



BSI Standards Publication

Safety of toys - Interpretations

Part 1: Replies to requests for interpretation of EN
71-1, EN 71-2, EN 71-8 and EN 71-14

National foreword

This British Standard is the UK implementation of CEN/TR 15371-1:2017. It supersedes PD CEN/TR 15371-1:2015, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee CW/15, Safety of toys.

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

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English Version

**Safety of toys - Interpretations - Part 1: Replies to requests
for interpretation of EN 71-1, EN 71-2, EN 71-8 and EN 71-
14**

Sécurité des jouets - Interprétations - Partie 1:
Réponses aux demandes d'interprétation de EN 71-1,
EN 71-2, EN 71-8 et EN 71-14

Sicherheit von Spielzeug - Interpretationen - Teil 1:
Antworten auf Anfragen zur Interpretation von EN 71-
1, EN 71-2, EN 71-8 und EN 71-14

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European foreword

This document (CEN/TR 15371-1:2017) has been prepared by Technical Committee CEN/TC 52 “Safety of toys”, the secretariat of which is held by DS.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes CEN/TR 15371-1:2015.

CEN/TR 15371, *Safety of toys — Interpretations*, is currently composed with the following parts:

- *Part 1: Replies to requests for interpretation of EN 71-1, EN 71-2, EN 71-8 and EN 71-14;*
- *Part 2: Replies to requests for interpretation of the chemical standards in the EN 71-series.*

0 Introduction

0.1 Interpretations and no-action decisions

This Technical Report contains replies to requests for interpretations concerning the understanding of clauses in EN 71-1:2014, EN 71-2:2011+A1:2014, EN 71-8:2011 and EN 71-14:2014. The replies concern those requests that have resulted in an interpretation or a decision that no action is required as the standard is sufficiently clear.

An interpretation does not have the same status as the text of the standard, nor can it overrule the text of the standard. However, following an interpretation should give assurance that the relevant clause of the standard has been correctly applied. An interpretation should only be regarded as a clarification of the meaning of the standard such that stakeholders can apply it correctly in a conformity assessment. An interpretation is not an assessment of the requirement in the standard - it is only a strict interpretation of the meaning of the text.

Disclaimer:

The interpretations have been derived by expert groups of CEN/TC 52. The information contained herein is for guidance only and does not reflect the formal approval by CEN or CEN member bodies. It should be noted that the interpretations are neither part of any standard nor have been referenced in the Official Journal of the European Union.

0.2 Requests for interpretation

Requests for interpretations may be submitted by a CEN member body through its national committee or by a CEN/TC 52 liaison (but not directly by an individual or a company) - in accordance with the interpretation protocols agreed by CEN/TC 52. The requests are then channelled to the relevant CEN/TC 52 working party, which will then deal with the request.

A request for an interpretation may lead to:

a) An interpretation of the standard:

This should reflect a reasonable interpretation of how the standard should be used, taking into account:

- 1) the wording of the standard;
- 2) the rationale of the standard;
- 3) the history of the standard.

b) A no-action decision:

This is applicable when it is agreed that the standard appropriately specifies how a toy shall be assessed.

c) A proposal for an amendment of the standard:

This is applicable when it is agreed that the standard is deficient in some way.

NOTE Interpretation and no-action decisions are published in the CEN/TR 15371 series, which will be updated on a regular basis.

Proposals for amendments will be progressed as new work item proposals in accordance with CEN rules.

0.3 Answers to requests for interpretations

Since requests for interpretations are submitted through a CEN member body or a CEN/TC 52 liaison, it is assumed that they will keep themselves informed about decisions concerning the request and its progress and will themselves inform the originator of the request as appropriate.

1 Scope

The purpose of this Technical Report is to provide replies to requests for interpretations of EN 71-1:2014, *Safety of toys — Part 1: Mechanical and physical properties*, EN 71-2:2011+A1:2014, *Safety of toys — Part 2: Flammability*, EN 71-8:2011, *Safety of toys — Part 8: Activity toys for domestic use* and EN 71-14:2014, *Safety of toys — Part 14: Trampolines for domestic use*.

2 EN 71-1:2014, Safety of toys – Part 1: Mechanical and physical properties

2.13.5 Ball (interpretation)

Question

The definition of a ball according to Clause 3.5 is:

“Spherical, ovoid or ellipsoidal object, usually but not always designed or intended to be thrown, hit kicked, rolled, dropped or bounced”.

There is an additional note explaining the ball definition includes multisided objects formed by at least 48 connecting planes into a generally spherical, ovoid or ellipsoidal shape.

What about spherical, ovoid or ellipsoidal objects having small protrusions or projections?

See below some examples of toys intended for children under 3 years of age that have a generally spherical, ovoid or ellipsoidal shape but in addition have protrusions or projections.

Should they be considered as balls?

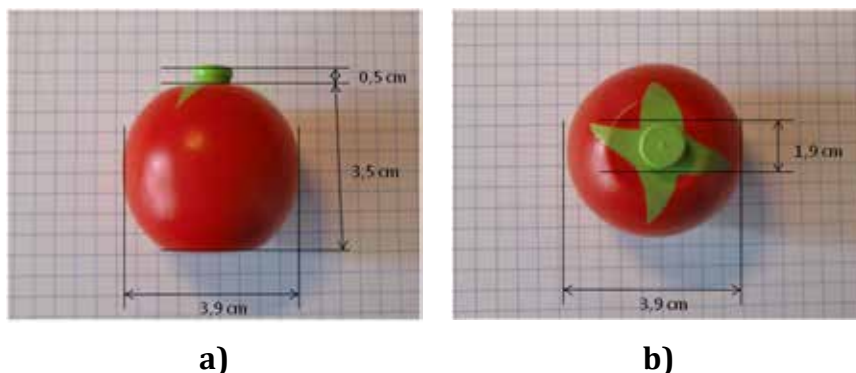


Figure 1

Ratio: minor/major axes = 90 % (green protrusion not counted) or 97,5 % (green protrusion counted)



Figure 2

Ratio: minor/major axes = 87 % (green protrusion not counted) or 75,5 % (green protrusion counted)

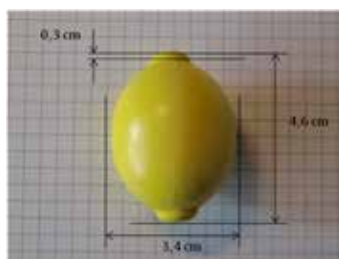


Figure 3

Ratio: minor/major axes = 74 % (yellow ends elements considered to be part of the whole shape)

Reply

The three toys as presented here would fall under the definition of balls and are subject to the requirements for small balls per EN 71-1. In the case of the tomato and purple strawberry the protrusions are on one side only and they are small. They appear to make no difference in the assessment of the ratio between minor and major dimensions mentioned in the informative annex. For the lemon shape the small end elements are considered to be part of the overall ellipsoidal shape. This interpretation is only valid for the toys evaluated under this request.

