



# TEST REPORT

MID OCEAN BRANDS B.V.

Technical Report: (3222)185-0297

Jul 12, 2022

Date Received: Jul.04,2022

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MID OCEAN BRANDS B.V.  
7/F., KINGS TOWER, 111 KING LAM STREET, CHEUNG SHA  
WAN, KOWLOON, HONG KONG

## SAMPLE INFORMATION:

|                             |                     |                         |        |
|-----------------------------|---------------------|-------------------------|--------|
| Sample Description:         | CCOLOR PENCIL SET   | Sample Quantity:        | N/A    |
| Vendor:                     | 111041              | Style No(s):            | MO7389 |
| Manufacturer:               | N/A                 | SKN/SKU No.:            | N/A    |
| Buyer:                      | N/A                 | PO No.:                 | N/A    |
| Labeled Age Grade:          | NOT PROVIDED        | Ref #:                  | N/A    |
| Appropriate Age Grade:      | N/A                 | Country of Origin:      | N/A    |
| Client Specified Age Grade: | OVER 3 YEARS OF AGE | Assortment No.:         | N/A    |
| Tested Age Grade:           | OVER 3 YEARS OF AGE | Country of Destination: | N/A    |
| UPC Code:                   | N/A                 | Color :                 | N/A    |

## EXECUTIVE SUMMARY:

| TEST REQUESTED                                                                                                                                                   | CONCLUSION           |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| 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. | PASS<br>See note 2&3 |
| The flammability requirements of the European Standard "Safety of Toys", EN 71: Part 2: 2020                                                                     | PASS                 |
| Migration of Certain Elements - EN71-3:2019+A1:2021                                                                                                              | PASS                 |

Note:

- 1.The sample is tested as "Over 3 years of age" per the client's request.
2. No relevant packaging was provided with the submitted sample(s), consequently, evaluation of the labeling requirements of this European Standard, "Safety of toys", EN71: Part 1:2014+A1:2018, clauses 7, was not conducted.
- 3.The submitted sample **releases** small part **after abuse**, thus, according to EN71: Part 1:2014+A1:2018, the following small part warning is required.  
"Warning! Not suitable for children under 36 months.Small parts.Chocking hazard.

Remark:The report test data with "\*" take from report (2421)365-8022 data Mar 14,2022.

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**BVCPS (ZHEJIANG) GENERAL CONTACT INFORMATION FOR THIS REPORT**

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Jane Ye  
TECHNICAL MANAGER

### APPROPRIATE AGE GRADE DETERMINATION

|                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The Appropriate Age Grade is determined with reference to the EN71: Part 1:2014+A1:2018, European Union Guidance Documents, CEN ISO/TR 8124-8:2016 Safety of toys - Part 8: Age determination guidelines and Age Determination Guidelines: Relating Children's Ages to Toy Characteristics and Play Behavior, September, 2002 |                                                                                                                                                                                                           |
| 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. |

### EXPLANATION OF THE ABBREVIATIONS FOR PART 1, 2

| Symbol | Explanation                                                              |        |                    |        |                     |
|--------|--------------------------------------------------------------------------|--------|--------------------|--------|---------------------|
| NM     | The samples are NOT IN COMPLIANCE WITH the requirement of this Subclause |        |                    |        |                     |
| M      | The samples are IN COMPLIANCE WITH the requirement of this Subclause     |        |                    |        |                     |
| N/A    | Not Applicable                                                           |        |                    |        |                     |
| NR     | Not Requested                                                            |        |                    |        |                     |
| NE     | Not Evaluated                                                            |        |                    |        |                     |
| NP     | None Present                                                             |        |                    |        |                     |
| P      | Present                                                                  |        |                    |        |                     |
| R      | Refer to Comment Section of this report                                  |        |                    |        |                     |
| Symbol | Language Present                                                         | Symbol | Language Present   | Symbol | Language Present    |
| B      | Belgian language                                                         | G      | German language    | PR     | Portuguese language |
| D      | Danish language                                                          | GR     | Greek language     | S      | Spanish language    |
| E      | English language                                                         | H      | Dutch language     | SD     | Swedish language    |
| F      | Finnish language                                                         | I      | Italian language   | SZ     | Swiss language      |
| FR     | French language                                                          | N      | Norwegian language |        |                     |

