Verdict
	 **Key** a) pass b) fail 1 large head probe D **Figure D.6 — Range 2 method of insertion of the 'A' portion of the test template followed by insertion of the shoulder of the template or probe D**		P
D.3	**Entrapment of clothing (Toggle test)**		P
D.3.1	**Apparatus**		P
	Test device, as shown in Figure D.7 a), comprising: — toggle, as shown in Figure D.7 b), made of polyamides (PA) (e.g. nylon), polytetrafluoroethylene (PTFE), which have been found to be suitable materials;		P
	— chain, as shown in Figure D.7 c);		P
	— collar, detachable and with good slip;		P
	— pole		P

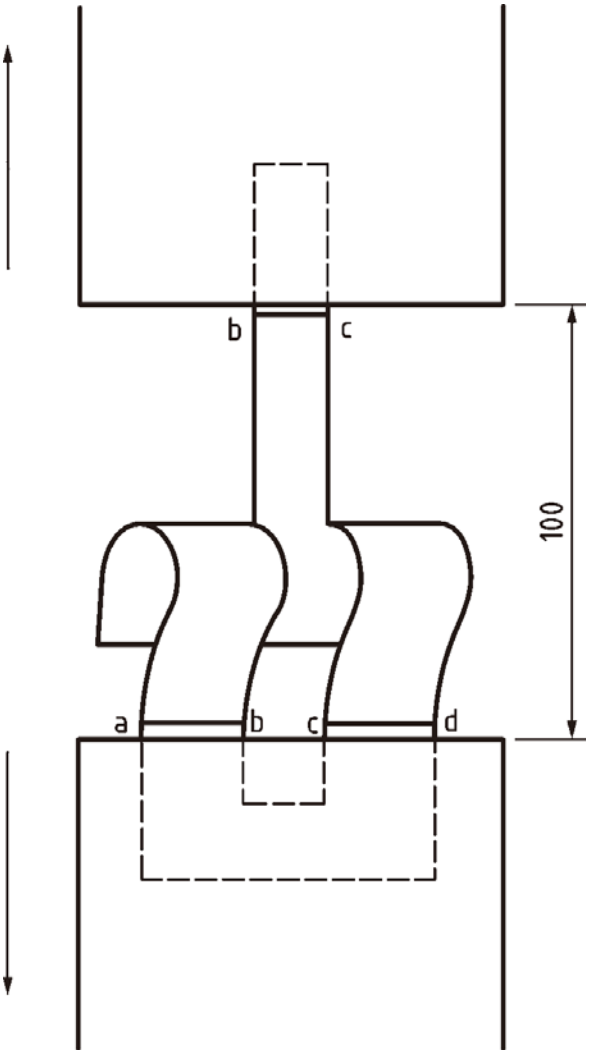
Clause	Requirement + Test	Result - Remark	Verdict
	 **a) Complete test device**		P
	 **b) Toggle**		P
	 **c) Chain** **Key** 1 pole 2 chain 3 toggle 4 collar **Figure D.7 — Test device**		P
D.3.2	**Procedure**		P
	Slides		P
	Position the test device perpendicularly in the starting section of the slide, 200 mm from the transition point of the starting section, and at the appropriate lateral location, as shown in Figure D.8.		P