REQ 156-15 (NEN, Netherlands)

2.23.12 Cord (no action decision)

Question

The question relates to 3.12 “cord” of EN 71-1.

The standard defines cord as:

“length of flexible textile or non-textile material including *elastic material*, monofilament polymeric material, *tape*, *ribbon*, rope, *strap*, woven and twisted material and string as well as certain weak and long *springs*”

Soft filled parts of a soft filled toy are not included by the definition of cord. Therefore, the requirements of 5.4 shall not be applied to those parts.

In the example provided, the tail of Figure 4 and the toy of Figure 6 are soft filled, while the tail of Figure 5 is not soft filled, therefore 5.4 is applicable only to the tail of Figure 5. Is it correct?



Figure 4



Figure 5



Figure 6

Reply

Standard is clear. Soft-filled parts of toys are not cords as defined in the standard. The tail of the toy in Figure 5 is considered a cord because there is not stuffing material inside.

REQ 104-12 (UNI, Italy)

2.3.3.30 Fuzz (no action decision)

Question

The question relates to 3.30 “fuzz” of EN 71-1.

Some soft filled toys may have fur with long hairs, even longer than 50 mm. We do know that such hairs are not to be considered as monofilament fibres.

If the toy loses these hairs when pet (as per foreseeable use), as in the attached picture, even in great amount, is it correct to consider these hairs included in the definition of fuzz, therefore excluding them from the requirements of 5.1?



Figure 7



Figure 8

Reply

Standard is clear. It is correct to consider the described fibres as fuzz (which is excluded from 5.1 requirements).

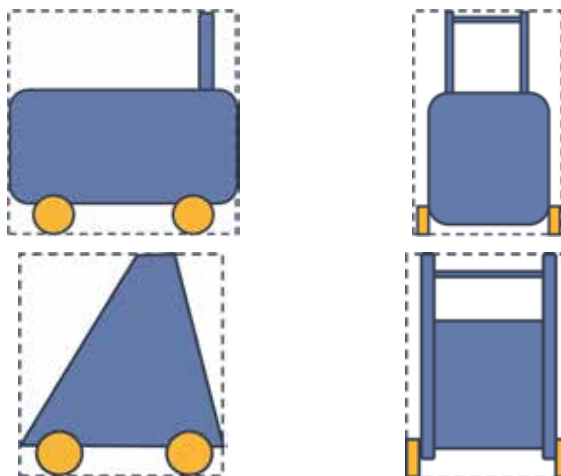
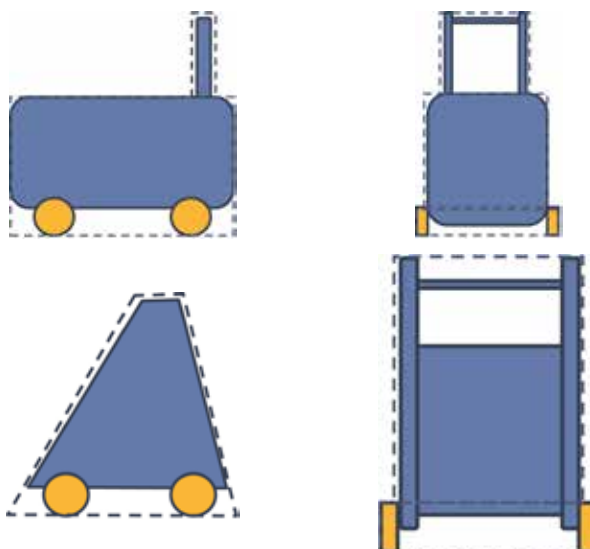
REQ 105-12 (UNI, Italy)

2.4.3.33 Large and bulky toy (interpretation)

Question

How do you measure the volume of large and bulky toys as defined in 3.33 of EN 71-1:2014?

Here are two possible ways. Option A or Option B (see drawings below)?

OPTION A: GLOBAL VOLUME CALCULATION**OPTION B : follow the shape to calculate volume**

Toy 1

Interpretation

The volume is considered to be smallest imaginary box that would contain the toy after having removed minor appendages which actually is option A above.

Minor appendages would be the wooden elements on the sides of toy 1.

REQ 134-13 (BSI, United Kingdom)

2.53.47 and 3.48 Projectile toys (no action decision)

Question

EN 71-1 has the below definitions of projectiles with or without stored energy:

3.47

projectile toy with stored energy

toy with a *projectile* propelled by means of a discharge mechanism capable of storing and releasing energy

3.48

projectile toy without stored energy

toy with a *projectile* discharged by the energy imparted by a child

An example - a toy where the energy is imparted by e.g. a spring or an elastic band and the launching is entirely controlled by the child, as the toy has no mechanism for holding back the projectile and storing the energy for a prolonged time. Such a toy could be interpreted not to be included in 3.48. However, the toy is obviously also not within 3.47 because we interpret 3.47 so that the toy shall be capable to accumulate and store the energy for a prolonged period of time without involvement of a child.

We would like to have a confirmation that a projectile toy, which cannot accumulate and store energy is within 3.48 even if a spring is used in launching the projectile.



Figure 9

Reply

Standard is clear. In this case, the energy is not stored and released by a discharge mechanism but the energy is imparted by the user. In consequence, this toy is regarded as a “projectile toy without stored energy”

REQ 064-06 (DS, Denmark)

2.63.47, 3.48 and 7.7 Projectile toys (no action decision)

Question

Even if we are aware of the ongoing discussion about the revision on projectiles requirements, we ask to give an official interpretation of the following issue to interpret correctly the current version of the standard.