**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 | N/A    |
| 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                                            |        |
| 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                                                       |        |
| 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 projectile 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                                                          | N/A    |

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

| Subclause                                             | Requirement                                                                               | Result |
|-------------------------------------------------------|-------------------------------------------------------------------------------------------|--------|
| 4.20.2.9, 4.20.2.11 & 7.14                            | Acoustics – percussion toys & cap-firing toys                                             | N/A    |
| 4.21                                                  | Toys containing a non-electrical heat source                                              | N/A    |
| 4.22 & 7.2                                            | Small balls                                                                               | N/A    |
| 4.23                                                  | Magnet                                                                                    |        |
| 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    |
| <b>FOR TOYS INTENDED FOR CHILDREN UNDER 36 MONTHS</b> |                                                                                           |        |
| 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    |
| 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                                                                                 | M      |



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

| Subclause | Requirement                                    | Result       |
|-----------|------------------------------------------------|--------------|
|           | <b>WARNINGS, INSTRUCTIONS FOR USE</b>          |              |
| 7.1       | General                                        | SEE NOTE 2   |
| 7.2       | Toys not intended for children under 36 months | SEE NOTE 2&3 |
| 7.5       | Functional toys                                | SEE NOTE 2   |

REQUIREMENTS & TEST METHODS CROSS REFERENCE TABLE FOR PART 1

| Sub-clause | Test Method                            | Sub-clause | Test Method                             | Sub-clause | Test Method                                                | Sub-clause | Test Method                                 |
|------------|----------------------------------------|------------|-----------------------------------------|------------|------------------------------------------------------------|------------|---------------------------------------------|
| 4.3        | 8.25.1                                 | 4.14.2     | 8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.11, 8.12 | 4.17.3     | 8.24.1                                                     | 5.3        | 8.4.2.1, 8.25                               |
| 4.5        | 8.5, 8.7, 8.11, 8.12                   | 4.15.1.3   | 8.11, 8.12, 8.21, 8.22                  | 4.17.4     | 8.24.2                                                     | 5.4        | 8.20, 8.36, 8.38, 8.39, 8.40                |
| 4.6        | 8.2, 8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.14 | 4.15.1.4   | 8.23.1                                  | 4.18       | 8.2, 8.3, 8.4.2.1                                          | 5.5        | 8.15                                        |
| 4.7        | 8.11                                   | 4.15.1.5   | 8.26.1                                  | 4.20       | 8.28                                                       | 5.6        | 8.29                                        |
| 4.8        | 8.12, 8.13                             | 4.15.1.8   | 8.29                                    | 4.21       | 8.30                                                       | 5.8        | 8.16                                        |
| 4.9        | 8.4.2.3, 8.11, 8.12                    | 4.15.2.4   | 8.26.2                                  | 4.22       | 8.3, 8.4.2.1, 8.5, 8.6, 8.7, 8.8, 8.32                     | 5.10       | 8.3, 8.4.2.1, 8.5, 8.6, 8.7, 8.8, 8.9, 8.32 |
| 4.10.1     | 8.18.2, 8.18.3                         | 4.15.3     | 8.21, 8.23.1                            | 4.23       | 8.2, 8.3, 8.4.2.1, 8.4.2.2, 8.5, 8.6, 8.7, 8.8, 8.34, 8.35 | 5.11       | 8.33                                        |
| 4.10.2     | 8.5, 8.6, 8.7, 8.11, 8.12              | 4.15.4     | 8.21, 8.23.1                            | 4.24       | 8.37                                                       | 5.12       | 8.3, 8.4.2.1, 8.5, 8.6, 8.7, 8.8, 8.9,      |
| 4.11       | 8.2, 8.3, 8.4.2.1, 8.9, 8.17           | 4.15.5     | 8.11, 8.12, 8.21, 8.22, 8.26.3, 8.27    | 4.25       | 8.2, 8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.32.1                   | 5.13       | 8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.32           |
| 4.13       | 8.19                                   | 4.16       | 8.23.2                                  | 5.1        | 8.2, 8.3, 8.4.2.1, 8.5, 8.7, 8.8, 8.9, 8.11, 8.12          |            |                                             |
| 4.14.1     | 8.31.1, 8.31.2                         | 4.17.1     | 8.4.2.3                                 |            |                                                            |            |                                             |

