EVERWAY INDUSTRIAL LIMITED

Technical Report: **(8525)304-0758** December 30, 2025
Date Received: October 31, 2025

YEUNG YIU HUNG
EVERWAY INDUSTRIAL LIMITED
31B VIGOR INDUSTRIAL BUILDING PHASE 1,
49-53 TA CHUEN PING STREET,
KWAI CHUNG, N.T. HONG KONG

Sample Description:	FOOTBALL CLUB ALL-IN-ONE PARTY BOX		
Vendor:	N/A	Sample Size:	2
Manufacturer:	N/A	Style No(s):	PD0717BB
Buyer:	N/A	SKN/SKU No.:	PD0717 (NUFC)
Labeled Age Grade:	8+	PO No.:	N/A
Appropriate Age Grade:	NOT REQUESTED	Ref #:	N/A
Client Specified Age Grade:	8+	Country of Origin:	CHINA
Tested Age Grade:	OVER 8 YEARS OF AGE	Assortment No.:	N/A
UPC Code:	4897107242732	Country of Destination:	AMERICA AND EUROPE

EXECUTIVE SUMMARY:

The sample(s) MEETS the following requirement(s):

- The mechanical and physical properties requirements of the tested subclauses of the European Standard, “Safety of toys”, EN71: Part 1:2014+A1:2018, clauses 1-7.
- Labeling requirements of “CE marking, manufacturer/ Importer name and address, and product identification” under “Directive 2009/48/EC Safety of Toy”.
- The flammability requirements of the European Standard "Safety of Toys”, EN 71: Part 2: 2020
- The mechanical and physical properties requirements of the tested subclauses of the British Standard, “Safety of toys”, BS EN71: Part 1:2014+A1:2018, clauses 1-7.
- The flammability requirements of the British Standard "Safety of Toys”, BS EN 71: Part 2: 2020
- Labeling requirements of “UKCA marking. Company name and UK address, product identification under Toys (Safety) Regulation 2011”.
- The BBP, DBP DEHP and DIBP content requirements of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 51 (amended up to EU No. 2018/2005).
- The DNOP, DINP and DIDP content requirements of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 52.

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This report is governed by, and incorporates by reference, the Conditions of Testing as posted at the date of issuance of this report at https://www.bureauveritas.cn/SZ-SBUs-Terms-Conditions-EN and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.

EXECUTIVE SUMMARY:

The sample(s) MEETS the following requirement(s):

- The cadmium content requirement of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 23 (amended up to EU No. 2016/217).

- The short chain chlorinated paraffins (SCCPs) content requirement of the European Parliament and Council Regulation (EU) 2019/1021 on Persistent Organic Pollutants (POPs) (recast).

- The heavy metals requirements of the European "Council Directive 94/62/EC of 20 December 1994 on packaging and packaging waste."

- The migration of certain elements in Category III - Scraped off toy material requirements of the European Standard, “Safety of Toys”, EN 71 Part 3: 2019+A2:2024.

- The migration of certain elements in Category III - Scraped off toy material requirements of the European Standard, “Safety of Toys”, EN 71 Part 3: 2019+A1:2021.

- The migration of certain elements in Category III - Scraped off toy material requirements of the British Standard, “Safety of Toys”, BS EN 71 Part 3: 2019+A1:2021.

- The listed aromatic amines (azocolourants) content requirement of the European Regulation (EC) No. 1907/2006 of the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) with its Latest Amendment, Annex XVII concerning the Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles, Item no. 43, Points 1 and 2.

- The polycyclic aromatic hydrocarbons (PAHs) content requirement of European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 50, Paragraph 5 and 6 with (EU) No. 1272/2013 & its amendments.

- The migration of certain elements in Category III - Scraped off toy material requirements of the British Standard, “Safety of Toys”, BS EN 71 Part 3: 2019+A2:2024.

- Overall Migration Test for Plastic Materials in Contact with Foodstuffs – Commission Regulation (EU) No. 10/2011 and Its Amendments

- Phthalate Contents for Plastic Materials in Contact with Foodstuffs - Commission Regulation (EU) No. 10/2011 and Its Amendments

- Specific Migration of Heavy Metals for Plastic Materials in Contact with Foodstuffs – Commission Regulation (EU) No. 10/2011 and Its Amendments

- Specific Migration of Phthalates for Plastic Materials in Contact with Foodstuffs –Commission Regulation (EU) No. 10/2011 and Its Amendments

- Pentachlorophenol Content for Wood in Contact with Foodstuffs – Chemicals Prohibition Ordinance (ChemVerbotsV) Article 15

EXECUTIVE SUMMARY:

The sample(s) MEETS the following requirement(s):

- Specific Migration of Formaldehyde for Wood in Contact with Foodstuffs – § 30 and 31 LFGB
- Polychlorinated Biphenyls Content for Wood in Contact with Foodstuffs – Chemicals Prohibition Ordinance (ChemVerbotsV) Article 13
- Sensory Test (Odour and Taste) for Materials in Contact with Foodstuffs – EC No. 1935/2004 and § 30 and 31 LFGB and BfR Recommendation
- Fastness of Fluorescence for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation
- Migration of Dyes for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation and French Decree 2007-766 and MCDA SHEET N ° 4 (V02 - 01/01/2019)
- Formaldehyde Content for Paper and Paperboard in Contact with Foodstuffs – § 30 and 31 LFGB and BfR Recommendation
- Azo Dyestuff Content for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation
- Specific Migration of Primary Aromatic Amine for Paper and Paperboard in Contact with Foodstuffs – § 30 and 31 LFGB, BfR Recommendation

The sample(s) was tested to the following requirement(s) and the data provided is for informational purposes only:

- The colourfastness requirements to rubbing of the BS EN ISO 105X12: 2002 “Textile - Tests for colour fastness - Part X12: Colour fastness to rubbing”.

Note: At the request of the client, the sample(s) was evaluated for use by children 8+.

NOTE: If there are questions or concerns regarding above report, please contact the appropriate lab persons.

General Enquiries:

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BUREAU VERITAS SHENZHEN CO., LTD.

Simon Chan
Senior Manager
Toys And Juvenile Products Department

SC / co

RESULTS:

APPROPRIATE AGE GRADE DETERMINATION

The Appropriate Age Grade is determined with reference to the EN71: Part 1 : 2014 +A1:2018, CEN ISO/TR 8124-8:2016 Safety of toys - Part 8: Age Determination Guidelines prepared by Technical Committee CEN/TC 52 and Age Grade Determination Guidelines of the Consumer Product Safety Commission (CPSC).	
Note :	The most stringent age grade from the Labeled Age Grade and the Appropriate Age Grade will be used for testing.
Note :	If the client does not specify an age grade for testing or request Bureau Veritas Consumer Products Services, Inc. to determine an appropriate age grade, the labeled age grade will be used for testing.

MECHANICAL & PHYSICAL PROPERTIES
(EN 71: PART 1 – 2014+A1 – 2018)

Subclause	Requirement	Result
4.1	Material cleanliness	M
4.2	Assembly	N/A
4.3	Flexible plastic sheeting	N/A
4.4	Toy Bags	N/A
4.5	Glass	N/A
4.6	Expanding materials	N/A
4.7 & 7.6	Edges	M
4.8 & 7.6	Points and metallic wires	M
4.8e	Splinters	M
4.9	Protruding parts	N/A
4.10.1	Folding and sliding mechanisms	N/A
4.10.2	Driving mechanisms	N/A
4.10.3	Hinges	N/A
4.10.4	Springs	N/A
4.11	Mouth actuated toys and other toys intended to be put in the mouth	M
4.12 & 7.3	Balloons	N/A
4.13 & 7.9	Cord of toy kites and other flying toys	N/A
4.14.1	Toys which a child can enter	N/A
4.14.2 & 7.8	Masks and helmets	N/A
4.15.1	Toys propelled by child	N/A
4.15.1.2 & 7.10.1 & 7.10.2 & 7.10.3 & 7.10.4 & 7.16	Toys propelled by child – Instructions for use	N/A
4.15.1.3	Toys propelled by child – Strength	N/A
4.15.1.4	Toys propelled by child – Stability	N/A
4.15.1.5	Toys propelled by child – Braking	N/A
4.15.1.6	Toys propelled by child - Transmission	N/A
4.15.1.7	Toys propelled by child – insertion mark	N/A
4.15.1.8	Electrically-driven ride-on toys	N/A
4.15.2	Toy bicycles	N/A
4.15.2.2 & 7.15	Toy bicycles – Warnings and instructions for use	N/A
4.15.2.3	Toy bicycles – Braking	N/A

MECHANICAL & PHYSICAL PROPERTIES
(EN 71: PART 1 – 2014+A1 – 2018)

Subclause	Requirement	Result
4.15.3 & 7.16 & 7.19	Rocking horses and similar toys	N/A
4.15.4 & 7.16	Toys not propelled by child	N/A
4.15.5 & 7.18	Toy scooters	N/A
4.16	Heavy immobile toys	N/A
4.17.2	All projectiles	N/A
4.17.3 & 7.7	Projectile toys with stored energy	N/A
4.17.4 & 7.26	Certain projectiles toys without stored energy	N/A
4.18 & 7.4	Aquatic toys and inflatable toys	N/A
4.19 & 7.13 & 7.14	Percussion caps	N/A
4.20.2.1- 4.20.2.8, 4.20.2.10, 4.20.2.12	Acoustics	M
4.20.2.9, 4.20.2.11 & 7.14	Acoustics – percussion toys & cap-firing toys	M
4.21	Toys containing a non-electrical heat source	N/A
4.22	Small balls	N/A
4.23	Magnet	N/A
4.23.2 a, b & c	Toy other than magnetic / electrical experimental sets intended for children over 8 years	N/A
4.23.3 & 7.20	Magnetic / electrical experimental sets intended for children over 8 years	N/A
4.24	Yo-yo ball	N/A
4.25	Toys attached to food	N/A
4.26	Toy Disguise Costumes	N/A
4.27.1	Flying toys – General	N/A
4.27.2 & 7.25.1	Rotors and propellers on flying toys	N/A
4.27.3 & 7.25.2	Rotors and propellers on remote controlled flying toys	N/A
FOR TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS		
5.1	General	N/A
5.1a	Small parts – as received	N/A
5.1b	Small parts, sharp points, sharp edges – after tests	N/A
5.1c	Cross section <2mm metal points & wires	N/A
5.1e	Toys contain glue	N/A
5.1f	Casing of toys	N/A
5.2	Fillings, coverings and seams	N/A
5.3	Adhesion of plastic sheeting	N/A
5.4.2	Cords and chains in toys intended for children under 18 months	N/A
5.4.3 & 7.22	Cords and chains in toys intended for children of 18 months or over but under 36 months	N/A
5.4.4	Fixed loops, tangled loops and nooses	N/A
5.4.5	Cords and chains on pull along toys	N/A
5.4.6 & 7.21	Electrical cables	N/A
5.4.7	Cross-sectional dimension of certain cords	N/A
5.4.8	Self-retracting cords	N/A