- a) EN 71-1 defines as projectile an “object intended to be launched into free flight or a trajectory in the air”

- 1) does this include toys like boomerang or frisbee?
 - 2) does this include small toys designed in such a way that hitting their base, they make a little jump, rotating on themselves? (to figure them think about a spoon on a table: hitting its extremity you can have it make this kind of jump)
 - 3) does it include objects launched by catapult toys?
- b) If a toy has a spring or an elastic band, but no mechanism to hold the projectile in the “charged” condition (this means that as soon as you release the projectile, it is launched, like in a bow), is it considered “projectile toy with stored energy” (the spring and elastic are considered as discharge mechanisms) or as a “projectile toy without stored energy” (the energy of the projectile depend upon how much the child put the projectile into the toy, like a bow, even if, differently from bows, in this case usually there is an “end of stroke” and the maximum projectile energy is defined)?
- c) 7.7 defines two warnings: not to use different projectiles from the supplied ones and not to aim at eyes or face.

We consider the first one applicable to all the projectile toys from which a generic projectile may be launched (for example projectile toy with stored energy or bows), but not applicable for toys without stored energy like catapults (4.17.2 does not give any reference to 7.7).

Instead we consider the second warning (“Aim at face”) applicable only to projectiles toys with stored energy or bows with a kinetic energy greater than 0,08 J.

Is it correct?

Reply

- a) 1) Standard is clear those toys enter into the projectiles definition.
- a) 2) Standard is clear those toys enter into the projectiles definition.
- a) 3) Standard is clear those toys enter into the projectiles definition (provided those “catapults” do not enter into the exclusion list as outlined into EN 71-1 Scope).
- b) Standard is clear this is a “projectile toy without stored energy” (see 3.48 definition) provided the described item is not regarded as a catapult and therefore enters into the exclusion list as outlined into EN 71-1 Scope.
- c) Standard is clear for projectile toys with stored energy in 4.17.3 c). If a discharge mechanism is able to discharge an object other than that provided with the toy, then labelling according to 7.7.1 is required. If a toy is capable of discharging a projectile with a kinetic energy greater than 0,08 J, labelling according to 7.7.2 is required. If a toy meets both conditions then the two labelling are required.

Bows and arrows shall only bear “Warning. Do not aim at eyes or face” under the conditions outlined in 4.17.4 c)

REQ 076-07 Part 1 (UNI, Italy)

2.74.3 Flexible plastic sheeting (no action decision)

Question 1

4.3 applies only to plastic sheeting having dimensions greater than 100 mm X 100 mm. If a plastic bag has a dimension of 100 mm X 80 mm, as it is, does the requirement apply?

Question 2

If we consider the plastic bag, its dimension is less than 100 mm X 100 mm, but if we consider the plastic sheeting, cutting the plastic bag along two edges, we can get a 100 mm X 160 mm (80 mm X 2).

But, especially if the toy is intended only for children over 36 months of age, it is not required to apply any cutting.

And, if the toy is intended for children under 36 months of age, and we apply the tension test to the bag, before to break it into a plastic sheet, it is foreseeable that the applied 90 N force will elongate the plastic sheeting and thus will also make it having a thinner thickness.

Moreover, the test method of 8.25.1.2 reads "For plastic bags, cut along the seams without stretching the bag so that two single sheets are produced."

But this test method is referred both by 4.3 and by Clause 6 (which does not apply to toy bags which have a play value in the toy).

In our opinion the need to cut the bag along the seams is referred to packaging bags, and not to plastic sheeting addressed by 4.3. The reason for this interpretation is that in case of bags with an opening perimeter greater than 380 mm (as required by Clause 6), the child can put his head inside the bag and so it can have on his nose and mouth just one sheet of the twos forming the bag.

But if 4.3 is not applicable to plastic bags, but to plastic sheeting only, we can have plastic bags with an opening perimeter less than 380 mm and with a thickness of less than 0,038 mm both for packaging and for bags having a play value (4.4 does not require a minimum thickness and Clause 6 defines a minimum thickness only for plastic bags with an opening perimeter greater than 380 mm).

The reason for this may be that bags (in which the child cannot put his head), having a double layer, are less foreseeable to become attached to a child's face in such a way to cause asphyxiation, differently from single layer plastic sheeting (this is just a supposition). Thus, one of the following should apply:

- 1) If the sheet is in a form of a plastic bag, its whole area shall be measured (not the area of the plastic bag, and thus the area which is the sum of the two layers area). The measurements are performed before any mechanical test.
- 2) For plastic bags only the area of the plastic bag (double layer) shall be taken into account. The measurements are performed before any mechanical test.
- 3) The area and the thickness of the plastic bags shall be measured after the mechanical tests (which ones, especially in the case of toys intended for children above 36 months of age?).

Which one is the correct one?

Reply

To question 1: The requirement does not apply

To question 2: Option 2 is the correct one

REQ 090-09 (UNI, Italy)

2.84.4 Toy bags (no action decision)

Question

In EN 71-1 there is a specific requirement for toy bags (4.4), which applies to toy bags with an opening perimeter greater than 380 mm and having a drawstring as means of closure.

But what shall be done if the bag has a perimeter smaller than 380 mm and it is made of a plastic sheet?

Reply

4.4 is not applicable and 4.3 should be considered.

REQ 089-09 (UNI, Italy)

2.94.5 Glass (no action decision)

Question

4.5 states that accessible glass may only be used for toys for children over 36 months where it is necessary for the function of the toy (e.g. optical toys, glass light bulbs, glass in experimental sets).

Traditionally there are some creativity sets where glass is used, but where it is not clear whether the glass is functional or not.

- 1) Should we consider the glass used in candle making set as functional?
- 2) What about a glass painting set intended to decorate glass objects?



Figure 10

Reply

The nature and use of this product (involving candles) means that EN 71-1 cannot address the safety. If this product were sold as a toy, it would need to be EC Type examined.