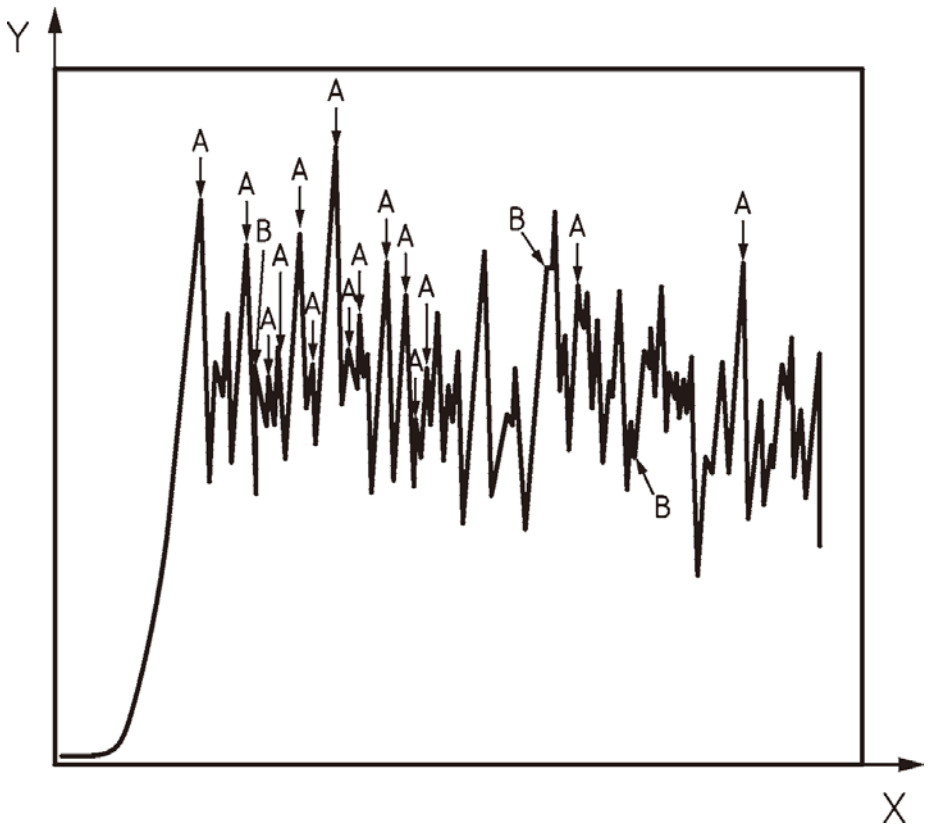
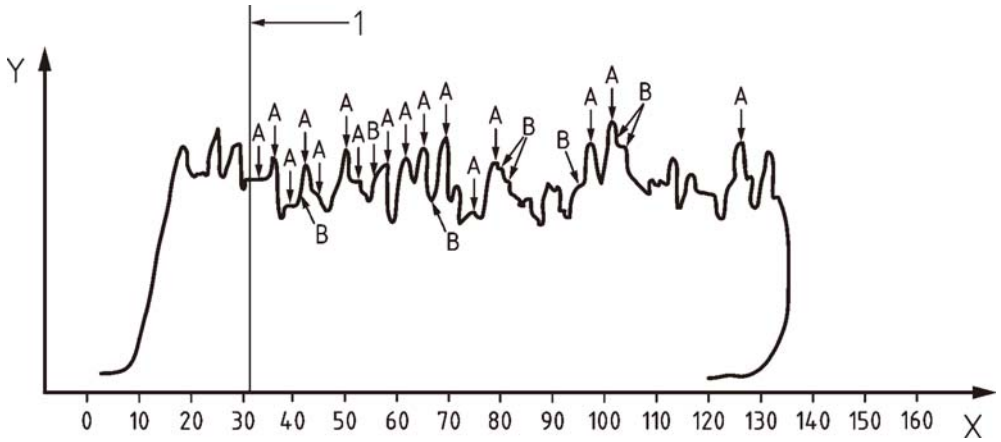
Clause	Requirement + Test	Result - Remark	Verdict
	Randomly place the toggle and chain under the action of its own weight to all positions within range, without applying additional force or influence.		P
	In the event that the test device is obstructed, apply a maximum force of 50 N in the direction of the forced movement. If the device is released this position within the equipment passes the test.		P
	Record and report where any entrapment of the toggle or chain occurs.		P
	 **a) Narrow slide**		P
	 **b) Wide slide** **Key** 1 centre line **Figure D.8 — Position of the test device on slides**		P
D.4	**Finger entrapment**		P
D.4.1	**Apparatus** Finger rods, as illustrated in Figure D.9.		P
	 **a) 8 mm diameter finger rod**		P