MECHANICAL & PHYSICAL PROPERTIES
(EN 71: PART 1 – 2014+A1 – 2018)

Subclause	Requirement	Result
5.4.9 & 7.11 & 7.23	Toys attached to or intended to be strung across a cradle, cot or perambulator	N/A
5.5 & 7.12	Liquid filled toys	N/A
5.6	Electrically driven toys	N/A
5.7	Glass and porcelain	N/A
5.8	Shape and size	N/A
5.9 & 7.17	Monofilament fibres	N/A
5.10	Small balls	N/A
5.11	Play figures	N/A
5.12	Hemispheric shaped toys	N/A
5.13	Suction cups	N/A
5.14	Straps intended to be worn fully or partially around the neck	N/A
5.15 & 7.24	Sledges with cords for pulling	N/A
6	Packaging	N/A
WARNINGS, INSTRUCTIONS FOR USE		
7.1	General	M
7.2	Toys not intended for children under 36 months	N/A
7.5	Functional toys	N/A

M = Meet NM = Not Meet N/A = Not Applicable NT = Not Tested NR = Not Requested R = Refer to Comment Section

RESULTS:

2009/48/EC GENERAL LABELING REQUIREMENT

Requirement	Result
CE Mark	M
Manufacturer/ Importer name and address	M
Product Identification	M

M = Meet NM = Not Meet N/A = Not Applicable NT = Not Tested NR = Not Requested R = Refer to Comment Section

RESULTS:

FLAMMABILITY PROPERTIES
(EN 71 PART 2:2020)

Subclause	Requirement	Result
4.1	General requirements The following materials shall not be present in toys: --Celluloid (cellulose nitrate), except when used in varnish, paint, glue, or in balls for table tennis or similar games; -Highly flammable solids. --Materials with a piled surface which produce surface flash when a flame is applied under the conditions described in 5.5. Piled surfaces showing no momentary area of flame over the piled surface remote from the test flame are considered compliant. Specific materials tested for flame application to check compliance with 4.2 to 4.5 are deemed compliant with the above if the toy meets the requirements in 4.2 to 4.5. In addition, toys shall not contain flammable gases, extremely flammable liquids, highly flammable liquids, flammable liquids, or flammable gels, except as permitted below: --Flammable liquids and gels in sealed containers with a maximum volume of 15 ml per container; --Highly flammable and flammable liquids entirely retained within porous materials in capillary channels of writing instruments; --Flammable liquids with a viscosity > 260 × 10^{-6} m^2/s (corresponding to a flow time > 38 s per EN ISO 2431:2019, Cup No. 6); --Highly flammable liquids in chemical toys, olfactory board games, cosmetic kits, and gustative games (as defined in 2009/48/EC).	M
4.2.1	Toys to be worn on the head 4.2.1 General The requirements of 4.2 apply to: -Beards, moustaches, wigs, etc. made from hair, pile or material with similar features; --Moulded and fabric masks; --Hoods, head-dresses, etc.; --Flowing elements of toys to be worn on the head. but not to paper novelty hats of the type usually supplied in party crackers. When a product incorporates several features (e.g., a hat with an attached mask and hair), each part shall be tested separately to the applicable clause relevant to that particular part of the toy. Attachments made from elastic or string which are used for the purpose of securing a mask, hat, etc. on the head shall not be tested.	N/A

RESULTS:

FLAMMABILITY PROPERTIES
(EN 71 PART 2:2020)

Subclause	Requirement	Result
4.2.2	4.2.2 Beards, moustaches, wigs, etc., made from hair, pile or material with similar features (e.g., free-hanging ribbons, paper, cloth strands), protruding ≥ 50 mm from the toy surface When tested per 5.2, the duration of flaming shall not be more than 2s after the removal of the test flame. In addition, if ignition occurs, the maximum burnt length of hair, pile or material with similar features shall not be: a) More than 50% of the greatest initial length if the initial length ≥ 150 mm; or b) More than 75% of the greatest initial length if the initial length < 150 mm. When determining whether materials are required to be tested under 4.2.2,the distance by which the material protrudes shall be measured without applying tension to the protruding part, e.g., curly hair is not straightened. Plaits/braided hair shall be fully released and combed, where possible. before testing.	N/A
4.2.3	4.2.3 Beards, moustaches, wigs, etc., made from hair, pile or material with similar features(e.g. free-hanging ribbons,paper,cloth strands or other flowing elements), which protruding < 50 mm from the surface of the toy wigs, etc., made from hair, pile or material with similar features which protruding ≤ 5 mm from the surface of the toy are regards as head-dresses and are covered by 4.2.5. When tested in accordance with 5.3, the duration of flaming shall not be more than 2 s after removal of the test flame, and the maximum distance between the upper edge of the burnt area and the point of application of the test flame shall not be more than 70 mm.	N/A
4.2.4	4.2.4 Full or partial moulded head masks When tested in accordance with 5.3, the duration of flaming shall not be more than 2 s after removal of the test flame, and the maximum distance between the upper edge of the burnt area and the point of application of the test flame shall not be more than 70 mm.	N/A
4.2.5	4.2.5 Flowing elements of toys to be worn on the head (except those covered by 4.2.2–4.2.3), hoods, head-dresses etc. and masks not covered by 4.2.4 which partially or fully cover the head (e.g. fabric and cardboard masks, eye masks, face masks), but excluding those items covered by 4.3 When tested in accordance with 5.4, the rate of spread of flame of the test sample shall not exceed 10 mm/s or the test sample shall self-extinguish.	N/A
4.3	Toy disguise costumes and toys intended to be worn by a child in play Requirement: (1) When tested accordance with 5.4, the rate of spread of flame of the test sample shall not exceed 30 mm/s or the test sample shall self-extinguish. (2) If the rate of spread of flame is between 10mm/s and 30 mm/s, the appropriate parts of the toy and the packaging shall be permanently marked with the following warning: "Warning. Keep away from fire".	N/A

RESULTS:

FLAMMABILITY PROPERTIES
(EN 71 PART 2:2020)

Subclause	Requirement	Result
4.4	Toys intended to be entered by a child Requirement: (1) When tested in accordance with 5.4, the rate of spread of flame of the test sample shall not exceed 30 mm/s, or the test sample shall self-extinguish. (2) If the test specimen has a rate of spread of flame greater than 20 mm/s when tested in accordance with 5.4, there shall be no flaming debris or molten drips. (3) If the material has non-identical surfaces, both sides shall be tested. (4) If the rate of spread of flame is between 10mm/s and 30 mm/s, the appropriate part(s) of the toy and the packaging shall be permanently marked with the following warning: "Warning. Keep away from fire".	N/A
4.5	Soft-filled toys The requirements of this subclause do not apply to soft-filled toys or soft-filled parts of a toy that cannot be cuddled or hugged by a child during play. The requirements of this subclause do not apply to toys which, when positioned in accordance with 5.5.3, present a maximum unhindered vertical soft-filled height of 150 mm or less. Soft-filled toys shall be tested as supplied, including any clothing or cover present with the toy and, if considered to be more onerous, with the clothes or cover removed if removal can be accomplished without damage to the clothes, cover or toy. When tested in accordance with 5.5, the rate of spread of flame on the surface shall not be more than 30 mm/s or the toy shall self-extinguish.	N/A

M = Meet NM = Not Meet P = Present NP = Not Present N/A = Not Applicable NT = Not Tested NR = Not Requested R = Refer to Comment Section

RESULTS:

MECHANICAL PHYSICAL PROPERTIES
(BS EN 71: PART 1 - 2014+A1 - 2018)

Subclause	Requirement	Result
4.1	Material cleanliness	M
4.2	Assembly	N/A
4.3	Flexible plastic sheeting	N/A
4.4	Toy Bags	N/A
4.5	Glass	N/A
4.6	Expanding materials	N/A
4.7 & 7.6	Edges	M
4.8 & 7.6	Points and metallic wires	M
4.8e	Splinters	M
4.9	Protruding parts	N/A
4.10.1	Folding and sliding mechanisms	N/A
4.10.2	Driving mechanisms	N/A
4.10.3	Hinges	N/A
4.10.4	Springs	N/A
4.11	Mouth actuated toys and other toys intended to be put in the mouth	M
4.12 & 7.3	Balloons	N/A
4.13 & 7.9	Cord of toy kites and other flying toys	N/A
4.14.1	Toys which a child can enter	N/A
4.14.2 & 7.8	Masks and helmets	N/A
4.15.1	Toys propelled by child	N/A
4.15.1.2 & 7.10.1 & 7.10.2 & 7.10.3 & 7.10.4 & 7.16	Toys propelled by child – Instructions for use	N/A
4.15.1.3	Toys propelled by child – Strength	N/A
4.15.1.4	Toys propelled by child – Stability	N/A
4.15.1.5	Toys propelled by child – Braking	N/A
4.15.1.6	Toys propelled by child - Transmission	N/A
4.15.1.7	Toys propelled by child – insertion mark	N/A
4.15.1.8	Electrically-driven ride-on toys	N/A
4.15.2	Toy bicycles	N/A
4.15.2.2 & 7.15	Toy bicycles – Warnings and instructions for use	N/A
4.15.2.3	Toy bicycles – Braking	N/A
4.15.3 & 7.16 & 7.19	Rocking horses and similar toys	N/A
4.15.4 & 7.16	Toys not propelled by child	N/A
4.15.5 & 7.18	Toy scooters	N/A
4.16	Heavy immobile toys	N/A
4.17.2	All projectiles	N/A
4.17.3 & 7.7	Projectile toys with stored energy	N/A
4.17.4 & 7.26	Certain projectiles toys without stored energy	N/A
4.18 & 7.4	Aquatic toys and inflatable toys	N/A

RESULTS:

MECHANICAL PHYSICAL PROPERTIES
(BS EN 71: PART 1 - 2014+A1 - 2018)