The same may apply to glass painting sets but much would depend on the nature of each product.

REQ 057-05 (AFNOR, France)

2.10 4.9 Protruding parts (interpretation)

Question

An example is given below where wheel axles have been exposed when the wheel has come off. For guidance also some other reference information is given.



Figure 11

For toys intended for children over 3 years:

Q1: Shall a wheel on a wheel axle (which, if exposed, can present a puncture hazard) be considered to be a protective component and thus subjected to 8.4.2.3 (tension test, protective components)?

Q2: If the answer to question 1 is "Yes", shall the potential puncture hazard of the axle be assessed after removing the axle from the toy and after placing the axle in a reasonably foreseeable position, or shall it be assessed when still in the toy and in a reasonably foreseeable position?

Q3: If the answer to question 1 is “No”: Shall any force at all be applied in an effort to remove/detach a wheel from a wheel axle in order to thereafter check the potential puncture hazard presented by the remaining exposed axle?

Reply

Q1: No, it shall not be considered as a protective component since the presence of the wheel is not to protect the end of the axle. Protective components are those which are intended to protect from a potential hazardous protrusion.

Q3: No, according to the standard and for over 3 toys, there is no requirement asking for the application of such a force.

REQ 129-12 (SIS, Sweden)

2.11 4.10.1 c) folding and sliding mechanisms (no action decision)

Question

The below toy is an ironing board made of plastic material with a height of 25 cm. It is intended to be used on a table (child is then standing up) or can also be placed on the ground (the child is sitting in front of the table). The legs of the ironing board are folding ones and present a scissor like action.

Are the requirements from 4.10.1 c) required for this type of toy?



Figure 12

Reply

Standard is clear, 4.10.1 c) applies since the legs of the ironing board are folding ones and present a scissor like action.

REQ 085-08 (AFNOR, France)

2.12 4.10.3 Hinges and rationale A.13 (interpretation)

Question

Balance bikes made of wood have in several designs introduced a hazard of having fingers crushed in the squash/squeeze points along the hinge line assembling the “front fork” and “bike frame” at the front end.

These squash/squeeze points as shown below between the two hinged parts are not common on other traditional ride-on toys and toy bicycles with traditional head tubes and fittings making this hinge encapsulated.

The Toy Safety Directive states in Annex II Particular Safety Requirements, Point 3 the following:

“Toys must be designed and manufactured in such a way as not to present any risk or only the minimum risk inherent to their use which could be caused by the movement of their parts.”

Shall the below hinged part conform to the requirement in EN 71-1, 4.10.3, despite the remarks made in the informative rationale A.13 of 4.10.3?



Figure 13

Reply

The purpose of the requirement in 4.10.3 is to address possible crushing hazard related to varying clearances along a hinge line as stated in the first sentence of the rationale A.13. Therefore, hinged part of the toy as described above shall comply with this requirement.

REQ 132-12 (DS, Denmark)

2.13 4.11 Mouth-actuated toys and other toys intended to be put in the mouth (interpretation)

Question

Which toys shall be considered as intended to be put in the mouth according to EN 71-1, 4.11?

It is clear that mouth-actuated toys, whistles and peashooters are intended to be put in the mouth but what about other toys like toy cups, toy spoons, toy forks, toy toothbrushes and toy lipsticks as in the following images?



Figure 14



Figure 15



Figure 16



Figure 17

And what about toys intended to be placed in the doll's mouth but that, for imitation, also the child may put in his mouth (like toy feeding bottle, toy soother, etc.)?



Figure 18



Figure 19



Figure 20

Reply

Toys which are miniatures of real products (e.g. cutlery, feeding bottles, soothers, toothbrush) and intended for use with dolls, etc. are not considered to be intended to be put in the mouth and are not covered by 4.11 requirements.

Toys which are copies of real products and which might be used by children for their real purpose during play are covered by 4.11 requirements if that leads to them being put in the mouth.

Toys which are copies of real products and which are just intended to be put to the lips (e.g. lipsticks, cups) should not be regarded as toys intended to be put in the mouth and are not covered by 4.11 requirements.

REQ 106-12 (UNI, Italy)

2.14 4.14.2 Masks and helmets (no action decision)

Question

1) 4.14.2 of EN 71-1 states about masks the following:

“4.14.2 Masks and helmets

Mask and helmets shall conform to the following requirements:

a) Masks and helmets that fully enclose the head and which are made of impermeable material shall provide a total ventilation area of 1 300 mm² or more through at least two holes at least 150 mm apart or through any equivalent single ventilation area.”

We understand reading this point that the requirement apply to all types of masks.

Nevertheless, there are several types of masks in the market according to their design and their material:

Masks that fully enclose the head (generally the area of the face with polymeric flexible material and the rest with textile material with or without hair). Masks that enclose the head but not fully (generally the area of the face with polymeric flexible material and the rest with textile material with or without hair).

Masks that only enclose the face.

The last ones have several designs, ones fit in the form of the face and others are more or less flat and are made of flexible material, polymeric half-rigid material and even cardboard.

Taking into account that establishing the safety requirements to address risks is the target of the standard (in this specific case, the risk of asphyxiation that could happen to the children when using the masks), we have a doubt regarding the below type of masks, which enclose only the face, because it is likely that not all the mentioned masks could present the risk of asphyxiation.

Therefore, there could be masks like the below ones that could not need to fulfil the requirements on 4.14.2 a)



Figure 21



Figure 22



Figure 23

- 2) Regarding the ventilation area required, we have a doubt about what has to be included in the mentioned area, i.e. does the ventilation area only include the holes at the level of the nose and the mouth, or include the holes at the level of the eyes too?

Reply

- 1) Requirements in 4.14.2 a) only apply to masks that fully enclose the head and which are made of impermeable material therefore masks that cover the face and for which pictures are given are not covered by this requirement.
- 2) All holes are to be taken into consideration whatever their position knowing that if only eye, nose and mouth holes were considered the 150 mm requirement would conflict with the normal positioning of those holes for a correct use and should never be fulfilled.