Clause	Requirement + Test	Result - Remark	Verdict
	 **b) 25 mm diameter finger rod** **Key** R spherical radius **Figure D.9 — Finger rods**		P
D.4.2	**Procedure**		P
	Apply the 8 mm diameter finger rod to the minimum cross section of the opening and, if the rod does not pass through, rotate it as illustrated in Figure D.10.		P
	Record and report if the rod enters the opening and if it locks in any position when moved through the conical arc shown in Figure D.10.		P
	If the 8 mm diameter finger rod passes through the opening, apply the 25 mm diameter finger rod.		P
	Record and report if the 25 mm diameter finger rod passes through the opening and, if it does, whether access is then given to another finger entrapment site.		P
	 **Figure D.10 — Rotation of the 8 mm diameter finger rod**		P
Annex E	**Test method for tear strength**		—
E.1	**Maximum value tongue tear, apparatus**		P
	A low inertia, autographic constant rate of traverse cloth tensile testing machine of a suitable range, power- operated at a rate of (100 ± 10) mm/min. Under the conditions of use, the error of the indicated or recorded maximum force at any point in the range in which the machine is used does not exceed ± 1 % of the force. The width of jaws is not less than the width of the specimen.		P
E.2	**Preparation of test specimens**		P

Clause	Requirement + Test	Result - Remark	Verdict
	Five specimens 200 mm × 60 mm shall be cut with the longer dimension in the longitudinal direction of the roll and five more specimens shall be cut with the longer dimension in the transverse direction of the roll. The strips shall be evenly spaced from the full usable length and width of the sample and not within 50 mm of the selvedge.		P
	In each specimen, a lengthways tongue 100 mm × 20 mm shall be cut, as shown in Figure E.1; the line *abcd* shall be drawn on each face of the specimen at a distance of 50 mm from the end of the tongue.		P
	In case of coated fabrics of high tear strength, if the tongue breaks or threads are pulled from the fabric instead of being broken, wider specimens, 200 mm × 150 mm, shall be used with the tongue 50 mm wide.		P
	 **Figure E.1 — Specimen**		P
E.3	**Conditioning**		P
	Condition the test specimens in accordance with the following method. If determinations are to be made on wet test specimens, totally immerse these for a minimum of 1 h at (20 ± 2) °C in an aqueous solution of a non- ionic wetting agent of concentration not more than 0,1 % (m/m). Thoroughly rinse in water and test within 1 min of removal from the water.		P
E.4	**Preconditioning**		P
	When the textile substrate is of a highly hygroscopic material or where the method of test requires a high degree of accuracy, moisture equilibrium (i.e. equilibrium reached by the coated fabric when, after exposure to air in motion, there is no appreciable change in mass) shall be approached from the dry side of the hysteresis curve by pre-conditioning the test pieces in an atmosphere having a relative humidity of not greater than 10 % and a temperature of between 60 °C and 70 °C.		P
E.5	**Characteristics of test atmospheres**		P

Clause	Requirement + Test	Result - Remark	Verdict
	The use of one of the following atmospheres shall be fixed by the particular standard or specification for each test or material. The choice of one of these alternatives will depend on the prevalent usage in individual countries and the variant used shall be reported in the test report.		P
	Atmosphere 'A' — temperature (20 ± 2) °C – relative humidity (65 ± 5) %		P
	Atmosphere 'B' — temperature (23 ± 2) °C – relative humidity (50 ± 5) %		P
	Atmosphere 'C' (tropical) — temperature (27 ± 2) °C – relative humidity (65 ± 5) %		P
	Atmosphere 'D' (temperature control only) — temperature (23 ± 2) °C		P
	Atmosphere 'E' (tropical temperature control only) — temperature (27 ± 2) °C		P
E.6	**Methods of conditioning**		P
	The test pieces shall be freely exposed to the standard atmosphere 'A', 'B' or 'C' until they are in equilibrium. Equilibrium with the standard atmosphere is deemed to have been reached when successive weighing, at intervals of 2 h, of the test pieces freely exposed to the moving air, differ by less than 0,1 %.		P
	For fabrics coated on one side only, a minimum of 16 h exposure is recommended.		P
	For fabrics coated on both sides, a minimum of 24 h is recommended.		P
	The test pieces shall be freely exposed to the standard atmosphere 'D' or 'E' for a period of 3 h.		P
E.7	**Procedure**		P
	Carry out the tests in the atmosphere for conditioning and testing described above.		P
	Adjust the testing machine to the rate of clamp movement given in apparatus above and select an appropriate force capacity range. Disengage any pawls or other arrestments which would prevent twoway movement of the weighting device. Set the clamps 100 mm apart.		P
	Clamp the tongue of the specimen symmetrically in the headstock jaws so that the line *bc* is just visible (see Figure E.2). Similarly, grip the legs of the specimen symmetrically in the traversing jaws so that the lines ab and cd are just visible and the legs of the specimen are parallel to the force of tear.		P
	Set the traversing jaws in motion. After 60 mm of the fabric has been torn, remove the pen and disengage the drive.		P

