



CONSUMER PRODUCTS SERVICES DIVISION

TECHNO SOURCE

Technical Report: (5211)154-0577
Date Received: June 03, 2011

June 21, 2011
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Sample Description: 20Q ASSORTMENT

1.) RED
2.) BLUE
3.) FUCHSIA

Vendor: N/A
Manufacturer: On File

Sample Size: 51
Style No(s): 1061, 1062, 1063

Buyer: N/A
Labeled Age Grade: 6+
Appropriate Age Grade: OVER 6 YEARS OF AGE
Client Specified Age: NOT SPECIFIED
Grade:
Tested Age Grade: OVER 6 YEARS OF AGE
UPC Code: 801561010619, 801561010626,
801561010633

SKN/SKU No.: N/A
PO No.: N/A
Ref #: N/A
Country of Origin: CHINA
Assortment No.: (1060)

EXECUTIVE SUMMARY:

The finding of the Safety Assessment (SA + DE + PCP) are presented in the "Result" section on this report.

BUREAU VERITAS HONG KONG LIMITED

Lai Ka Ming, Kent
Director
Toys and Juvenile Products Department

KL/se

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RESULTS:

1.0) Summary

It was requested that Bureau Veritas Consumer Products Services Inc. (BVCPS) review the submitted product according to the European Toy Safety Directive 2009/48/EC (TSD) and provide a Safety Assessment and Design Evaluation on this toy.

1.1) Safety Assessment

According to the Toy Safety Directive 2009/48/EC article 18, manufacturers shall, before placing a toy on the market, carry out an analysis of the chemical, physical, mechanical, electrical, flammability, hygiene and radioactivity hazards that the toy may present, as well as an assessment of the potential exposure to such hazards. The purpose of this report is to identify the applicable requirements and to help defining the scope of testing based on the assessment.

1.2) Design Evaluation

Further to Safety Assessment, a Design Evaluation is to identify critical aspects that could result into failures to the requirements and which should be controlled during the production. The design evaluation is limited to Mechanical & Physical / Flammability / Electrical properties.

The evaluation was performed on the given information/material submitted by the client. It has to be noted that some non-conformities and potential failures cannot be identified without testing. Actual tests shall be conducted before production in order to have more information to identify non-conformities and potential failures.

1.3) Summary of Findings

Applicable requirements of the toy are presented in section 4. No non-conformity was identified during the design evaluation. Potential failure was identified during the design evaluation, see section 5.3 for details.

2.0) Information/material submitted by the client

The Safety Assessment and Design Evaluation were performed based on the following information/material submitted by the client:

- Product sample
- Packaging
- Manufacturing process description
- Bill of materials



RESULTS:

3.0) General Product description

The product is a digital electrical digital game in the spherical shape with a black and white monitor in the center. On/Off switch button located at the right bottom side of the product. 8 buttons are located circularly around the flat face. Question and instruction will be shown in black and white digital monitor and sound will be provided. The product is operated with 2 AAA size batteries, which are included in the package.

The appropriate age grade of the toy determined by BVCPS is toy, over 6 years of age.

According to client's information, the product will be distributed to United Kingdom.

4.0) Safety Assessment

4.1) Mechanical & Physical / Flammability / Electrical properties

This section indicates the mechanical, physical, flammability and electrical requirements the toy has to comply with.

4.1.1) Harmonized Standards

It shall be pointed out that the toy safety standards used for the purpose of the safety assessment and the design evaluation are those which are harmonized under the currently enforced Toy Safety Directive 88/378/EEC with the addition of EN 14682 "Children's clothing" which is harmonized under GPSD and applies to toy disguise costumes. However, the new and modified requirements have also been taken into consideration, based on the most recent draft standards revisions of EN 71 Parts 1, 2 and 8 and EN 62115 available through CEN TC 52 and CENELEC TC 61. When those standards are finalized and published, the safety assessment and design evaluation will need review and potential update.

This toy is subject to the following harmonized standards for Mechanical & Physical / Flammability / Electrical properties:

- EN 71-1:2005+A9:2009 "Safety of toys - Part 1: Mechanical and physical properties"
- EN 71-2:2006+A1:2007 "Safety of toys - Part 2: Flammability"
- EN 62115:2005 "Electric toys – Safety" and its amendment IEC 62115:2003 (Modified) + A1:2004
- New requirements in prEN71-1:2011
- New requirements in prEN 71-2:2011
- EN 62115 + prA2 + prA3



RESULTS:

The harmonized standards (and its further amendment) listed above cover the mechanical, electrical and flammability requirements of the toy. No EC type examination is required for these hazards.

No novelty characteristics not sufficiently covered by the harmonized standards were identified.