REQ 048-04 (AENOR, Spain)

2.15 4.15.1.2 Warnings and instructions for use (no action decision)

Question

4.15.1.2 indicates:

“Electrically-driven ride-on toys and/or their *packaging*, and their instructions for use, shall carry a warning regarding protective equipment (see 7.10.3). This warning is not required on electrically-driven ride-on toys that are equipped with a seat, and are either covered by the requirement in 4.15.1.4 or have a maximum design speed of less than 8,2 km/h when tested according to 8.29 (determination of maximum design speed of electrically-driven ride-on toys).”

7.10.3 applies when the electrically-driven ride-on toys are equipped with a seat but are not covered either by the requirement in 4.15.1.4 or have a maximum design speed of less than 8,2 km/h when tested according to 8.29 (determination of maximum design speed of electrically-driven ride-on toys).

Where a toy is not required by the requirement of this clause to bear the warning referenced in 7.10.3, do you remove the reference to protective equipment or the warning as a whole?

Reply

Standard is clear. When the labelling requirement related to protective equipment from 7.10.3 does not apply, the required labelling is:

“Warning. Not to be used in traffic”.

REQ 124-12 (BSI, United Kingdom)

2.16 4.15.1.4 Stability (interpretation)

Question

Is the lateral stability test applicable to a two wheels toy motorbike intended for children over 3 years of age, for which removable stabilizers are provided, considering that the toy can be operated by the child when stabilizers are removed?

Reply

This toy shall be considered as toy where the feet of the child can provide sideways stability and therefore excluded from the 4.15.1.4 requirements.

REQ 046-04 (AENOR, Spain)

2.17 4.15.1.4; 8.23.1 Stability (interpretation)

Question (UNI, Italy)

EN 71-1 requires, for the stability test, to “load the toy in the most onerous position with a mass [...] on its standing or sitting surface”.

Our interpretation of this requirement is “Load the toy in the most onerous position on the standing or sitting surface, in such a way the mass is perpendicular to the standing or sitting surface and that the vertical projection of the base of the test mass is fully enclosed in the sitting surface. If the standing or sitting surface is narrower than the test mass, the centre of the test mass shall be positioned along the axis of the seat.”

Applying this interpretation, a correct position to place the test mass for the front stability is shown in the following pictures (please, do not consider the position of the toy on the inclined plane, it is just an example).



a)



b)



c)

Figure 24

If we do not apply this interpretation every laboratory can try to find any improbable sitting surface like in the following examples:

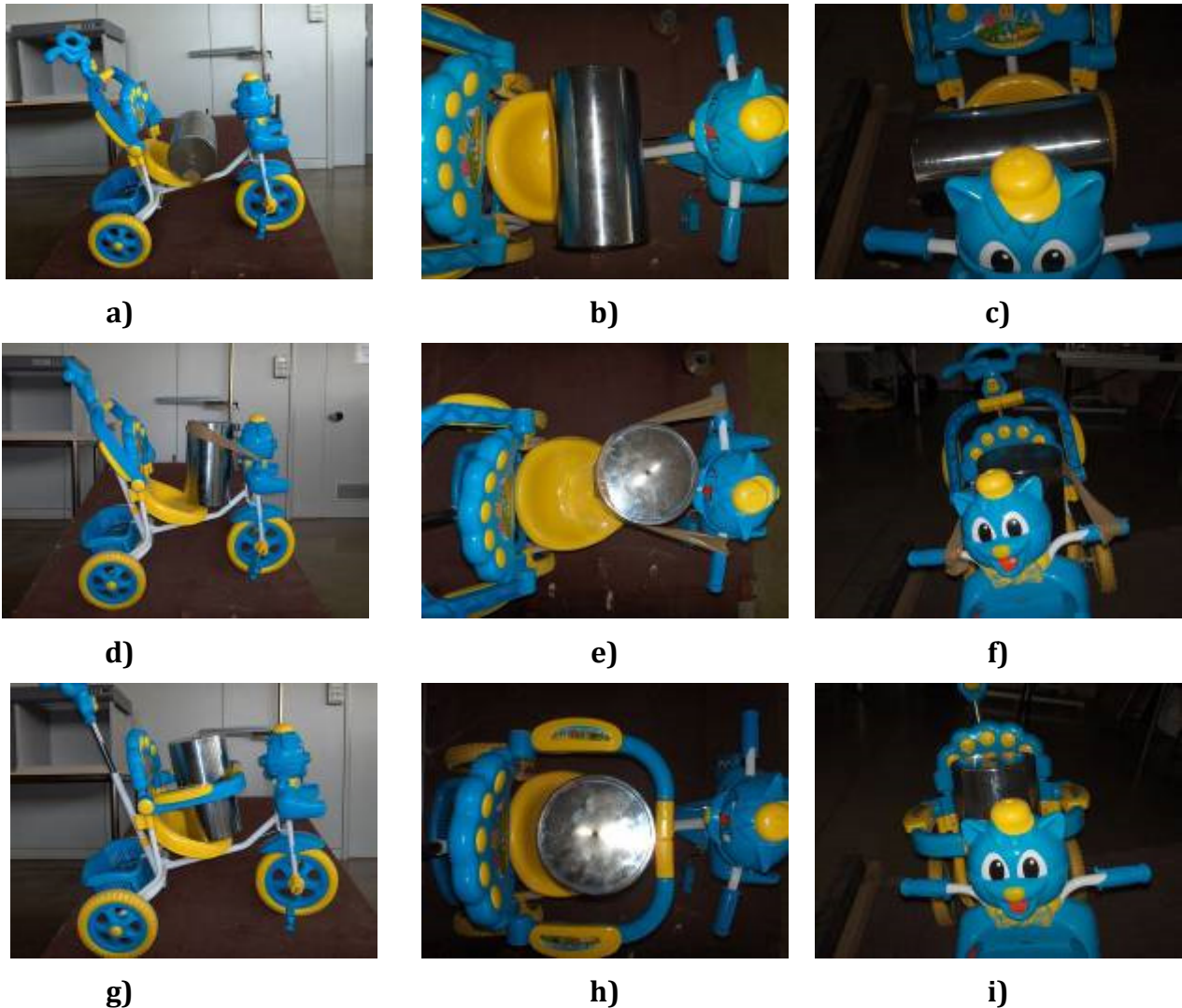


Figure 25

We consider that all the above examples represent a not correct way to perform the test: in the first row example, the mass is not perpendicular to the sitting surface, in the second and in the third rows, the mass base is outside the sitting surface.