Clause	Requirement + Test	Result - Remark	Verdict
	 **Figure E.2 — Method of clamping specimen**		P
E.8	**Calculation and expression of results**		P
	The trace obtained may consist of a series of peaks, as shown in Figure E.3, or a relatively smooth curve as shown in Figure E.4. From the five maximum values recorded, determine the mean value in newtons as the longitudinal or transverse tear strength according to whether longitudinal or transverse threads respectively are torn.		P

Clause	Requirement + Test	Result - Remark	Verdict
	 **a) Electronic response time**		P
	 **b) Mechanical response at low inertia** **Key** X load Y direction of tear (trace length) **Figure E.3 — Typical autographic traces**		P
	The median value of tearing resistance is the value such that half the numbers of peaks have higher values and half have lower values.		P
	To determine the median value, count the total number of peaks (*n*). If n is an odd number, count downwards, starting at the uppermost peak, a number of peaks equal to (*n* + 1)/2. The number of the last peak counted is the median peak.		P

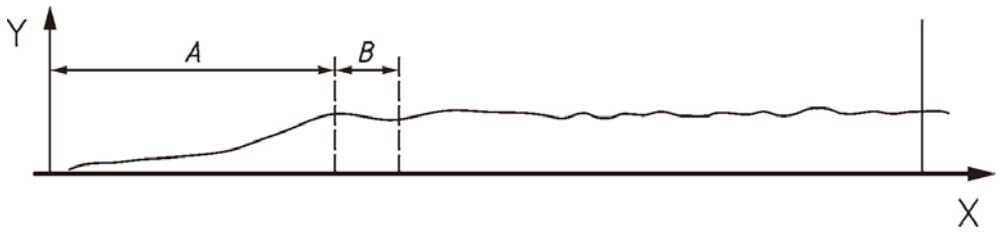
Clause	Requirement + Test	Result - Remark	Verdict
	If *n* is an even number, the median value is taken as midway between peaks *n*/2 and (*n*/2) + 1.		P
	 **Key** X load Y direction of tear (trace length) **Figure E.4 — Autographic trace without definite peaks**		P
E.9	**Test report**		P
	The test report shall include the following particulars:		P
	a) description of the coated fabric;		P
	b) mean tear strength in both the longitudinal and transverse directions. Indicate clearly that the results are based on maximum values and report the method of test used. If a rip-stop fabric has been tested, report the number of rip-stop bars per unit length of the sample and the number torn through per specimen during test;		P
	c) specimen size used;		P
	d) details of any deviation from the standard test procedure;		P
	e) number and date of this European Standard.		P

	TABLE: Leakage current		P
	Heating appliances: 1,15 x rated input.....:		—
	Motor-operated and combined appliances: 1,06 x rated voltage .....:	254,4	—
Leakage current between		I (mA)	Max. allowed I (mA)
L/N and reinforced insulation		0,01/0,01	0,25

	TABLE: Electric strength		P
Test voltage applied between:		Voltage (V)	Breakdown(Yes/No)
L/N and reinforced insulation		3000	No

	TABLE: Leakage current		P
	Single phase appliances: 1,06 x rated voltage .....:	1,06 x240=254,4	—
	Three phase appliances 1,06 x rated voltage divided by √3: .....:		—
Leakage current between		I (mA)	Max. allowed I (mA)
L/N and reinforced insulation		0,01/0,01	0,25