Test reports to be inserted into the technical file shall refer to the future harmonized standards under Toy Safety Directive 2009/48/EC. These standards are expected to be published by CEN in July 2011.

4.1.2) National Standards

From the list of EU countries of distribution provided by the requestor, no additional national safety regulation/standard has been identified as applicable to this toy.

4.2) Hygiene

The toy must be designed and manufactured in such a way as to meet hygiene and cleanliness requirements in order to avoid any risk of infection, sickness or contamination.

The toy and the material used in the toy shall be visually clean and free from infestation (Clause 4.1 of EN 71-1).

From the list of EU countries of distribution provided by the requestor, no additional national hygiene regulation/standard has been identified as applicable to this toy.

4.3) Radioactivity

The Manufacturer provided a certificate to be inserted into the Technical file declaring that radioactive materials have not been intentionally added.

Chapter III (Health protection from radiation) of the Treaty establishing the European Atomic Community Applies. The Manufacturer provided a declaration of compliance to Chapter III of this Treaty to be inserted into the Technical file.

4.4) Chemical Properties

4.4.1) Harmonized Standards

This toy is not subject to the harmonized standards published in the Official Journal of the European Union as the product does not fall into the scope of EN 71 Part 3, 4, 5 and 7.



RESULTS:

4.4.2) Review of the Bill Of Materials

4.4.2.1) Show applicable restricted items in the REACH Annex XVII

Benzene

Component	Material	Color
Wire	PVC	Orange
Wire	PVC	Green
Wire	PVC	Yellow
Wire	PVC	Red
Wire	PVC	Black
Soft Plastic	PVC	Blue

Cadmium

Component	Material	Color
Wire	PVC	Orange
Wire	PVC	Green
Wire	PVC	Yellow
Wire	PVC	Red
Wire	PVC	Black
Soft Plastic	PVC	Blue



RESULTS:

Phthalates

- bis (2-ethylhexyl) phthalate (DEHP)
- dibutyl phthalate (DBP)
- benzyl butyl phthalate (BBP)
- di-'isononyl' phthalate (DINP)
- di-'isodecyl' phthalate (DIDP)
- di-n-octyl phthalate (DNOP)

Component	Material	Color
Wire	PVC	Orange
Wire	PVC	Green
Wire	PVC	Yellow
Wire	PVC	Red
Wire	PVC	Black
Soft Plastic	PVC	Blue
20Q Assortment - Red	Coating	-

This toy does not contain material that is high risk in containing azocolourants.

4.4.2.2) Review of CMR and SVHC

This toy does not contain any liquid / mobile materials, hence toxicological risk assessment was not evaluated.

4.4.3) Additional national safety regulation/ standard with the following inserted

From the list of EU countries of distribution provided by the requestor, no additional national safety regulation/standard has been identified as applicable to this toy.

4.4.4) Recommended Additional Chemical Tests

- **Additional chemical tests under 2009/48/EC (Effective on July 20th, 2013)**
Heavy metals content



RESULTS:

4.5) Other Requirements:

This toy is subject to additional European requirements other than the Toy Safety Directive. This toy shall conform to the provisions of all these requirements as listed below:

4.5.1) Requirements related to safety

- Regulation 1907/2006 Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- Directive 2004/108/EC Electromagnetic Compatibility

4.5.2) Requirements related to environmental

- Directive 94/62/EC Packaging and Packaging waste
- Directive 2009/125/EC Ecodesign Requirements for Energy-related Products
- Directive 2006/66/EC Batteries and Accumulators
- Directive 2002/95/EC Restriction of the Use of certain Hazardous Substances in Electrical and Electronic Equipment (RoHS)
- Directive 2002/96/EC Waste Electrical and Electronic Equipment (WEEE)

5.0) Design Evaluation

5.1) Applicable requirement

No non-conformity was identified based on the submitted information of the toy.

5.1.1) Applicable clause(s) of EN71-1:2005+A9:2009 "Safety of toys – Part 1: Mechanical and physical properties

Clause 4.1: Material

Toys and material used in toys shall be visually clean and free from infestation. The submitted sample was visually checked and complied with this requirement.

Clause 4.7: Edges

Accessible edges shall not present an unreasonable risk of injury. The metal part of the submitted sample was smoothed with round edge. Low risk was identified in this toy.

Clause 4.8: Points and metallic wires

Accessible points shall not present an unreasonable risk of injury. Tip of item shall be free from burr. The metal point of submitted sample was smoothed. Low risk was identified in this toy.



RESULTS:

Clause 4.20: Acoustics

This requirement is intended to prevent hearing damage. The submitted sample with sound emitted which sound pressure level measured was less than 115 dB. Low risk was identified in this toy.