In the third row, someone can argue that the ring allows the placing of the mass without any external support, but if we consider applying this interpretation, we will again have problems. Actually, EN 71-1, Figure 26 does not define the sides of the test mass. Since the test mass does not need to be a perfect cylinder, also the test mass for the dynamic test defined in Figure 28 may be used. Since the position of the test mass on ride on toys with armrest may be significantly influenced (if we agree with this interpretation) by the sides of the test mass, we will have for sure different test results, depending on the kind of the test mass used.



a)



b)



c)

Figure 26

We can also have even more improbable test conditions like the following:



a)



b)



c)

Figure 27

According to our opinion, the correct interpretation is “load the toy in the most onerous position on the standing or sitting surface, in such a way the mass is perpendicular to the standing or sitting surface and that the vertical projection of the base of the test mass is fully enclosed in the sitting surface. If the standing or sitting surface is narrower than the test mass, the centre of the test mass shall be positioned along the axis of the seat”. Thus between the two positions shown in the following examples, in case we are considering the frontal stability, it is the second (the one with the test mass with its base in contact with the front edge of the seat) to be considered as the most onerous condition (in the other one, the test mass is just centred on the seat, and thus this is not the most onerous position). Nevertheless, allowing laboratories to place the mass with its base outside the sitting surface would lead to have no more repeatable tests.

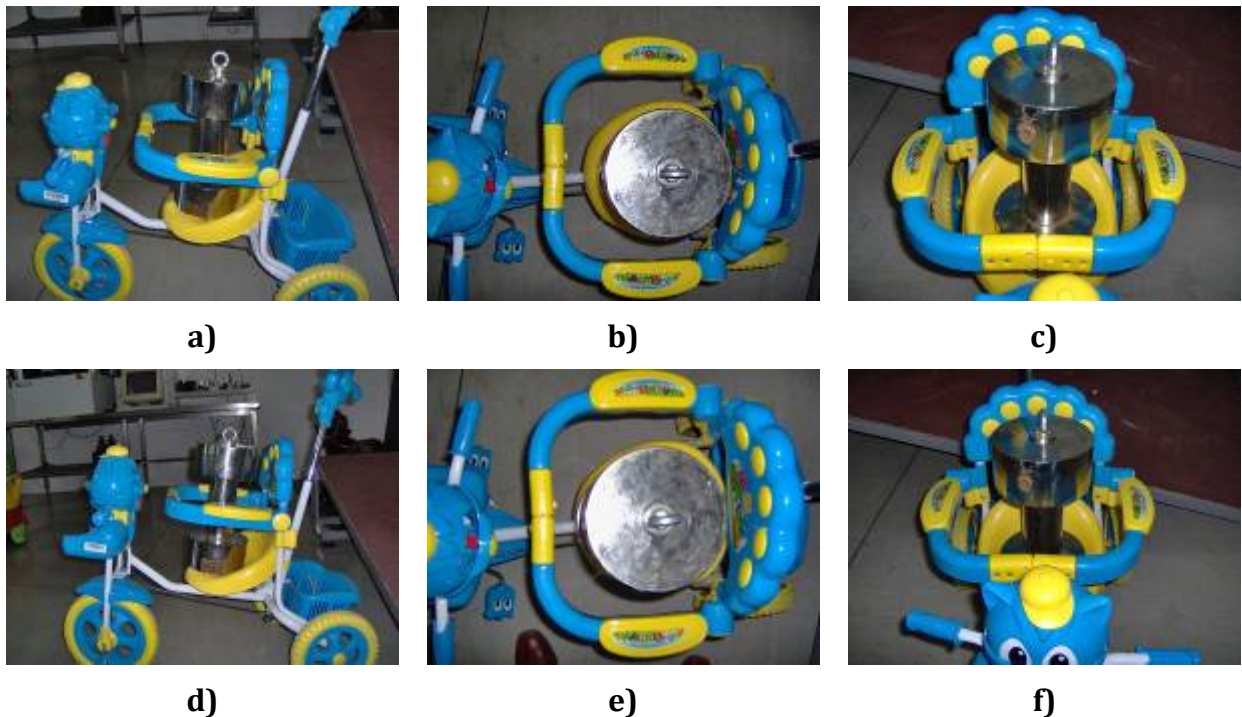


Figure 28

Question (BSI, United Kingdom)

The clause states “Load the toy in the most onerous position” Can this be clarified as to whether the weight/mass is loaded in the most onerous position or the toy is placed in the most onerous position with the test mass located in the “normal” position of use?

Comments/proposal for an answer: Believed that the test mass should be placed on the seat (or standing position) to the extremity of the seat, but within the confines of the seat, i.e. not overhanging the seat.

Also, the test mass should remain perpendicular to the plane of the seat, when placed on the 10° slope.

Reply

Before placing the toy on the slope, the mass shall be placed on the sitting or standing surface so that the main axis of the mass remains as close as vertical as possible without any additional support between the mass and the sitting or standing surface. If the sitting or standing surface is larger than the base of the test mass, the test shall be performed placing the mass on the sitting or standing surface in the most onerous position(s) with regards to stability and shall remain within the sitting or standing surface. It is allowed to use e.g. tape, straps, etc. to maintain the mass in position when the toy is placed on the slope.

REQ 070-06 (UNI, Italy); REQ 074-07 (BSI, United Kingdom)

2.18 4.15.1.6 c) Transmission and wheel arrangement (no action decision)**Question**

During testing of a battery-operated ride on car (shown below), it was noted that there was a gap of approximately 6 mm between a wheel and the adjacent motor housing (see illustration).

It is clear from 4.15.1.6 c) of EN 71-1 that the product fails:

Text of standard

c) Spaces between the wheels and the body or parts of the body (e.g. mudguards) shall also allow a 12 mm diameter rod to be inserted if they allow a 5 mm diameter rod to be inserted.