**FLAMMABILITY (EN 71 PART 2: 2020 )**

| Subclause | Requirement                                                                                 | Result |
|-----------|---------------------------------------------------------------------------------------------|--------|
| 4.1       | Cellulose nitrate                                                                           | NP     |
| 4.1       | Highly flammable solids                                                                     | NP     |
| 4.1       | Surface flash on a piled surface                                                            | N/A    |
| 4.1       | Flammable gases                                                                             | N/A    |
| 4.1       | Extremely flammable liquids, highly flammable liquids, flammable liquids and flammable gels | N/A    |
| 4.2       | Toys to be worn on the head                                                                 | N/A    |
| 4.3       | Toy disguise costumes and toys intended to be worn by child in play                         | N/A    |
| 4.3       | warning on product and packaging (10 - 30 mm/s)                                             | N/A    |
| 4.4       | Toys intended to be entered by a child                                                      | N/A    |
| 4.4       | warning on product and packaging (10 – 30 mm/s)                                             | N/A    |
| 4.5       | Soft-filled toys                                                                            | N/A    |

REQUIREMENTS & TEST METHODS CROSS REFERENCE TABLE FOR PART 2

| Sub-clause | Test Method | Sub-clause | Test Method | Sub-clause | Test Method | Sub-clause | Test Method |
|------------|-------------|------------|-------------|------------|-------------|------------|-------------|
| 4.2.2      | 5.2         | 4.2.4      | 5.3         | 4.3        | 5.4         | 4.5        | 5.5         |
| 4.2.3      | 5.3         | 4.2.5      | 5.4         | 4.4        | 5.4         | -          | -           |

**Tested Component(s) Breakdown List**

| Test Item | Description                     | Location | Style |
|-----------|---------------------------------|----------|-------|
| 1*        | Black coating                   | -        | -     |
| 2*        | Brown coating                   | -        | -     |
| 3*        | Sky blue coating                | -        | -     |
| 4*        | Light green coating             | -        | -     |
| 5*        | Red coating                     | -        | -     |
| 6*        | Green coating                   | -        | -     |
| 7*        | Orange coating                  | -        | -     |
| 8*        | Yellow coating                  | -        | -     |
| 9*        | Wood                            | -        | -     |
| 10*       | Black lead core                 | -        | -     |
| 11*       | Brown lead core                 | -        | -     |
| 12*       | Sky blue lead core              | -        | -     |
| 13*       | Light green lead core           | -        | -     |
| 14*       | Red lead core                   | -        | -     |
| 15*       | Green lead core                 | -        | -     |
| 16*       | Orange lead core                | -        | -     |
| 17*       | Yellow lead core                | -        | -     |
| 18        | Transparent plastic             | -        | -     |
| 19        | White plastic                   | -        | -     |
| 20        | Black print on white paper tape | -        | -     |