Subclause	Requirement	Result
4.19 & 7.13 & 7.14	Percussion caps	N/A
4.20.2.1- 4.20.2.8, 4.20.2.10, 4.20.2.12	Acoustics	M
4.20.2.9, 4.20.2.11 & 7.14	Acoustics – percussion toys & cap-firing toys	M
4.21	Toys containing a non-electrical heat source	N/A
4.22	Small balls	N/A
4.23	Magnet	N/A
4.23.2 a, b & c	Toy other than magnetic / electrical experimental sets intended for children over 8 years	N/A
4.23.3 & 7.20	Magnetic / electrical experimental sets intended for children over 8 years	N/A
4.24	Yo-yo ball	N/A
4.25	Toys attached to food	N/A
4.26	Toy Disguise Costumes	N/A
4.27.1	Flying toys – General	N/A
4.27.2 & 7.25.1	Rotors and propellers on flying toys	N/A
4.27.3 & 7.25.2	Rotors and propellers on remote controlled flying toys	N/A
FOR TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS		
5.1	General	N/A
5.1a	Small parts – as received	N/A
5.1b	Small parts, sharp points, sharp edges – after tests	N/A
5.1c	Cross section <2mm metal points & wires	N/A
5.1e	Toys contain glue	N/A
5.1f	Casing of toys	N/A
5.2	Fillings, coverings and seams	N/A
5.3	Adhesion of plastic sheeting	N/A
5.4.2	Cords and chains in toys intended for children under 18 months	N/A
5.4.3 & 7.22	Cords and chains in toys intended for children of 18 months or over but under 36 months	N/A
5.4.4	Fixed loops, tangled loops and nooses	N/A
5.4.5	Cords and chains on pull along toys	N/A
5.4.6 & 7.21	Electrical cables	N/A
5.4.7	Cross-sectional dimension of certain cords	N/A
5.4.8	Self-retracting cords	N/A
5.4.9 & 7.11 & 7.23	Toys attached to or intended to be strung across a cradle, cot or perambulator	N/A
5.5 & 7.12	Liquid filled toys	N/A
5.6	Electrically driven toys	N/A
5.7	Glass and porcelain	N/A
5.8	Shape and size	N/A
5.9 & 7.17	Monofilament fibres	N/A

RESULTS:

MECHANICAL PHYSICAL PROPERTIES
(BS EN 71: PART 1 - 2014+A1 - 2018)

Subclause	Requirement	Result
5.10	Small balls	N/A
5.11	Play figures	N/A
5.12	Hemispheric shaped toys	N/A
5.13	Suction cups	N/A
5.14	Straps intended to be worn fully or partially around the neck	N/A
5.15 & 7.24	Sledges with cords for pulling	N/A
6	Packaging	N/A
WARNINGS, INSTRUCTIONS FOR USE		
7.1	General	M
7.2	Toys not intended for children under 36 months	N/A
7.5	Functional toys	N/A

M = Meet NM = Not Meet N/A = Not Applicable NT = Not Tested NR = Not Requested R = Refer to Comment Section

RESULTS:

FLAMMABILITY PROPERTIES
(BS EN 71 PART 2:2020)

Subclause	Requirement	Result
4.1	General requirements The following materials shall not be present in toys: --Celluloid (cellulose nitrate), except when used in varnish, paint, glue, or in balls for table tennis or similar games; -Highly flammable solids. --Materials with a piled surface which produce surface flash when a flame is applied under the conditions described in 5.5. Piled surfaces showing no momentary area of flame over the piled surface remote from the test flame are considered compliant. Specific materials tested for flame application to check compliance with 4.2 to 4.5 are deemed compliant with the above if the toy meets the requirements in 4.2 to 4.5. In addition, toys shall not contain flammable gases, extremely flammable liquids, highly flammable liquids, flammable liquids, or flammable gels, except as permitted below: --Flammable liquids and gels in sealed containers with a maximum volume of 15 ml per container; --Highly flammable and flammable liquids entirely retained within porous materials in capillary channels of writing instruments; --Flammable liquids with a viscosity > 260 × 10^{-6} m^2/s (corresponding to a flow time > 38 s per EN ISO 2431:2019, Cup No. 6); --Highly flammable liquids in chemical toys, olfactory board games, cosmetic kits, and gustative games (as defined in 2009/48/EC).	M
4.2.1	Toys to be worn on the head 4.2.1 General The requirements of 4.2 apply to: -Beards, moustaches, wigs, etc. made from hair, pile or material with similar features; --Moulded and fabric masks; --Hoods, head-dresses, etc.; --Flowing elements of toys to be worn on the head. but not to paper novelty hats of the type usually supplied in party crackers. When a product incorporates several features (e.g., a hat with an attached mask and hair), each part shall be tested separately to the applicable clause relevant to that particular part of the toy. Attachments made from elastic or string which are used for the purpose of securing a mask, hat, etc. on the head shall not be tested.	N/A

RESULTS:

FLAMMABILITY PROPERTIES
(BS EN 71 PART 2:2020)

Subclause	Requirement	Result
4.2.2	4.2.2 Beards, moustaches, wigs, etc., made from hair, pile or material with similar features (e.g., free-hanging ribbons, paper, cloth strands), protruding ≥ 50 mm from the toy surface When tested per 5.2, the duration of flaming shall not be more than 2s after the removal of the test flame. In addition, if ignition occurs, the maximum burnt length of hair, pile or material with similar features shall not be: a) More than 50% of the greatest initial length if the initial length ≥ 150 mm; or b) More than 75% of the greatest initial length if the initial length < 150 mm. When determining whether materials are required to be tested under 4.2.2,the distance by which the material protrudes shall be measured without applying tension to the protruding part, e.g., curly hair is not straightened. Plaits/braided hair shall be fully released and combed, where possible. before testing.	N/A
4.2.3	4.2.3 Beards, moustaches, wigs, etc., made from hair, pile or material with similar features(e.g. free-hanging ribbons,paper,cloth strands or other flowing elements), which protruding < 50 mm from the surface of the toy wigs, etc., made from hair, pile or material with similar features which protruding ≤ 5 mm from the surface of the toy are regards as head-dresses and are covered by 4.2.5. When tested in accordance with 5.3, the duration of flaming shall not be more than 2 s after removal of the test flame, and the maximum distance between the upper edge of the burnt area and the point of application of the test flame shall not be more than 70 mm.	N/A
4.2.4	4.2.4 Full or partial moulded head masks When tested in accordance with 5.3, the duration of flaming shall not be more than 2 s after removal of the test flame, and the maximum distance between the upper edge of the burnt area and the point of application of the test flame shall not be more than 70 mm.	N/A
4.2.5	4.2.5 Flowing elements of toys to be worn on the head (except those covered by 4.2.2–4.2.3), hoods, head-dresses etc. and masks not covered by 4.2.4 which partially or fully cover the head (e.g. fabric and cardboard masks, eye masks, face masks), but excluding those items covered by 4.3 When tested in accordance with 5.4, the rate of spread of flame of the test sample shall not exceed 10 mm/s or the test sample shall self-extinguish.	N/A
4.3	Toy disguise costumes and toys intended to be worn by a child in play Requirement: (1) When tested accordance with 5.4, the rate of spread of flame of the test sample shall not exceed 30 mm/s or the test sample shall self-extinguish. (2) If the rate of spread of flame is between 10mm/s and 30 mm/s, the appropriate parts of the toy and the packaging shall be permanently marked with the following warning: "Warning. Keep away from fire".	N/A

RESULTS:

FLAMMABILITY PROPERTIES
(BS EN 71 PART 2:2020)

Subclause	Requirement	Result
4.4	Toys intended to be entered by a child Requirement: (1) When tested in accordance with 5.4, the rate of spread of flame of the test sample shall not exceed 30 mm/s, or the test sample shall self-extinguish. (2) If the test specimen has a rate of spread of flame greater than 20 mm/s when tested in accordance with 5.4, there shall be no flaming debris or molten drips. (3) If the material has non-identical surfaces, both sides shall be tested. (4) If the rate of spread of flame is between 10mm/s and 30 mm/s, the appropriate part(s) of the toy and the packaging shall be permanently marked with the following warning: "Warning. Keep away from fire".	N/A
4.5	Soft-filled toys The requirements of this subclause do not apply to soft-filled toys or soft-filled parts of a toy that cannot be cuddled or hugged by a child during play. The requirements of this subclause do not apply to toys which, when positioned in accordance with 5.5.3, present a maximum unhindered vertical soft-filled height of 150 mm or less. Soft-filled toys shall be tested as supplied, including any clothing or cover present with the toy and, if considered to be more onerous, with the clothes or cover removed if removal can be accomplished without damage to the clothes, cover or toy. When tested in accordance with 5.5, the rate of spread of flame on the surface shall not be more than 30 mm/s or the toy shall self-extinguish.	N/A

M = Meet NM = Not Meet N/A = Not Applicable R = Refer to Comment Section

RESULTS:

UKCA mark & UK Toys (Safety) Regulation 2011 labeling.

Requirement	Result
UKCA Marking	M
Company name and UK address	M
Product Identification	M

M = Meet NM = Not Meet N/A = Not Applicable NT = Not Tested NR = Not Requested R = Refer to Comment Section

RESULTS:

BS EN ISO 105 X12 Colourfastness to rubbing

Sample Description	Dry/Wet procedure	Result	Requirement	Conclusion
Black (cup)(fork)	Dry	4-5	-	Data
	Wet	4-5	-	Data
Black (plate)	Dry	4-5	-	Data
	Wet	4-5	-	Data
Gray & Blue (plate)	Dry	4-5	-	Data
	Wet	4-5	-	Data
Black (cord)	Dry	3-4	-	Data
	Wet	3	-	Data

RESULTS:

BBP/DBP/DEHP/DIBP CONTENTS (European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 51 (amended up to EU No. 2018/2005))

Test Method : International Standard ISO 8124-6: 2018, Method C.

Sample Identity	Color / Component	Location	Style
1	all coating	paper sticker	A
2	all coating	paper card,paper plate .paper cup	A
3	all coating/ white coating	pattern on ball	A
4	grey coating	origami	A
5	white plastic	handclap	A
6	black plastic	handclap	A
7	clear adhesive tape	adhesive tape	A
8	soft white plastic	Whistle	A
9	silvery plastic	ball	A
10	blue plastic	tube of ball	A
11	multi-color printed clear laminated white paper	paper cup	A
12	grey plastic	joint of tube	A
13	white foam	foam sticker	A
14	clear glue	glue	A

Parameter	**Unit**	**Result**					**Limit**
		1 + 2	3 + 4	5 + 6 + 7	8 + 9 + 10	11 + 12	
BBP	%	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	0.1
DBP	%	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	0.1
DEHP	%	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	0.1
DIBP	%	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	0.1
Sum of four phthalates	%	LT 0.02	LT 0.02	LT 0.02	LT 0.02	LT 0.02	0.1
Conclusion	-	PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result	Limit
		13 + 14	
BBP	%	LT 0.005	0.1
DBP	%	LT 0.005	0.1
DEHP	%	LT 0.005	0.1
DIBP	%	LT 0.005	0.1
Sum of four phthalates	%	LT 0.02	0.1
Conclusion	-	PASS	-

Detection Limit :
BBP = Butyl benzyl phthalate (0.005%)
DBP = Dibutyl phthalate (0.005%)
DEHP = Di(2-ethylhexyl) phthalate (0.005%)
DIBP = Diisobutyl phthalate (0.005%)

LT = Less than
ND = None detected
Results reported in percentage

RESULTS:

DNOP/DINP/DIDP CONTENTS IN TOYS AND CHILDCARE ARTICLES WHICH CAN BE PLACED IN MOUTH BY THE CHILDREN (European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 52)

Test Method : International Standard ISO 8124-6: 2018, Method C.