Is this an accurate understanding of the standard?



a)



b)



c)



d)

Figure 29 — View of back of car 5 mm plug gauge inserted in gap

Reply

The standard adequately treats this case. The 5/12 mm requirement only applies to areas capable of crushing fingers or other parts of the body if entrapped considering the normal and foreseeable use of the toy. Reference is made to EN 71-1, Annex A, second sentence of A.20: “the requirements are also intended to address the hazards associated with *chain* transmissions and wheel arrangements capable of crushing fingers and other parts of the body, if entrapped”.

REQ 054-05 (BSI, United Kingdom)

2.19 4.15.1.6 d) Transmission and wheel arrangement (no action decision)

Question

Subclause 4.15.1.6 d) states:

“Tricycles, provided with an attached handle used for pushing the child, shall be constructed in such a way as to prevent entrapment of the child’s feet in the pedals, etc. whilst being pushed, (e.g. *free-wheeling mechanism* or foot rests).”

If a free-wheeling mechanism is present, 4.15.1.5 requires a mechanically propelled toy to have a braking device.

It is very difficult for a manufacturer to add a brake to a tricycle. Therefore, one possible solution is to manufacture the tricycle with the option of having the front wheel (with pedals) set as either a fixed drive or free-wheeling, with accompanying instructions clearly informing the parent to set it as free-wheeling if the parent handle is attached, or fixed drive if the handle is not attached (I have seen several like this on the market).

However, 4.15.1.5 excludes “toys where hands or feet provide the motive power to the driving wheel(s) via direct transmission”.

It is our belief that this exclusion was written prior to the addition of 4.15.1.5 d) in the 1998 edition, when all tricycles were of the traditional fixed wheel design. This exclusion is therefore not valid if the tricycle has a free-wheel mode.

A.20 also excludes tricycles with pedals on the front wheel, but again, I believe this rationale was written with only fixed wheel tricycles in mind.

The point here is that a retailer wishes to supply a free-wheeling tricycle with a parent handle and no brake. If the parent handle is removed, the child will be riding a free-wheeling toy with no means of braking, usually performed by the child putting his feet on the pedals (I do not hold with a suggested view that the child can brake the tricycle by putting his feet on the ground, since this is likely to lead to foot entrapment by the frame or rear wheels. Remember that 4.15.1.6 d) requires a tricycle with a parent handle to have foot rests, for example, for the very reason of keeping the child’s feet away from moving parts).

Would the group agree that the exclusion in 4.15.1.5 is not valid in this instance?

Reply

The standard, as it is currently, adequately addresses this case. This kind of toy would require a brake.

REQ 055-05 (BSI, United Kingdom)

2.20 4.15.5.7 Toy scooters – protruding parts (interpretation)

Question

« The handles on *toy scooters* shall have an end with a diameter of 40 mm or more. »

How should the above requirement be applied to scooter handles that are spherical or foam covered?

Should this requirement also applied to bicycles?

Reply

Rationale A.10 indicates that end protections including spherical ones for e.g. handle bars “should be given a sufficiently large surface area to avoid puncturing of the body”, independently from the material used. The maximum diameter of the sphere or similarly shaped end covers shall be considered for the measurement purpose. The 40 mm requirement only applies to toy scooters.

REQ 133-13 (BSI, United Kingdom)

2.21 4.17 Projectiles (no action decision)

Question

Is a toy containing plastic darts with resilient material point and a plastic target, and the darts are designed to be thrown by hand of a child upon the target considered as a “projectile toy” according to the given definition of EN 71? On the other hand, simply to say that the question is whether a toy intended to be thrown by hand of a child but not to be launched by a mechanism is considered as a “projectile” according to EN 71.

The following is the relevant subclauses of EN 71:

3.46 projectile: Object intended to be **launched** into free flight or a trajectory in the air.

3.47 projectile toy with stored energy: Toy with a *projectile* propelled by means of a discharge mechanism capable of storing and releasing energy.

3.48 projectile toy without stored energy: Toy with a *projectile* discharged by the energy imparted by a child.

A.22 Projectiles (see 4.17)

“These requirements are intended to address certain but not all potentially unexpected hazards associated with *projectile* **firing toys** and by **the firing of improvised projectiles from such toys**.

A toy in which the kinetic energy is determined by the toy and not by the child is typically a gun or other *spring*-loaded device. A pea-shooter is an example of a toy with a *projectile* (a pea) of which the kinetic energy is determined by the child by blowing.”

We notice that there are two keywords in the above subclauses: “launch” and “firing”. According to the normal understanding of people, the meaning of the two words is to shoot something into the sky using a discharge mechanism but not throw something by hand.

In addition, we also notice that in EN 71-1 A.22, which is the explanation of the requirements of 4.17, there is an important statement that again leads people to regard projectile as an object, which is shot by a discharge mechanism. The statement is: “These requirements are intended to address certain, but not all, potentially unexpected hazards associated with *projectile* firing toys and by the firing of improvised *projectiles* from such toys.” The statement tells us what is the most important thing concerned in the EN 71 projectile 4.17. That is the hazards caused by projectiles that are fired by a mechanism.

Furthermore, in A.22, there are two examples used to explain two definitions – “a toy in which the kinetic energy is determined by the toy and not by the child” and “a toy in which the kinetic energy is determined by the child”. Both of the examples are projectile toys where the projectile is shot by a discharge mechanism. The example lead us to understand that “a toy in which the kinetic energy is determined by the child” refer to the projectile toy of which the projectile is fired through a mechanism but not thrown by hand. Since in 4.17 these two definitions are not mentioned, naturally we regard “a toy in which the kinetic energy is determined by the toy and not by the child” as “projectile toy with stored energy”. In addition, “a toy in which the kinetic energy is determined by the child” as “projectile toy without stored energy”

In order to verify the above understanding, we also refer to another international toy standard of ASTM F963-96a.