**Migration of Certain Elements - EN71-3:2019+A1:2021**

**Test Method:** European Standard EN71-3:2019+A1:2021

|                                                                                                             |                     |                                                          |
|-------------------------------------------------------------------------------------------------------------|---------------------|----------------------------------------------------------|
| <b>See Soluble Element (Parameter) and its corresponding Maximum Allowable Limit (Req.) in Result Table</b> | <b>Category I</b>   | <b>Dry, brittle, powder-like or pliable toy material</b> |
|                                                                                                             | <b>Category II</b>  | <b>Liquid or sticky toy material</b>                     |
|                                                                                                             | <b>Category III</b> | <b>Scraped-off toy material</b>                          |

| -                     | Unit  | Req.  | Result |        |        |        |        |        |
|-----------------------|-------|-------|--------|--------|--------|--------|--------|--------|
| Test Item(s)          | -     | -     | 10*    | 11*    | 12*    | 13*    | 14*    | 15*    |
| Category              | -     | I     | I      | I      | I      | I      | I      | I      |
| Parameter             | -     | -     | -      | -      | -      | -      | -      | -      |
| Mass of Trace Amount  | g     | -     | -      | -      | -      | -      | -      | -      |
| Boron (B)             | mg/kg | 1200  | <120   | <120   | <120   | <120   | <120   | <120   |
| Aluminium (Al)        | mg/kg | 2250  | <225   | <225   | <225   | <225   | <225   | <225   |
| Chromium III (Cr III) | mg/kg | 37.5  | <3.75  | <3.75  | <3.75  | <3.75  | <3.75  | <3.75  |
| Chromium VI (Cr VI)   | mg/kg | 0.02  | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 | <0.005 |
| Manganese (Mn)        | mg/kg | 1200  | <120   | <120   | <120   | <120   | <120   | <120   |
| Cobalt (Co)           | mg/kg | 10.5  | <1.05  | <1.05  | <1.05  | <1.05  | <1.05  | <1.05  |
| Nickel (Ni)           | mg/kg | 75    | <7.5   | <7.5   | <7.5   | <7.5   | <7.5   | <7.5   |
| Copper (Cu)           | mg/kg | 622.5 | <62.25 | <62.25 | <62.25 | <62.25 | <62.25 | <62.25 |
| Zinc (Zn)             | mg/kg | 3750  | <375   | <375   | <375   | <375   | <375   | <375   |



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|-------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Arsenic (As)      | mg/kg | 3.8   | <0.38 | <0.38 | <0.38 | <0.38 | <0.38 | <0.38 |
| Selenium (Se)     | mg/kg | 37.5  | <3.75 | <3.75 | <3.75 | <3.75 | <3.75 | <3.75 |
| Strontium (Sr)    | mg/kg | 4500  | <450  | <450  | <450  | <450  | <450  | <450  |
| Cadmium (Cd)      | mg/kg | 1.3   | <0.13 | <0.13 | <0.13 | <0.13 | <0.13 | <0.13 |
| Tin (Sn)          | mg/kg | 15000 | <1500 | <1500 | <1500 | <1500 | <1500 | <1500 |
| Organic tin       | mg/kg | 0.9   | <0.9* | <0.9* | <0.9* | <0.9* | <0.9* | <0.9* |
| Antimony (Sb)     | mg/kg | 45    | <4.5  | <4.5  | <4.5  | <4.5  | <4.5  | <4.5  |
| Barium (Ba)       | mg/kg | 1500  | <150  | <150  | <150  | <150  | <150  | <150  |
| Mercury (Hg)      | mg/kg | 7.5   | <0.75 | <0.75 | <0.75 | <0.75 | <0.75 | <0.75 |
| Lead (Pb)         | mg/kg | 2.0   | 0.570 | 0.413 | 0.360 | 0.381 | 0.518 | 0.452 |
| <b>Conclusion</b> | -     | -     | PASS  | PASS  | PASS  | PASS  | PASS  | PASS  |