Sample Identity	Color / Component	Location	Style
1	all coating	paper sticker	A
2	all coating	paper card,paper plate .paper cup	A
3	all coating/ white coating	pattern on ball	A
4	grey coating	origami	A
5	white plastic	handclap	A
6	black plastic	handclap	A
7	clear adhesive tape	adhesive tape	A
8	soft white plastic	Whistle	A
9	silvery plastic	ball	A
10	blue plastic	tube of ball	A
11	multi-color printed clear laminated white paper	paper cup	A
12	grey plastic	joint of tube	A
13	white foam	foam sticker	A
14	clear glue	glue	A

Parameter	**Unit**	**Result**					**Limit**
		1 + 2	3 + 4	5 + 6 + 7	8 + 9 + 10	11 + 12	
DNOP	%	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	0.1
DINP	%	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	0.1
DIDP	%	LT 0.005	LT 0.005	LT 0.005	LT 0.005	LT 0.005	0.1
Sum of DNOP, DINP and DIDP	%	LT 0.015	LT 0.015	LT 0.015	LT 0.015	LT 0.015	0.1
Conclusion	-	PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result	Limit
		13 + 14	
DNOP	%	LT 0.005	0.1
DINP	%	LT 0.005	0.1
DIDP	%	LT 0.005	0.1
Sum of DNOP, DINP and DIDP	%	LT 0.015	0.1
Conclusion	-	PASS	-

LT = Less than
ND = None detected
Results reported in percentage
Detection Limit :
DNOP = Di-n-octyl phthalate (0.005%)
DINP = Di-iso-nonyl phthalate (0.005%)
DIDP = Di-iso-decyl phthalate (0.005%)

RESULTS:

CADMIUM CONTENT (European Regulation (EC) No. 1907/2006 REACH Annex XVII and its amendments up to Commission Regulation (EU) No. 2016/217, Item no. 23)

Test Method : I: BS EN 1122: 2001, Method B
II: In house acid digestion

Sample Identity	Color / Component	Location	Style
1	all coating	paper sticker	A
2	all coating	paper card,paper plate .paper cup	A
3	all coating/ white coating	pattern on ball	A
4	grey coating	origami	A
5	white plastic	handclap	A
6	black plastic	handclap	A
7	clear adhesive tape	adhesive tape	A
8	soft white plastic	Whistle	A
9	silvery plastic	ball	A
10	blue plastic	tube of ball	A
11	multi-color printed clear laminated white paper	paper cup	A
12	grey plastic	joint of tube	A
13	white foam	foam sticker	A
14	clear glue	glue	A

Requirement	**Type I: Plastics: 100 mg/kg (0.01% by weight)** **Type II: Paints on Painted Article: 1000 mg/kg (0.1% by weight)** **Type III: Paints: 100 mg/kg (0.01% by weight)** **Type IV: Paints with a high zinc content of over 100,000 mg/kg: 100 mg/kg (0.01% by weight)** **Type V: Recovered Polyvinylchloride (PVC): 1000 mg/kg (0.1% by weight)** **Type VI: Brazing Filler: 100 mg/kg (0.01% by weight)** **Type VII: Metals in Jewelry: 100 mg/kg (0.01% by weight)** **Type VIII:other materials:100 mg/kg (0.01% by weight)**

Parameter	**Unit**	**Result**				**Limit**
		1	2	3	4	
Type	**-**	II	II	II	II	**-**
Method	**-**	II	II	II	II	**-**
Cadmium (Cd)	mg/kg	LT 10	LT 10	LT 10	LT 10	1000
Conclusion	-	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result			Limit
		5 + 6 + 7 + 8	9 + 10 + 11	12 + 13 + 14	
Type	**-**	I	I	I	**-**
Method	**-**	I	I	I	**-**
Cadmium (Cd)	mg/kg	LT 10	LT 10	LT 10	100
Conclusion	-	PASS	PASS	PASS	-

LT = Less than

mg/kg = milligrams per kilogram (ppm = parts per million)

BS EN 1122 Operator: Jiang Wei Ming, Wellen

RESULTS:

SHORT CHAIN CHLORINATED PARAFFINS (SCCPS) CONTENT (European Parliament and Council Regulation (EU) 2019/1021 on Persistent Organic Pollutants (POPs) (recast), Annex I, Part A)

Test Method : Solvent extraction and analysis by Gas Chromatograph Mass Spectrometer Negative Chemical Ionization (GC-MS/NCI).

Sample Identity	Color / Component	Location	Style
5	white plastic	handclap	A
6	black plastic	handclap	A
9	silvery plastic	ball	A
10	blue plastic	tube of ball	A
11	multi-color printed clear laminated white paper	paper cup	A
30	clear adhesive tape /soft white plastic	Whistle,adhesive tape	A
31	grey plastic /white foam/ clear glue	joint of tube ,foam sticker ,glue	A

Parameter	**Unit**	**Result**			**Limit**
		5 + 6 + 9	10 + 11	30 + 31	
SCCP	mg/kg	ND	ND	ND	1500
Conclusion	-	PASS	PASS	PASS	-

LT = Less Than
* = Average of duplicate analyses
mg/kg = milligrams per kilogram
ND = None Detected (detection limit = 30 mg/kg)

Remark:
Short chain chlorinated paraffins (SCCPs) is also known as alkanes C10-C13, chloro.
Plastics and leather of product(s) are applicable to be tested only.

RESULTS:

HEAVY METALS PRESENT IN PACKAGING (European Council Directive 94/62/EC on Packaging and Packaging Waste)

Sample Identity	Color / Component	Location	Style
25	multi-color printed white/ brown paper board	box	A
26	multi-color printed soft white paper	joint of Whistle	A
27	brown paper sheet	wrap of spoon,fork& knife	A
28	clear laminated white paper	joint of foam sticker	A
29	transparent plastic sticker	sticker on box	A

Parameter	**Unit**	**Result**					**Limit**
		25	26	27	28	29	
Sum of Pb, Cd, Hg and Cr VI	mg/kg	LT 20	LT 20	LT 20	LT 20	LT 20	100
Conclusion	-	PASS	PASS	PASS	PASS	PASS	-

LT = Less Than

mg/kg = milligrams per kilogram (ppm = parts per million)

* = Average of duplicate analyses

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2019+A2:2024)

Test Method : European Standard EN 71 Part 3: 2019+A2:2024, Section 9.

Sample Identity	Color / Component	Location	Style
3	all coating/ white coating	pattern on ball	A
5	white plastic	handclap	A
6	black plastic	handclap	A
7	clear adhesive tape	adhesive tape	A
8	soft white plastic	Whistle	A
9	silvery plastic	ball	A
10	blue plastic	tube of ball	A
11	multi-color printed clear laminated white paper	paper cup	A
12	grey plastic	joint of tube	A
13	white foam	foam sticker	A
14	clear glue	glue	A
15	multi-color printed white paper sticker	paper sticker	A
16	multi-color printed soft white paper 纸	paper plate	A
17	multi-color printed bright white paper	paper card	A
18	black printed white paper	Whistle	A
19	grey printed dull white paper	end of origami	A
20	soft grey paper	origami	A
21	multi-color printed off white paper	tissue	A
22	multi-color printed dark white paper	mat	A
23	flesh wood	spoon,fork,knife	A
24	black fabric	string of paper card	A

Class	Category III - Scraped off toy material

Parameter	Unit	Result					Limit:
		3	5	6	7	8	
Aluminium (Al)	mg/kg	79.7	LT 2	LT 2	2.93	LT 2	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	15000
Barium (Ba)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	0.216	0.0643	LT 0.025	0.0295	LT 0.025	460
Chromium VI (Cr VI)	mg/kg	#LT 0.025	#LT 0.025	LT 0.025	0.0295	LT 0.025	0.053
Copper (Cu)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930
Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	56000
Zinc (Zn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	46000
Mass of trace amount (g)		0.0182	-	-	0.0877	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result					Limit:
		9	10	11	12	13	
Aluminium (Al)	mg/kg	1680	LT 2	843	LT 2	2.31	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	15000
Barium (Ba)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	0.0346	0.115	0.272	LT 0.025	0.0295	460
Chromium VI (Cr VI)	mg/kg	0.0346	#LT 0.025	#LT 0.025	LT 0.025	0.0295	0.053
Copper (Cu)	mg/kg	LT 2	13.0	LT 2	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	LT 2	LT 2	12.9	LT 2	LT 2	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930

Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	LT 2	LT 2	7.69	LT 2	LT 2	56000
Zinc (Zn)	mg/kg	2.27	LT 2	LT 2	LT 2	11.9	46000
Mass of trace amount (g)		-	-	-	-	0.0229	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	**Unit**	**Result**					**Limit:**
		14	15	16	17	18	
Aluminium (Al)	mg/kg	16.9	32.7	240	168	536	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	LT 2	LT 2	LT 2	LT 2	5.50	15000
Barium (Ba)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	0.0515	0.0806	0.0537	0.0337	0.330	460
Chromium VI (Cr VI)	mg/kg	0.0515	#LT 0.025	#LT 0.025	0.0337	#LT 0.025	0.053
Copper (Cu)	mg/kg	LT 2	2.78	LT 2	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	6.62	6.03	5.40	5.99	3.05	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930
Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	13.9	52.1	46.1	47.6	5.16	56000
Zinc (Zn)	mg/kg	LT 2	2.44	LT 2	LT 2	LT 2	46000
Mass of trace amount (g)		0.0322	-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result					Limit:
		19	20	21	22	23	
Aluminium (Al)	mg/kg	315	66.1	4.75	51.3	LT 2	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	3.76	LT 2	LT 2	11.4	2.78	15000
Barium (Ba)	mg/kg	7.10	3.65	2.41	4.13	21.8	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	2.83	0.218	LT 0.025	0.0505	LT 0.025	460
Chromium VI (Cr VI)	mg/kg	#LT 0.025	#LT 0.025	LT 0.025	0.0505	LT 0.025	0.053
Copper (Cu)	mg/kg	3.85	LT 2	2.03	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	22.3	26.4	2.91	LT 2	21.2	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930
Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	69.0	55.0	248	3.10	4.41	56000
Zinc (Zn)	mg/kg	14.8	4.11	4.90	2.95	17.0	46000
Mass of trace amount (g)		-	-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result	Limit:
		24	
Aluminium (Al)	mg/kg	6.74	28130
Arsenic (As)	mg/kg	LT 2	47
Boron (B)	mg/kg	LT 2	15000
Barium (Ba)	mg/kg	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	17
Cobalt (Co)	mg/kg	LT 2	130
Chromium III (Cr III)	mg/kg	2.33	460
Chromium VI (Cr VI)	mg/kg	#LT 0.025	0.053
Copper (Cu)	mg/kg	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	94
Manganese (Mn)	mg/kg	6.25	15000
Nickel (Ni)	mg/kg	LT 2	930
Lead (Pb)	mg/kg	LT 2	23
Antimony (Sb)	mg/kg	2.21	560
Selenium (Se)	mg/kg	LT 2	460

Tin (Sn)	mg/kg	LT 2	180000
Organic Tin	mg/kg	LT 2	12
Strontium (Sr)	mg/kg	3.37	56000
Zinc (Zn)	mg/kg	6.23	46000
Mass of trace amount (g)		-	-
Conclusion		PASS	-

mg/kg = milligrams per kilogram (ppm=parts per million) LT = Less Than

* = Average of duplicate analysis FR = Failed Result
Organic tin = migration of total organic tin is expressed as tributyl tin cation content in mg/kg
= Verified results (see note)
Remark:
- Results of Cr III and Cr VI were reported as sum of soluble Chromium content unless specified.
- Result(s) of organic tin was (were) calculated while assuming the tin content wholly contributed from tributyltin cation unless specified.
Note:
If soluble chromium content or soluble tin content exceeded the screening limits of soluble chromium (VI) or organic tin content, the results were verified by below method
- Chromium VI: EN71 part 3:2019+A2:2024, Annex F
- Organic tin: EN71 part 3:2019+A2:2024, Annex G by Gas Chromatography – Mass Spectroscopy analysis.