The following is the relevant subclauses of ASTM F963-96a:

3.1.25: *Projectile – an object propelled **by means of a discharge mechanism** capable of storing and releasing energy under the control of the operator.*

4.20: *Projectile Toys – These requirements relate to certain, but not all, potential, unexpected hazards that might be caused by projectile firing toys and by the firing of improvised projectiles from such toys. **Certain well-recognized hazards that are inherent in traditional toys such as slingshots and darts are not covered by these requirements.***

4.20.1: *These requirements apply to toys that are intended to launch projectiles into free flight by means of **a discharge mechanism in which the kinetic energy of the projectile is determined by the toy and not by the user.***

4.20.1.5: *The aforementioned requirements shall not apply to any **discharge mechanism incapable of storing energy independent of the user.***

It is very clear that in ASTM toys intended to be thrown by hand are not projectile toys. Moreover, in ASTM, “projectile toy” is also divided into two kinds: “projectile toy with stored energy” and “projectile

toy without stored energy". The projectile requirements of ASTM are not applicable to "projectile toy without stored energy" but the requirements of EN 71 do.

After the study of the relevant clauses of EN 71 and making reference to the above mentioned clauses of ASTM F963-96a, we may get the following understanding about EN 71 projectile clauses: "Projectile toy with stored energy" may be regarded as the toys that are intended to launch projectiles into free flight by means of a discharge mechanism in which the kinetic energy of the projectile is determined by the toy and not by the child, such as a gun or other spring-loaded device. And "projectile toy without stored energy" may be regarded as toys having discharge mechanism incapable of storing energy independent of the child and the kinetic energy is determined by the child, such as A pea-shooter mentioned in A.22, bows and arrows, slingshots etc.

To sum up all above, we may draw a conclusion that in both EN 71 and ASTM F963, the real meaning of "projectile" is a toy having discharge mechanism. In addition, the real purpose to set up projectile testing clauses is to reduce the potentially unexpected hazards that might be caused by projectile firing toys and by the firing of improvised projectiles from such toys.

Please note that this conclusion is not only based on the above study, but also on our testing practice. We found that in practice there were many kinds of toys intended to be thrown by hand of a child that would not be treated as projectile by all other laboratories, for example small planes and baseballs etc. The requirements of EN 71 projectile clauses are not applicable and suitable for these toys. These requirements are also not suitable for dart game intended to be thrown by hand of a child. Otherwise, most of these toys in market will not comply with EN 71. For example dart fitted with magnetic metal disc, if it is treated as projectile, the disc shall have a minimum area of 3 cm² according to EN 71 projectile clause. We have seldom seen such dart with a big point. We think it is more dangerous because of the weight of the big point. If it is thrown to a child's face or head, it is likely to cause a hole hurt.

Reply

The definition included in 3.46 of EN 71-1 indicates:

"Projectile: Object intended to be launched into free flight or a trajectory in the air"

Launching something in the air can be produced through a discharge mechanism (kinetic energy determined by the toy only) or with hands (kinetic energy determined by child strength).

As the hazard associated with projectiles does not depend on the fact that they are launched or not through a discharge mechanism, it is considered that all types of projectiles, with or without stored energy and with or without discharge mechanism are covered by 4.17 of EN 71-1, the applicability of the different subclauses being determined by the nature of the projectiles and the way they are launched.

REQ 026-03 (EU Commission)

2.22 4.18 Aquatic toys and inflatable toys (no action decision)

Question

EN 71-1 4.18, specifies that "In addition, aquatic ride-on toys with a maximum dimension larger than 1,2 meters (e.g. large inflatable animals) measured on the uninflated toy, shall fulfil the applicable requirements for floating leisure articles, Class A 2 devices in EN 15649-3".

Shall all applicable requirements stated by EN 15649-3 be applied? Or all applicable requirements excluding requirements referring to 'Consumer information' (Clause 5)?

EN 15649-3, 5.1 reads: "*Consumer information (on the packaging, on the product and by means of written instructions for use) shall be in accordance with EN 15649-2.*". Does this mean that aquatic ride-on toys with a maximum dimension larger than 1,2 m shall also comply with EN 15649-2?

Besides, EN 15649-3 makes reference for test parameters and test methods to EN 15649-1: does this mean that aquatic ride-on toys with a maximum dimension larger than 1,2 m shall comply also with EN 15649-1?

Reply

Standard is clear. Rationale A.23 indicates aquatic ride-on toys with a maximum dimension larger than 1,2 m shall comply also with the corresponding requirements in EN 15649-1 and EN 15649-2.

REQ 108-12 (UNI, Italy)

2.23 4.18 Aquatic toys and inflatable toys (interpretation)

Question

The question relates to 4.18 “Aquatic toys and inflatable toys” of EN 71-1 point a).

The standard specifies that: “a) Air-inflation inlets on *aquatic toys* shall have stoppers and all air-inflation inlets with stoppers on *aquatic toys* and inflatable toys shall have the stoppers **permanently** attached to the toy. The stopper, or any part of it, **if detached** when tested according to 8.3 (torque test), and 8.4.2.1 (tension test, general) shall not fit entirely in the cylinder when tested according to 8.2 (small parts cylinder).”

How can **permanently** be judged?

Should **permanently** be interpreted as **withstanding the 90 N force applied during the tension test**?

Reply

The word “permanently” means the stopper shall not be a *removable component* (see definition in 3.51)

REQ 110-12 (UNI, Italy)

2.24 4.19 Percussion caps (no action decision)

Question

4.19 requires that an indication of the make and model of percussion caps to be used shall be indicated on the toy.

The toy shall carry also the warning of 7.14, i.e. “Warning. Do not use close to the ear! Misuse may cause damage to hearing. Do not fire indoors! Use only percussion caps recommended by the manufacturer”.

4.19 states that the warning may alternatively be placed on the packaging.

Some laboratories interpret that also the make and model of percussion caps may alternatively be placed on the packaging. Is it correct?

Reply

Standard is clear, the make and model shall appear on the toy.

REQ 100-09 (UNI, Italy)

2.25 4.20 Acoustics (Re: percussion toys) (no action decision)

Question

The picture below shows a toy which is recommended for children of approximately 12 months of age. The play pattern involves hammering the pegs through the plank until they come to a stop, at which point the bench can be turned over and the pegs can be hammered through in the other direction. The toy and the hammer are entirely made of wood. To fit the definition of 3.44 the toy has to be “clearly designed to make sound”. Although the toy does make sound, there seems to be nothing specific about