	TABLE: Electric strength		P
Test voltage applied between:		Voltage (V)	Breakdown(Yes/No)
L/N and reinforced insulation		3000	No

	TABLE: Components			P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Mark(s) of conformity
Air blower	Various.	—	220-240V~, 50Hz, Min.330W, Max.2000W, IP24B, Class I	TUV
Line	Various.	—	Ø0.4- Ø0,5mm	Test with appliance
Enclosure	Various.	PVC	PVC TARPAULIN THICKNESS: 0.4- 0,5mm	Test with appliance

White PVC Green PVC Grey PVC Blue PVC Yellow PVC Red PVC Brown PVC Purple PVC

	Requirement test	Result remarks	Verdict
Black net	Flammability	2.2mm/s	P
White net	Flammability	2.2mm/s	P
White PVC	Flammability	2.0mm/s	P
Green PVC	Flammability	1.9mm/s	P
Grey PVC	Flammability	1.9mm/s	P
Blue PVC	Flammability	2.0mm/s	P
Yellow PVC	Flammability	1.9mm/s	P
Red PVC	Flammability	2,0mm/s	P
Brown PVC	Flammability	2.0mm/s	P
Purple PVC	Flammability	1.9mm/s	P
Light blue PVC	Flammability	1.9mm/s	P

Lighte green PVC	Flammability	2.0mm/s	P
Orange PVC	Flammability	1.9mm/s	P
Black PVC	Flammability	2,0mm/s	P
Pink PVC	Flammability	2.0mm/s	P
Silver PVC	Flammability	2.0mm/s	P
Transparent blue plastic	Flammability	2,0mm/s	P
Transparent red plastic	Flammability	2,0mm/s	P
Transparent plastic	Flammability	2,0mm/s	P
Transparent purple plastic	Flammability	2,0mm/s	P
Transparent green plastic	Flammability	2,0mm/s	P
Black cloth tape	Flammability	1.9mm/s	P
Red paint on PVC	Flammability	2,0mm/s	P
White paint on PVC	Flammability	2,0mm/s	P
Yellow paint on PVC	Flammability	2,0mm/s	P
Green paint on PVC	Flammability	2,0mm/s	P
Blue paint on PVC	Flammability	2,0mm/s	P
Black paint on PVC	Flammability	2,0mm/s	P
Line	Flammability	2.3mm/s	P

Black net					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	181.7	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.2	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.2	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	14.1	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	22.0	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	35.4	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	158.7	3 750	Pass

White net					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	131.4	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.2	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	9.7	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	13.2	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	22.0	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass

Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	31.8	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	154.2	3 750	Pass

White PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	141.2	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.0	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	8.7	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	12.1	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.1	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.2	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	23.1	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	142.5	3 750	Pass

Green PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	192.3	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.0	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.5	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	14.2	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.6	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.02	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	33.6	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	175.2	3 750	Pass

Grey PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	183.5	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.1	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.7	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	14.6	1 200	Pass

Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.7	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	37.5	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	172.0	3 750	Pass

Blue PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	156.4	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.1	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.6	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	14.2	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.2	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	36.3	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	171.2	3 750	Pass

Yellow PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	165.7	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.1	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.2	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	14.2	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.3	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	36.3	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass

Zinc	mg/kg	EN 71-3:2013+A3:2018	165.8	3 750	Pass

Red PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	172.6	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.5	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.5	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	14.3	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	22.0	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	36.2	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	152.7	3 750	Pass

Brown PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	166.9	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.0	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.0	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	14.1	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.1	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.2	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	33.6	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	155.7	3 750	Pass

Purple PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	181.2	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.0	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.3	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	14.6	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass

Copper	mg/kg	EN 71-3:2013+A3:2018	21.6	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.02	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	33.5	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	172.6	3 750	Pass

Light blue PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	179.4	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.1	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.4	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	14.8	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.7	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	35.4	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	177.2	3 750	Pass

Lighte green PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	168.9	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.1	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.3	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	14.7	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.2	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	35.4	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	160.9	3 750	Pass

Orange PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict

Aluminium	mg/kg	EN 71-3:2013+A3:2018	168.7	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.1	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.2	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	14.8	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.3	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	36.0	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	175.4	3 750	Pass