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (European Standard EN 71 Part 3: 2019+A1:2021)

Test Method : European Standard EN 71 Part 3: 2019+A1:2021, Section 9.

Sample Identity	Color / Component	Location	Style
3	all coating/ white coating	pattern on ball	A
5	white plastic	handclap	A
6	black plastic	handclap	A
7	clear adhesive tape	adhesive tape	A
8	soft white plastic	Whistle	A
9	silvery plastic	ball	A
10	blue plastic	tube of ball	A
11	multi-color printed clear laminated white paper	paper cup	A
12	grey plastic	joint of tube	A
13	white foam	foam sticker	A
14	clear glue	glue	A
15	multi-color printed white paper sticker	paper sticker	A
16	multi-color printed soft white paper 纸	paper plate	A
17	multi-color printed bright white paper	paper card	A
18	black printed white paper	Whistle	A
19	grey printed dull white paper	end of origami	A
20	soft grey paper	origami	A
21	multi-color printed off white paper	tissue	A
22	multi-color printed dark white paper	mat	A
23	flesh wood	spoon,fork,knife	A
24	black fabric	string of paper card	A

Class	Category III - Scraped off toy material

Parameter	Unit	Result					Limit:
		3	5	6	7	8	
Aluminium (Al)	mg/kg	79.7	LT 2	LT 2	2.93	LT 2	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	15000
Barium (Ba)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	0.216	0.0643	LT 0.025	0.0295	LT 0.025	460
Chromium VI (Cr VI)	mg/kg	#LT 0.025	#LT 0.025	LT 0.025	0.0295	LT 0.025	0.053
Copper (Cu)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930
Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	56000
Zinc (Zn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	46000
Mass of trace amount (g)		0.0182	-	-	0.0877	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result					Limit:
		9	10	11	12	13	
Aluminium (Al)	mg/kg	1680	LT 2	843	LT 2	2.31	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	15000
Barium (Ba)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	0.0346	0.115	0.272	LT 0.025	0.0295	460
Chromium VI (Cr VI)	mg/kg	0.0346	#LT 0.025	#LT 0.025	LT 0.025	0.0295	0.053
Copper (Cu)	mg/kg	LT 2	13.0	LT 2	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	LT 2	LT 2	12.9	LT 2	LT 2	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930

Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	LT 2	LT 2	7.69	LT 2	LT 2	56000
Zinc (Zn)	mg/kg	2.27	LT 2	LT 2	LT 2	11.9	46000
Mass of trace amount (g)		-	-	-	-	0.0229	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	**Unit**	**Result**					**Limit:**
		14	15	16	17	18	
Aluminium (Al)	mg/kg	16.9	32.7	240	168	536	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	LT 2	LT 2	LT 2	LT 2	5.50	15000
Barium (Ba)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	0.0515	0.0806	0.0537	0.0337	0.330	460
Chromium VI (Cr VI)	mg/kg	0.0515	#LT 0.025	#LT 0.025	0.0337	#LT 0.025	0.053
Copper (Cu)	mg/kg	LT 2	2.78	LT 2	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	6.62	6.03	5.40	5.99	3.05	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930
Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	13.9	52.1	46.1	47.6	5.16	56000
Zinc (Zn)	mg/kg	LT 2	2.44	LT 2	LT 2	LT 2	46000
Mass of trace amount (g)		0.0322	-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result					Limit:
		19	20	21	22	23	
Aluminium (Al)	mg/kg	315	66.1	4.75	51.3	LT 2	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	3.76	LT 2	LT 2	11.4	2.78	15000
Barium (Ba)	mg/kg	7.10	3.65	2.41	4.13	21.8	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	2.83	0.218	LT 0.025	0.0505	LT 0.025	460
Chromium VI (Cr VI)	mg/kg	#LT 0.025	#LT 0.025	LT 0.025	0.0505	LT 0.025	0.053
Copper (Cu)	mg/kg	3.85	LT 2	2.03	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	22.3	26.4	2.91	LT 2	21.2	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930
Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	69.0	55.0	248	3.10	4.41	56000
Zinc (Zn)	mg/kg	14.8	4.11	4.90	2.95	17.0	46000
Mass of trace amount (g)		-	-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result	Limit:
		24	
Aluminium (Al)	mg/kg	6.74	28130
Arsenic (As)	mg/kg	LT 2	47
Boron (B)	mg/kg	LT 2	15000
Barium (Ba)	mg/kg	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	17
Cobalt (Co)	mg/kg	LT 2	130
Chromium III (Cr III)	mg/kg	2.33	460
Chromium VI (Cr VI)	mg/kg	#LT 0.025	0.053
Copper (Cu)	mg/kg	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	94
Manganese (Mn)	mg/kg	6.25	15000
Nickel (Ni)	mg/kg	LT 2	930
Lead (Pb)	mg/kg	LT 2	23
Antimony (Sb)	mg/kg	2.21	560
Selenium (Se)	mg/kg	LT 2	460

Tin (Sn)	mg/kg	LT 2	180000
Organic Tin	mg/kg	LT 2	12
Strontium (Sr)	mg/kg	3.37	56000
Zinc (Zn)	mg/kg	6.23	46000
Mass of trace amount (g)		-	-
Conclusion		PASS	-

mg/kg = milligrams per kilogram LT = Less Than
* = Average of duplicate analysis FR = Failed Result
Organic tin = migration of total organic tin is expressed as tributyl tin cation content in mg/kg
= Verified results (see note)

Remark:
- Results of Cr III and Cr VI were reported as sum of soluble Chromium content unless specified.
- Result(s) of organic tin was (were) calculated while assuming the tin content wholly contributed from tributyltin cation unless specified.

Note:
If soluble chromium content or soluble tin content exceeded the screening limits of soluble chromium (VI) or organic tin content, the results were verified by below method:
- Chromium VI: EN71 part 3:2019+A1:2021, Annex F
- Organic tin: EN71 part 3:2019+A1:2021, Annex G by Gas Chromatography – Mass Spectroscopy analysis.

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (British Standard BS EN 71 Part 3: 2019+A1:2021)

Test Method : British Standard BS EN 71 Part 3: 2019+A1:2021, Section 9.

Sample Identity	Color / Component	Location	Style
3	all coating/ white coating	pattern on ball	A
5	white plastic	handclap	A
6	black plastic	handclap	A
7	clear adhesive tape	adhesive tape	A
8	soft white plastic	Whistle	A
9	silvery plastic	ball	A
10	blue plastic	tube of ball	A
11	multi-color printed clear laminated white paper	paper cup	A
12	grey plastic	joint of tube	A
13	white foam	foam sticker	A
14	clear glue	glue	A
15	multi-color printed white paper sticker	paper sticker	A
16	multi-color printed soft white paper 纸	paper plate	A
17	multi-color printed bright white paper	paper card	A
18	black printed white paper	Whistle	A
19	grey printed dull white paper	end of origami	A
20	soft grey paper	origami	A
21	multi-color printed off white paper	tissue	A
22	multi-color printed dark white paper	mat	A
23	flesh wood	spoon,fork,knife	A
24	black fabric	string of paper card	A

Class	Category III - Scraped off toy material

Parameter	Unit	Result					Limit:
		3	5	6	7	8	
Aluminium (Al)	mg/kg	79.7	LT 2	LT 2	2.93	LT 2	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	15000
Barium (Ba)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	0.216	0.0643	LT 0.025	0.0295	LT 0.025	460
Chromium VI (Cr VI)	mg/kg	#LT 0.025	#LT 0.025	LT 0.025	0.0295	LT 0.025	0.053
Copper (Cu)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930
Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	56000
Zinc (Zn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	46000
Mass of trace amount (g)		0.0182	-	-	0.0877	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result					Limit:
		9	10	11	12	13	
Aluminium (Al)	mg/kg	1680	LT 2	843	LT 2	2.31	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	15000
Barium (Ba)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	0.0346	0.115	0.272	LT 0.025	0.0295	460
Chromium VI (Cr VI)	mg/kg	0.0346	#LT 0.025	#LT 0.025	LT 0.025	0.0295	0.053
Copper (Cu)	mg/kg	LT 2	13.0	LT 2	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	LT 2	LT 2	12.9	LT 2	LT 2	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930

Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	LT 2	LT 2	7.69	LT 2	LT 2	56000
Zinc (Zn)	mg/kg	2.27	LT 2	LT 2	LT 2	11.9	46000
Mass of trace amount (g)		-	-	-	-	0.0229	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	**Unit**	**Result**					**Limit:**
		14	15	16	17	18	
Aluminium (Al)	mg/kg	16.9	32.7	240	168	536	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	LT 2	LT 2	LT 2	LT 2	5.50	15000
Barium (Ba)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	0.0515	0.0806	0.0537	0.0337	0.330	460
Chromium VI (Cr VI)	mg/kg	0.0515	#LT 0.025	#LT 0.025	0.0337	#LT 0.025	0.053
Copper (Cu)	mg/kg	LT 2	2.78	LT 2	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	6.62	6.03	5.40	5.99	3.05	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930
Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	13.9	52.1	46.1	47.6	5.16	56000
Zinc (Zn)	mg/kg	LT 2	2.44	LT 2	LT 2	LT 2	46000
Mass of trace amount (g)		0.0322	-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result					Limit:
		19	20	21	22	23	
Aluminium (Al)	mg/kg	315	66.1	4.75	51.3	LT 2	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	3.76	LT 2	LT 2	11.4	2.78	15000
Barium (Ba)	mg/kg	7.10	3.65	2.41	4.13	21.8	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	2.83	0.218	LT 0.025	0.0505	LT 0.025	460
Chromium VI (Cr VI)	mg/kg	#LT 0.025	#LT 0.025	LT 0.025	0.0505	LT 0.025	0.053
Copper (Cu)	mg/kg	3.85	LT 2	2.03	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	22.3	26.4	2.91	LT 2	21.2	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930
Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	69.0	55.0	248	3.10	4.41	56000
Zinc (Zn)	mg/kg	14.8	4.11	4.90	2.95	17.0	46000
Mass of trace amount (g)		-	-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result	Limit:
		24	
Aluminium (Al)	mg/kg	6.74	28130
Arsenic (As)	mg/kg	LT 2	47
Boron (B)	mg/kg	LT 2	15000
Barium (Ba)	mg/kg	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	17
Cobalt (Co)	mg/kg	LT 2	130
Chromium III (Cr III)	mg/kg	2.33	460
Chromium VI (Cr VI)	mg/kg	#LT 0.025	0.053
Copper (Cu)	mg/kg	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	94
Manganese (Mn)	mg/kg	6.25	15000
Nickel (Ni)	mg/kg	LT 2	930
Lead (Pb)	mg/kg	LT 2	23
Antimony (Sb)	mg/kg	2.21	560
Selenium (Se)	mg/kg	LT 2	460