Clause 7: Warning and instructions for use

The toy have contain all applicable labeling that required by the European standard as listed below:

- Importer Name and Address
- Retain statement
- CE mark

5.1.2) Applicable clause(s) of EN 62115:2005 "Electric toys – Safety" and its amendment IEC 62115:2003 (Modified) + A1:2004

Clause 7 - Marking and instruction

The toy shall contain all applicable labeling that required by European requirements. The submitted sample complied to this requirement.

Clause 13 – Mechanical strength

The sample's enclosure and LCD display shall show no damage, which could impair compliance to six blows of impact energy of 0.7J applied to the enclosure.

Clause 14.1 – Construction

Toys shall be battery toys, transformer toys or dual-supply toys. Their supply voltage shall not exceed 24 V. The submitted product was operated by 2xAAA batteries, which was in comply with the requirements.

Clause 14.6 – Construction

The sample contains battery cover with screw. It shall be not accessible without aid of a tool.

Clause 14.9 – Construction

Toys shall not be supplied by batteries connected in parallel unless a mixture of used and new batteries, or the reverse insertion of batteries. The submitted product was operated by 2XAAA batteries, which was connected in series

Clause 14.14 – Construction

Toys shall not contain asbestos.

RESULTS:

Clause 15.1 - Protection of cords and wires

Wireways shall be smooth and free from sharp edges. Cords and wires shall be protected so that they do not come into contact with burrs, cooling fins or similar edges that may cause damage to their insulation.

Clause 16.1 – Components

Components shall comply with the safety requirements specified in the relevant IEC standards as far as they reasonably apply.


Clause 16.2 – Components

Toys should not be fitted with thermal cut-outs which can be reset by a soldering operation and / or mercury switches. It is in comply with the requirements.



Clause 18 - Clearances and creepage distances

Clearances and creepage distances of functional insulation shall not be less than 0,5 mm. For functional insulation on PCB, except at their edges, 0,2 mm is allowed if protected against the deposition of dirt.


5.2) Potential failures that require production control

Requirement	Potential failures	Production control point	Images
EN71-1 EN71-1 Clause 4.20 Acoustic	The C-weighted peak emission sound pressure level, LpC shall not exceed 115dB	Incoming control (Speaker module): <ul style="list-style-type: none"> - Check the speaker module's model number per delivery note/ PO/ product specification during incoming lot - Trial assembly of speaker module to conduct sound pressure level test 	

RESULTS:

Requirement	Potential failures	Production control point	Images
EN 62115			
Clause 5.13 - Polarity reversed	Deviation in production may cause reverse battery contact.	The construction of battery compartment shall be produced air gap between terminal's plate and battery when battery insert in reversed position. Control point: create the dummy AAA size battery to visual check the reversed position.	
Clause 9.4 - Short circuit	Deviation in production may cause short circuit test failure.	According to clause 9.4, the rib of battery compartment shall be constructed to prevent the bridge of different terminals by insertion of 0.5mm steel rod. Control point: use the 0.5mm steel rod to visual check the terminal's rib whether it is short circuit or not	

RESULTS:

Requirement	Potential failures	Production control point	Images																		
<p>Clause 17 - Screw and connections</p>	<p>Poor screwing control may cause failure in this requirement.</p>	<p>The below table is showed the requirement of the screw torque test according the size of screw applied:</p> <table border="1" data-bbox="808 768 1070 1467"> <thead> <tr> <th>Nominal diameter of screw (mm)</th> <th>Torque Nm</th> </tr> </thead> <tbody> <tr> <td><=2.8</td> <td>0.4</td> </tr> <tr> <td>>2.8 and <=3.0</td> <td>0.5</td> </tr> <tr> <td>>3.0 and <=3.2</td> <td>0.6</td> </tr> <tr> <td>>3.2 and <=3.6</td> <td>0.8</td> </tr> <tr> <td>>3.6 and <=4.1</td> <td>1.2</td> </tr> <tr> <td>>4.1 and <=4.7</td> <td>1.8</td> </tr> <tr> <td>>4.7 and <=5.3</td> <td>2.0</td> </tr> <tr> <td>>=5.3</td> <td>2.5</td> </tr> </tbody> </table> <p>Control point: use the torque screw driver to tightened and loosened the screw for 10 times, it shall not show jerking</p>	Nominal diameter of screw (mm)	Torque Nm	<=2.8	0.4	>2.8 and <=3.0	0.5	>3.0 and <=3.2	0.6	>3.2 and <=3.6	0.8	>3.6 and <=4.1	1.2	>4.1 and <=4.7	1.8	>4.7 and <=5.3	2.0	>=5.3	2.5	
Nominal diameter of screw (mm)	Torque Nm																				
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>=5.3	2.5																				

RESULTS:

**Sample
image:**



RESULTS:



RESULTS:



Sample Number
(5211)154-0577

- End of report -