Black PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	199.8	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.0	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.9	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	15.3	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.1	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.2	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	39.8	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	197.2	3 750	Pass

Pink PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	169.8	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.0	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.4	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	14.7	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.6	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.02	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass

Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	36.5	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	191.0	3 750	Pass

Black cloth tape					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	167.2	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.1	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.4	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	14.7	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.7	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	37.8	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	199.2	3 750	Pass

Silver PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	192.0	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.0	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.5	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	14.9	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.6	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.02	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	35.8	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	190.6	3 750	Pass

Transparent blue plastic					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	141.5	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.1	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	8.8	1 500	Pass

Boron	mg/kg	EN 71-3:2013+A3:2018	10.6	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.3	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	21.1	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	109.2	3 750	Pass

Transparent red plastic					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	140.2	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.1	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	8.9	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	10.3	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.3	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	20.7	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	111.3	3 750	Pass

Transparent plastic					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	132.0	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.1	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	8.7	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	10.1	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.3	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	20.3	15 000	Pass

Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	108.2	3 750	Pass

Transparent purple plastic					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	142.3	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.1	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	8.7	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	10.1	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.3	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	20.6	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	110.2	3 750	Pass

Transparent green plastic					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	133.2	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.1	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	8.7	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	10.1	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	21.3	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	20.7	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	111.3	3 750	Pass

Red paint on PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	205.6	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.0	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	11.3	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	15.6	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass

Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	23.5	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.02	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	41.2	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	206.5	3 750	Pass

White paint on PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	196.4	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.0	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	10.9	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	15.8	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	23.8	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	42.0	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	203.4	3 750	Pass

Yellow paint on PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	201.8	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.0	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	11.1	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	15.2	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	23.9	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	43.2	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	218.9	3 750	Pass

Green paint on PVC

Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	202.7	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.0	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	11.0	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	15.3	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	23.8	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	42.3	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	198.4	3 750	Pass

Blue paint on PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	205.6	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.0	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	11.7	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	15.8	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	23.2	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	40.5	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	194.9	3 750	Pass

Black paint on PVC					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	213.7	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	2.0	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	11.8	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	16.6	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.2	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	23.8	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	2.01	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	N.D.	1 200	Pass

Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	43.3	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	209.0	3 750	Pass

O-ring					
Test Item	Unit	Test Method	Result	Limit	Verdict
Aluminium	mg/kg	EN 71-3:2013+A3:2018	212.8	5 625	Pass
Antimony	mg/kg	EN 71-3:2013+A3:2018	1.2	45	Pass
Arsenic	mg/kg	EN 71-3:2013+A3:2018	N.D.	3.8	Pass
Barium	mg/kg	EN 71-3:2013+A3:2018	11.6	1 500	Pass
Boron	mg/kg	EN 71-3:2013+A3:2018	13.2	1 200	Pass
Cadmium	mg/kg	EN 71-3:2013+A3:2018	N.D.	1.3	Pass
Chromium (III)	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Chromium (VI)	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.02	Pass
Cobalt	mg/kg	EN 71-3:2013+A3:2018	0.6	10.5	Pass
Copper	mg/kg	EN 71-3:2013+A3:2018	52.7	622.5	Pass
Lead	mg/kg	EN 71-3:2013+A3:2018	5.02	13.5	Pass
Manganese	mg/kg	EN 71-3:2013+A3:2018	22.1	1 200	Pass
Mercury	mg/kg	EN 71-3:2013+A3:2018	N.D.	7.5	Pass
Nickel	mg/kg	EN 71-3:2013+A3:2018	N.D.	75	Pass
Selenium	mg/kg	EN 71-3:2013+A3:2018	N.D.	37.5	Pass
Strontium	mg/kg	EN 71-3:2013+A3:2018	N.D.	4 500	Pass
Tin	mg/kg	EN 71-3:2013+A3:2018	1219.4	15 000	Pass
Organic tin	mg/kg	EN 71-3:2013+A3:2018	N.D.	0.9	Pass
Zinc	mg/kg	EN 71-3:2013+A3:2018	N.D	3 750	Pass

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