Tin (Sn)	mg/kg	LT 2	180000
Organic Tin	mg/kg	LT 2	12
Strontium (Sr)	mg/kg	3.37	56000
Zinc (Zn)	mg/kg	6.23	46000
Mass of trace amount (g)		-	-
Conclusion		PASS	-

mg/kg = milligrams per kilogram
LT = Less Than
* = Average of duplicate analysis
FR = Failed Result
Organic tin = migration of total organic tin is expressed as tributyl tin cation content in mg/kg
= Verified results (see note)

Remark:
- Results of Cr III and Cr VI were reported as sum of soluble Chromium content unless specified.
- Result(s) of organic tin was (were) calculated while assuming the tin content wholly contributed from tributyltin cation unless specified.

Note:
If soluble chromium content or soluble tin content exceeded the screening limits of soluble chromium (VI) or organic tin content, the results were verified by below method:
- Chromium VI: BS EN71 part 3:2019+A1:2021, Annex F
- Organic tin: BS EN71 part 3:2019+A1:2021, Annex G by Gas Chromatography – Mass Spectroscopy analysis.

RESULTS:

AROMATIC AMINES (AZOCOLOURANTS) CONTENT (European Regulation (EC) No. 1907/2006 REACH with its Latest Amendment, Annex XVII, Item no. 43, Points 1 and 2)

Test Method : Quantification by Gas Chromatography/Mass Spectrometry (GC/MS)
Additional chromatographic technique employed to confirm positive result by HPLC/TLC

Sample Identity	Color / Component	Location	Style
24	black fabric	string of paper card	A

Maximum Limit:	**30 mg/kg**

Tested Item(s)	Test Method	Result		Unit	Conclusion
		Detected Analyte(s)	Conc.		
24	I	ND	ND	mg/kg	PASS

ND = Not Detected (Detection Limit = 10 mg/kg (ppm)) ppm = parts per million
mg/kg = milligrams per kilogram NR = Not Requested
* = The specimen is a minor component. As only a reduced mass (< 0.5 g) could be used for the test the result may have a greater uncertainty due to lower material homogeneity
Amine No. = Refer to List of Banned Amines for the description of the detected Amine.
Test Method I = BS EN ISO 14362-1: 2017, Clauses 9, 10.2 and afterwards.
Test Method II = BS EN ISO 14362-1: 2017, Clauses 9, 10.1, 10.3 and afterwards.
Test Method III = International Standard ISO 17234-1: 2020.

Remark:
The list of aromatic amines in azo colorants is summarized in table of Appendix.
The CAS-number 97-56-3 (no. 5) and 99-55-8 (no. 6) are further reduced to CAS-number 95-53-4 (no. 18) and 95-80-7 (no. 19), respectively.
The colorant(s) of Test Item(s), that are able to form 4-aminoazobenzene, is (are) able to generate aniline and 1,4-phenylenediamine under the condition of Test Method.
The absence of 4-aminoazobenzene is inferred by the absence of aniline and 1,4-phenylenediamine under the condition of Test Method.
The presence of 4-aminoazobenzene is determined by BS EN ISO 14362-3: 2017.
The presence of 4-aminoazobenzene is determined by ISO 17234-2: 2011.

LIST OF BANNED AMINES Specified Amines		
Number	Chemical Name	CAS Number
1.	4-aminobiphenyl	92-67-1
2.	Benzidine	92-87-5
3.	4-chloro-o-toluidine	95-69-2
4.	2-naphthylamine	91-59-8
5.	o-aminoazotoluene	97-56-3
6.	5-nitro-o-toluidine	99-55-8
7.	4-chloroaniline	106-47-8
8.	4-methoxy-m-phenylenediamine	615-05-4
9.	4,4'-diaminodiphenylmethane	101-77-9
10.	3,3'-dichlorobenzidine	91-94-1
11.	3,3'-dimethoxybenzidine	119-90-4
12.	3,3'-dimethylbenzidine	119-93-7
13.	4,4'-methylenedi-o-toluidine	838-88-0
14.	p-cresidine	120-71-8
15.	4,4'-methylene-bis-(2-chloro-aniline)	101-14-4
16.	4,4'-oxydianiline	101-80-4
17.	4,4'-thiodianiline	139-65-1
18.	o-toluidine	95-53-4
19.	4-methyl-m-phenylenediamine	95-80-7
20.	2,4,5-trimethylaniline	137-17-7
21.	o-anisidine	90-04-0
22.	4-amino azobenzene	60-09-3

RESULTS:

POLYCYCLIC AROMATIC HYDROCARBONS (PAHs) CONTENT (European Regulation (EC) No. 1907/2006 REACH Annex XVII, Item no. 50, Paragraph 5 and 6 with (EU) No. 1272/2013 & its amendments)

Test Method : With reference to test method mentioned in German AfPS GS 2019:01 PAK

Sample Identity	Color / Component	Location	Style
1	all coating	paper sticker	A
2	all coating	paper card,paper plate .paper cup	A
4	grey coating	origami	A
5	white plastic	handclap	A
6	black plastic	handclap	A
7	clear adhesive tape	adhesive tape	A
8	soft white plastic	Whistle	A
9	silvery plastic	ball	A
10	blue plastic	tube of ball	A
11	multi-color printed clear laminated white paper	paper cup	A
12	grey plastic	joint of tube	A
13	white foam	foam sticker	A

Maximum Limit:	**Type I**	**Articles includes amongst others:** **- sport equipment such as bicycles, golf clubs, racquets** **- household utensils, trolleys, walking frames tools for domestic use** **- clothing, footwear, gloves and sportswear** **- watch-straps, wrist-bands, masks, head-bands** **1 mg/kg (Each of all listed PAHs)**
	Type II	**Toys, including activity toys, and childcare articles** **0.5 mg/kg (Each of all listed PAHs)**

Test Item(s)	Type	Result		Unit	Conclusion
		Detected Analyte(s)	Conc.		
1 + 2	II	ND	ND	mg/kg	PASS
4	II	ND	ND	mg/kg	PASS
5 + 6	II	ND	ND	mg/kg	PASS
7 + 8	II	ND	ND	mg/kg	PASS
9 + 10	II	ND	ND	mg/kg	PASS
11 + 12	II	ND	ND	mg/kg	PASS
13	II	ND	ND	mg/kg	PASS

ND = Not detected
Conc. = Concentration
Detection Limit : Each PAHs 0.2 mg/kg

“>” = More than
mg/kg = milligram per kilogram

Remark:
- The list of polycyclic aromatic hydrocarbons is summarized in table of Appendix.

APPENDIX

List of Polynuclear Aromatic Hydrocarbons:					
No.	**Name of Analytes**	**CAS-No.**	**No.**	**Name of Analytes**	**CAS-No.**
1	Benzo[a]pyrene (BaP)	50-32-8	5	Benzo[b]fluoranthene (BbFA)	205-99-2
2	Benzo[e]pyrene (BeP)	192-97-2	6	Benzo[j]fluoranthene (BjFA)	205-82-3
3	Benzo[a]anthracene (BaA)	56-55-3	7	Benzo[k]fluoranthene (BkFA)	207-08-9
4	Chrysene (CHR)	218-01-9	8	Dibenzo[a,h]anthracene (DBAhA)	53-70-3

RESULTS:

MIGRATION OF CERTAIN ELEMENTS (British Standard BS EN 71 Part 3: 2019+A2:2024)

Test Method : British Standard BS EN 71 Part 3: 2019+A2:2024, Section 9.

Sample Identity	Color / Component	Location	Style
3	all coating/ white coating	pattern on ball	A
5	white plastic	handclap	A
6	black plastic	handclap	A
7	clear adhesive tape	adhesive tape	A
8	soft white plastic	Whistle	A
9	silvery plastic	ball	A
10	blue plastic	tube of ball	A
11	multi-color printed clear laminated white paper	paper cup	A
12	grey plastic	joint of tube	A
13	white foam	foam sticker	A
14	clear glue	glue	A
15	multi-color printed white paper sticker	paper sticker	A
16	multi-color printed soft white paper 纸	paper plate	A
17	multi-color printed bright white paper	paper card	A
18	black printed white paper	Whistle	A
19	grey printed dull white paper	end of origami	A
20	soft grey paper	origami	A
21	multi-color printed off white paper	tissue	A
22	multi-color printed dark white paper	mat	A
23	flesh wood	spoon,fork,knife	A
24	black fabric	string of paper card	A

Class	Category III - Scraped off toy material

Parameter	Unit	Result					Limit:
		3	5	6	7	8	
Aluminium (Al)	mg/kg	79.7	LT 2	LT 2	2.93	LT 2	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	15000
Barium (Ba)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	0.216	0.0643	LT 0.025	0.0295	LT 0.025	460
Chromium VI (Cr VI)	mg/kg	#LT 0.025	#LT 0.025	LT 0.025	0.0295	LT 0.025	0.053
Copper (Cu)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930
Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	56000
Zinc (Zn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	46000
Mass of trace amount (g)		0.0182	-	-	0.0877	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result					Limit:
		9	10	11	12	13	
Aluminium (Al)	mg/kg	1680	LT 2	843	LT 2	2.31	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	15000
Barium (Ba)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	0.0346	0.115	0.272	LT 0.025	0.0295	460
Chromium VI (Cr VI)	mg/kg	0.0346	#LT 0.025	#LT 0.025	LT 0.025	0.0295	0.053
Copper (Cu)	mg/kg	LT 2	13.0	LT 2	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	LT 2	LT 2	12.9	LT 2	LT 2	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930

Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	LT 2	LT 2	7.69	LT 2	LT 2	56000
Zinc (Zn)	mg/kg	2.27	LT 2	LT 2	LT 2	11.9	46000
Mass of trace amount (g)		-	-	-	-	0.0229	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	**Unit**	**Result**					**Limit:**
		14	15	16	17	18	
Aluminium (Al)	mg/kg	16.9	32.7	240	168	536	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	LT 2	LT 2	LT 2	LT 2	5.50	15000
Barium (Ba)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	0.0515	0.0806	0.0537	0.0337	0.330	460
Chromium VI (Cr VI)	mg/kg	0.0515	#LT 0.025	#LT 0.025	0.0337	#LT 0.025	0.053
Copper (Cu)	mg/kg	LT 2	2.78	LT 2	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	6.62	6.03	5.40	5.99	3.05	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930
Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	13.9	52.1	46.1	47.6	5.16	56000
Zinc (Zn)	mg/kg	LT 2	2.44	LT 2	LT 2	LT 2	46000
Mass of trace amount (g)		0.0322	-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result					Limit:
		19	20	21	22	23	
Aluminium (Al)	mg/kg	315	66.1	4.75	51.3	LT 2	28130
Arsenic (As)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	47
Boron (B)	mg/kg	3.76	LT 2	LT 2	11.4	2.78	15000
Barium (Ba)	mg/kg	7.10	3.65	2.41	4.13	21.8	18750
Cadmium (Cd)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	17
Cobalt (Co)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	130
Chromium III (Cr III)	mg/kg	2.83	0.218	LT 0.025	0.0505	LT 0.025	460
Chromium VI (Cr VI)	mg/kg	#LT 0.025	#LT 0.025	LT 0.025	0.0505	LT 0.025	0.053
Copper (Cu)	mg/kg	3.85	LT 2	2.03	LT 2	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	94
Manganese (Mn)	mg/kg	22.3	26.4	2.91	LT 2	21.2	15000
Nickel (Ni)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	930
Lead (Pb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	23
Antimony (Sb)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	560
Selenium (Se)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	460
Tin (Sn)	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	180000
Organic Tin	mg/kg	LT 2	LT 2	LT 2	LT 2	LT 2	12
Strontium (Sr)	mg/kg	69.0	55.0	248	3.10	4.41	56000
Zinc (Zn)	mg/kg	14.8	4.11	4.90	2.95	17.0	46000
Mass of trace amount (g)		-	-	-	-	-	-
Conclusion		PASS	PASS	PASS	PASS	PASS	-

Parameter	Unit	Result	Limit:
		24	
Aluminium (Al)	mg/kg	6.74	28130
Arsenic (As)	mg/kg	LT 2	47
Boron (B)	mg/kg	LT 2	15000
Barium (Ba)	mg/kg	LT 2	18750
Cadmium (Cd)	mg/kg	LT 2	17
Cobalt (Co)	mg/kg	LT 2	130
Chromium III (Cr III)	mg/kg	2.33	460
Chromium VI (Cr VI)	mg/kg	#LT 0.025	0.053
Copper (Cu)	mg/kg	LT 2	7700
Mercury (Hg)	mg/kg	LT 2	94
Manganese (Mn)	mg/kg	6.25	15000
Nickel (Ni)	mg/kg	LT 2	930
Lead (Pb)	mg/kg	LT 2	23
Antimony (Sb)	mg/kg	2.21	560
Selenium (Se)	mg/kg	LT 2	460

Tin (Sn)	mg/kg	LT 2	180000
Organic Tin	mg/kg	LT 2	12
Strontium (Sr)	mg/kg	3.37	56000
Zinc (Zn)	mg/kg	6.23	46000
Mass of trace amount (g)		-	-
Conclusion		PASS	-

mg/kg = milligrams per kilogram (ppm=parts per million) LT = Less Than

* = Average of duplicate analysis FR = Failed Result
Organic tin = migration of total organic tin is expressed as tributyl tin cation content in mg/kg
= Verified results (see note)
Remark:
- Results of Cr III and Cr VI were reported as sum of soluble Chromium content unless specified.
- Result(s) of organic tin was (were) calculated while assuming the tin content wholly contributed from tributyltin cation unless specified.
Note:
If soluble chromium content or soluble tin content exceeded the screening limits of soluble chromium (VI) or organic tin content, the results were verified by below method
- Chromium VI: EN71 part 3:2019+A2:2024, Annex F
- Organic tin: EN71 part 3:2019+A2:2024, Annex G by Gas Chromatography – Mass Spectroscopy analysis.

RESULTS:

Sample Description Assigned by Laboratory:

Test Item	Description	Client Claimed Material
1	Clear coating (inner cup)	/
2	Brown wood (knife, spoon, fork)	Wood
3	Black /Red printed white paper (plate)	Paper

1. Overall Migration Test for Plastic Materials in Contact with Foodstuffs – Commission Regulation (EU) No. 10/2011 and Its Amendments

Test Condition: 3% Acetic acid: 70 ℃, 2hrs
50% Ethanol: 70℃ ,2hrs

Simulant Used	Unit	Result	Maximum Allowable Limit	Analytical Tolerance
		1		
Food contact surface area	dm^2	1.71	-	-
Volume of stimulant used	mL	250	-	-
3% Acetic acid	mg/dm^2	<5	10	+2
50% Ethanol	mg/dm^2	<5	10	+2
Conclusion	-	PASS	-	-

Note: "<" = less than
mg/dm^2 = milligram per square decimetre

Method: EN 1186-1: 2002.

Remark: 1) The migration test is carried out according to EC Regulation No. 10/2011 and the corresponding regulatory statutes.

2) For article intended for single use, only single determination is carried out in the migration tests and the test result is shown in result table.

2. Phthalate Contents for Plastic Materials in Contact with Foodstuffs - Commission Regulation (EU) No. 10/2011 and Its Amendments

Parameter	Unit	Result	Maximum Allowable Limit
		1	
Butyl benzyl phthalate (BBP)	%	<0.005	0.1
Dibutyl phthalate (DBP)	%	<0.005	0.05
Di-2-ethylhexyl phthalate (DEHP)	%	<0.005	0.1
Di-iso-decyl phthalate (DIDP)	%	<0.005	0.1
Di-iso-nonyl phthalate (DINP)	%	<0.005	0.1
Conclusion	-	PASS	-

Note: "<" = less than

Method: Solvent extraction and analysis by Gas Chromatograph Mass Spectrometer (GC-MS) or Liquid Chromatograph Mass Spectrometer (LC-MS).

RESULTS:

3. Specific Migration of Heavy Metals for Plastic Materials in Contact with Foodstuffs – Commission Regulation (EU) No. 10/2011 and Its Amendments,

Test Condition: 3% Acetic acid :70℃, 2 hrs

Parameter	Simulant Used	Unit	Result	Maximum Allowable Limit
			1	
Food contact surface area	-	dm^2	1.71	-
Volume of stimulant used	-	mL	250	-
Barium (Ba)	3% Acetic acid	mg/kg	<0.01	1
Cobalt (Co)	3% Acetic acid	mg/kg	<0.01	0.05
Copper (Cu)	3% Acetic acid	mg/kg	<0.04	5
Iron (Fe)	3% Acetic acid	mg/kg	<0.04	48
Lithium (Li)	3% Acetic acid	mg/kg	<0.01	0.6
Manganese (Mn)	3% Acetic acid	mg/kg	<0.01	0.6
Zinc (Zn)	3% Acetic acid	mg/kg	<0.01	5
Aluminum (Al)	3% Acetic acid	mg/kg	<0.1	1
Nickel (Ni)	3% Acetic acid	mg/kg	<0.01	0.02
Antimony (Sb)	3% Acetic acid	mg/kg	<0.01	0.04
Arsenic (As)	3% Acetic acid	mg/kg	<0.01	Not detected
Cadmium (Cd)	3% Acetic acid	mg/kg	<0.002	Not detected
Chromium (Cr)	3% Acetic acid	mg/kg	<0.01	Not detected
Europium (Eu)	3% Acetic acid	mg/kg	<0.01	0.05
Gadolinium (Gd)	3% Acetic acid	mg/kg	<0.01	0.05
Lanthanum (La)	3% Acetic acid	mg/kg	<0.01	0.05
Lead (Pb)	3% Acetic acid	mg/kg	<0.01	Not detected
Mercury (Hg)	3% Acetic acid	mg/kg	<0.01	Not detected
Terbium (Tb)	3% Acetic acid	mg/kg	<0.01	0.05
Sum of Europium (Eu), Gadolinium (Gd), Lanthanum (La), and/or Terbium (Tb)	3% Acetic acid	mg/kg	<0.01	0.05
Conclusion	**-**	-	PASS	-

Note: "<" = less than
mg/kg = milligram per kilogram

Method: EN 13130-1: 2004 and analysis by Inductively Coupled Argon Plasma Spectrometer (ICP).

Remark: 1) The migration test is carried out according to EC Regulation No. 10/2011 and the corresponding regulatory statutes.

2) For article intended for single use, only single determination is carried out in the migration tests and the test result is shown in result table.

RESULTS:

4. Specific Migration of Phthalates for Plastic Materials in Contact with Foodstuffs –Commission Regulation (EU) No. 10/2011 and Its Amendments

Test Condition: 3% Acetic acid:70℃, 2hrs
50% Ethanol: 70℃, 2hrs

Parameter	Simulant Used	Unit	Result 1	Maximum Allowable Limit
Food contact surface area	-	dm^2	1.71	-
Volume of stimulant used	-	mL	250	-
Butyl benzyl phthalate (BBP)	3% Acetic acid	mg/kg	<0.01	6
	50% Ethanol	mg/kg	<0.01	
Di-2-ethylhexyl phthalate (DEHP)	3% Acetic acid	mg/kg	<0.01	0.6
	50% Ethanol	mg/kg	0.0258	
Dibutyl phthalate (DBP)	3% Acetic acid	mg/kg	<0.01	0.12
	50% Ethanol	mg/kg	<0.01	
Butyl benzyl phthalate (BBP), Di-2-ethylhexyl phthalate (DEHP), Dibutyl phthalate (DBP) and Di-iso-butyl phthalate (DIBP)	3% Acetic acid	mg/kg	<0.01	0.6 (a)
	50% Ethanol	mg/kg	0.0516	
Di-iso-decyl phthalate (DIDP) and Di-iso-nonyl phthalate (DINP)	3% Acetic acid	mg/kg	<0.01	1.8
	50% Ethanol	mg/kg	0.0621	
Conclusion	**-**	-	PASS	

Note: "<" = less than
mg/kg = milligram per kilogram

Method: EN 13130-1: 2004 and analysis by Liquid Chromatograph Mass Spectrometer (LC-MS).

Remark: 1) The migration test is carried out according to EU regulation No. 10/2011 and the corresponding regulatory statutes.

2) For article intended for single use, only single determination is carried out in the migration tests and the test result is shown in result table.

5. Pentachlorophenol Content for Wood in Contact with Foodstuffs – Chemicals Prohibition Ordinance (ChemVerbotsV) Article 15

Parameter	Unit	Result 2	Maximum Allowable Limit
PCP	mg/kg	<0.1	5
Conclusion	-	PASS	-

Note: "<" = less than
mg/kg = milligram per kilogram

Method: §64 LFGB B82.02-8:2001 modified.

RESULTS:

6. Specific Migration of Formaldehyde for Wood in Contact with Foodstuffs – § 30 and 31 LFGB

Test Condition: 3% Acetic acid: 70 ℃, 2 hrs
95% ethanol: 60 ℃, 2 hrs
Iso-octane: 40 ℃, 0.5 hrs

Parameter	Simulant Used	Unit	Result	Maximum Allowable Limit
			2	
Food contact surface area	-	dm^2	0.686	-
Volume of simulant used	-	mL	114	-
Formaldehyde	3% Acetic acid	mg/kg	<1.5	15
	95% Ethanol	mg/kg	<1.5	15
	Iso-octane	mg/kg	<1.5	15
Conclusion	**-**	-	PASS	-

Note: "<" = less than
mg/kg = milligram per kilogram

Method: EN 13130-1:2004 and CEN/TS 13130-23:2005

Remark: 1) For article intended for single use, only single determination is carried out in the migration tests and the test result is shown in result table.

7. Polychlorinated Biphenyls Content for Wood in Contact with Foodstuffs – Chemicals Prohibition Ordinance (ChemVerbotsV) Article 13

Parameter	Unit	Result	Maximum Allowable Limit
		2	
PCB	mg/kg	<1	5
Conclusion	-	PASS	-

Note: "<" = less than
mg/kg = milligram per kilogram

Method: Solvent extraction and analysis by Gas Chromatography Mass Spectrometer (GC-MS).

Remark: The list of polychlorinated biphenyls is summarized in table of Appendix.

APPENDIX

List of Polychlorobiphenyls:			
No.	**Name of Analytes**	**No.**	**Name of Analytes**
1	2,2',5 Trichlorobiphenyl (PCB-18)	5	2,2',3,4,4',5'-Hexachlorobiphenyl (PCB-138)
2	2,4,4'-Trichlorobiphenyl (PCB-28)	6	2,2',4,4',5,5'-Hexachlorobiphenyl (PCB-153)
3	2,2',5,5'-Tetrachlorobiphenyl (PCB-52)	7	2,2',3,4,4',5,5'-Heptachlorobiphenyl (PCB-180)
4	2,2',4,5,5'-Pentachlorobiphenyl (PCB-101)	-	-

RESULTS:

8. Sensory Test (Odour and Taste) for Materials in Contact with Foodstuffs – EC No. 1935/2004 and § 30 and 31 LFGB and BfR Recommendation

Parameter	Result		Maximum Allowable Limit
	2	3	
Odour	0	0	2.5 Scale
Taste transfer into foodstuff through simulant, Mineral Water	0	0	2.5 Scale
Taste transfer into foodstuff through simulant, Olive oil	0	0	2.5 Scale
Conclusion	PASS	PASS	-

Note: Scale: 0 = no perceptible off-odour (or taste transfer);
1 = off-odour (or taste transfer) just perceptible (but still difficult to define);
2 = slight off-odour (or taste transfer);
3 = distinct off-odour (or taste transfer);
4 = strong off-odour (or taste transfer)

Method: DIN 10955: 2024-01

9. Fastness of Fluorescence for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation

Test Condition: Procedure B – Medium time contact: 4 h at (23 ± 2) oC

Parameter	Simulant Used	Result	Limit
		3	
Optical Bluings (Fluorescence)	Distilled water	Grade 5	No less than Grade 5
	3% Acetic acid	Grade 5	
	Alkaline salt solution	Grade 5	
	Rectified olive oil	Grade 5	
Conclusion	-	PASS	-

Note: Scale: 5 = negligible or no change or staining;
4 = slightly changed or stained;
3 = noticeably changed or stained;
2 = considerably changed or stained;
1 = much changed or stained

Method: EN 648: 2018,

RESULTS:

10. Migration of Dyes for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation and French Decree 2007-766 and MCDA SHEET N ° 4 (V02 - 01/01/2019)

Test Condition: Procedure B-medium time contact:4hrs at (23 ± 2) °C

Parameter	Simulant Used	Result	Maximum Allowable Limit
		3	
Migration of Dyes	Distilled water	Grade 5	No less than Grade 5
	3% Acetic acid	Grade 5	
	Alkaline salt solution	Grade 5	
	Olive oil	Grade 5	
Conclusion	-	PASS	-

Note: Scale: 5 = negligible or no change or staining;
4 = slightly changed or stained;
3 = noticeably changed or stained;
2 = considerably changed or stained;
1 = much changed or stained

Method: EN 646:2018

11. Formaldehyde Content for Paper and Paperboard in Contact with Foodstuffs – § 30 and 31 LFGB and BfR Recommendation

Parameter	Unit	Result	Maximum Allowable Limit
		3	
Formaldehyde	mg/dm^2	<0.5	1
Conclusion	-	PASS	-

Note: "<" = less than
mg/dm^2 = milligram per square decimeter

Method: EN 645:1994 and analysis by EN 1541:2001.

Remark: The limit refers to BfR Recommendation XXXVII.

RESULTS:

12. Azo Dyestuff Content for Paper and Paperboard in Contact with Foodstuffs - § 30 and 31 LFGB and BfR Recommendation

Parameter	Unit	Result	Maximum Allowable Limit
		3	
o-Toluidine	mg/kg	<10	30
2-Methoxyaniline	mg/kg	<10	30
p-Chloroaniline	mg/kg	<10	30
p-Kresidine	mg/kg	<10	30
2,4,5-Trimethylaniline	mg/kg	<10	30
4-Chloro-o-Toluidine	mg/kg	<10	30
2,4-Toluylenediamine	mg/kg	<10	30
2,4-Diaminoanisole	mg/kg	<10	30
2-Naphthylamine	mg/kg	<10	30
2-Amino-4-nitrotoluene	mg/kg	<10	30
4-Aminodiphenyl	mg/kg	<10	30
p-Aminoazobenzene	mg/kg	<10	30
4,4'-Oxydianiline	mg/kg	<10	30
Benzidine	mg/kg	<10	30
4,4'-Diaminodiphenylmethane	mg/kg	<10	30
o-Aminoazotoluene	mg/kg	<10	30
3,3'-Dimethyl-4,4'-diaminodiphenylmethane	mg/kg	<10	30
3,3'-Dimethylbenzidine	mg/kg	<10	30
4,4'-Thiodianiline	mg/kg	<10	30
3,3'-Dichlorobenzidine	mg/kg	<10	30
4,4'-Methylene-bis-(2-chloraniline)	mg/kg	<10	30
3,3'-Dimethoxybenzidine	mg/kg	<10	30
Conclusion	-	PASS	-

Note: mg/kg = milligram per kilogram
"<" = less than
">" = more than

Method: EN 14362-1:2017

Remark : 1. The limit refers to BfR Recommendation XXXVI.

RESULTS:

13. Specific Migration of Primary Aromatic Amine for Paper and Paperboard in Contact with Foodstuffs – § 30 and 31 LFGB, BfR Recommendation

Test Condition: Distilled water: 23 °C, 24hrs

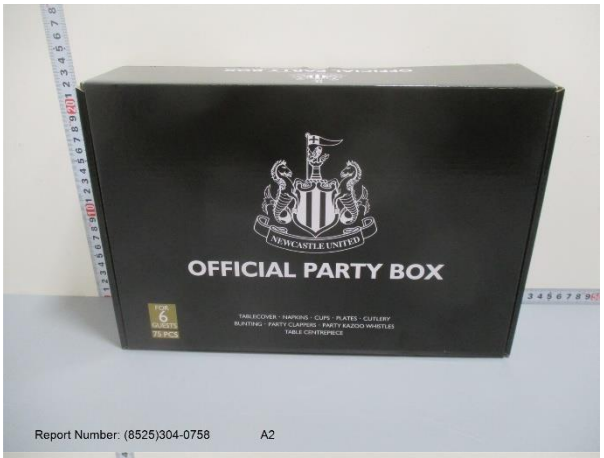
Parameter	Unit	Result	Maximum Allowable Limit
		3	
4-aminobiphenyl / 4-biphenylamine	ug/L	<2	2
o-anisidine / 2-methoxyaniline	ug/L	<2	2
Benzidine	ug/L	<2	2
4-Chloro-aniline / p-chloroaniline	ug/L	<2	2
4-Chloro-o-toluidine	ug/L	<2	2
4,4'-Diaminodiphenylether / 4,4'-oxydianiline	ug/L	<2	2
4,4'-Methylenedianiline / 4,4'-diamino-diphenylmethane	ug/L	<2	2
4,4-Methylenedi-o-toluidine / 3,3'-dimethyl-4,4'-diaminodiphenylmethane	ug/L	<2	2
2-Methoxy-5-methylaniline / p-cresidine	ug/L	<2	2
4-Methoxy-m-phenylenediamine / 2,4-diaminoanisole	ug/L	<2	2
o-Toluidine / 2-aminotoluene	ug/L	<2	2
2,4-Toluenediamine	ug/L	<2	2
3,3-Dimethylbenzidine	ug/L	<2	2
2,4,5-Trimethylaniline	ug/L	<2	2
Aniline*	ug/L	<2	10
2,4-Dimethylaniline / 2,4-xylidine*	ug/L	<2	10
2,6-Dimethylaniline / 2,6-xylidine*	ug/L	<2	10
m-Phenylenediamine / 1,3-phenylenediamine*	ug/L	<2	10
p-Phenylenediamine / 1,4-phenylenediamine*	ug/L	<2	10
2,6-Toluenediamine*	ug/L	<2	10
1,5-Diaminenaphthalene*	ug/L	<2	10
2-naphthylamine	ug/L	<2	2
o-aminoazotoluene/ 4-amino-2',3-dimethylazobenzene/ 4-o-tolylazo-o-toluidine	ug/L	<2	2
5-nitro-o-toluidine*	ug/L	<2	10
3,3'-dichlorobenzidine	ug/L	<2	2
3,3'-dimethoxybenzidine / o-dianisidine	ug/L	<2	2
4,4'-methylene-bis-(2-chloro-aniline) / 2,2'-dichloro-4,4'-methylene-dianiline	ug/L	<2	2
4,4'-thiodianiline	ug/L	<2	2
4-amino azobenzene	ug/L	<2	2
Sum of primary aromatic amines with *	ug/L	<2	10
Conclusion	-	PASS	-

Note: "<" = less than
ug/L = microgram per liter

Method: EN 647:1994, LC-MSMS analysis.

Remark: The limit refers to BfR Recommendation XXXVI.

SAMPLE PHOTO:



END OF REPORT