| -                     | Unit  | Req.  | Result |        |
|-----------------------|-------|-------|--------|--------|
| <b>Test Item(s)</b>   | -     | -     | 16*    | 17*    |
| <b>Category</b>       | -     | I     | I      | I      |
| <b>Parameter</b>      | -     | -     | -      | -      |
| Mass of Trace Amount  | g     | -     | -      | -      |
| Boron (B)             | mg/kg | 1200  | <120   | <120   |
| Aluminium (Al)        | mg/kg | 2250  | <225   | <225   |
| Chromium III (Cr III) | mg/kg | 37.5  | <3.75  | <3.75  |
| Chromium VI (Cr VI)   | mg/kg | 0.02  | <0.005 | <0.005 |
| Manganese (Mn)        | mg/kg | 1200  | <120   | <120   |
| Cobalt (Co)           | mg/kg | 10.5  | <1.05  | <1.05  |
| Nickel (Ni)           | mg/kg | 75    | <7.5   | <7.5   |
| Copper (Cu)           | mg/kg | 622.5 | <62.25 | <62.25 |
| Zinc (Zn)             | mg/kg | 3750  | <375   | <375   |
| Arsenic (As)          | mg/kg | 3.8   | <0.38  | <0.38  |
| Selenium (Se)         | mg/kg | 37.5  | <3.75  | <3.75  |
| Strontium (Sr)        | mg/kg | 4500  | <450   | <450   |
| Cadmium (Cd)          | mg/kg | 1.3   | <0.13  | <0.13  |
| Tin (Sn)              | mg/kg | 15000 | <1500  | <1500  |
| Organic tin           | mg/kg | 0.9   | <0.9*  | <0.9*  |
| Antimony (Sb)         | mg/kg | 45    | <4.5   | <4.5   |
| Barium (Ba)           | mg/kg | 1500  | <150   | <150   |
| Mercury (Hg)          | mg/kg | 7.5   | <0.75  | <0.75  |
| Lead (Pb)             | mg/kg | 2.0   | 0.306  | 0.263  |
| <b>Conclusion</b>     | -     | -     | PASS   | PASS   |

| -                     | Unit  | Req.  | Result |        |        |        |        |        |
|-----------------------|-------|-------|--------|--------|--------|--------|--------|--------|
| <b>Test Item(s)</b>   | -     | -     | 1*     | 2*     | 3*     | 4*     | 5*     | 6*     |
| <b>Category</b>       | -     | III   | III    | III    | III    | III    | III    | III    |
| <b>Parameter</b>      | -     | -     | -      | -      | -      | -      | -      | -      |
| Mass of Trace Amount  | g     | -     | -      | -      | -      | -      | -      | -      |
| Boron (B)             | mg/kg | 15000 | <1500  | <1500  | <1500  | <1500  | <1500  | <1500  |
| Aluminium (Al)        | mg/kg | 28130 | <2813  | <2813  | <2813  | <2813  | <2813  | <2813  |
| Chromium III (Cr III) | mg/kg | 460   | <46    | <46    | <46    | <46    | <46    | <46    |
| Chromium VI (Cr VI)   | mg/kg | 0.053 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 | <0.020 |
| Manganese (Mn)        | mg/kg | 15000 | <1500  | <1500  | <1500  | <1500  | <1500  | <1500  |
| Cobalt (Co)           | mg/kg | 130   | <13    | <13    | <13    | <13    | <13    | <13    |



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|                   |       |        |        |        |        |        |        |        |
|-------------------|-------|--------|--------|--------|--------|--------|--------|--------|
| Nickel (Ni)       | mg/kg | 930    | <93    | <93    | <93    | <93    | <93    | <93    |
| Copper (Cu)       | mg/kg | 7700   | <770   | <770   | <770   | <770   | <770   | <770   |
| Zinc (Zn)         | mg/kg | 46000  | <4600  | <4600  | <4600  | <4600  | <4600  | <4600  |
| Arsenic (As)      | mg/kg | 47     | <4.7   | <4.7   | <4.7   | <4.7   | <4.7   | <4.7   |
| Selenium (Se)     | mg/kg | 460    | <46    | <46    | <46    | <46    | <46    | <46    |
| Strontium (Sr)    | mg/kg | 56000  | <5600  | <5600  | <5600  | <5600  | <5600  | <5600  |
| Cadmium (Cd)      | mg/kg | 17     | <1.7   | <1.7   | <1.7   | <1.7   | <1.7   | <1.7   |
| Tin (Sn)          | mg/kg | 180000 | <18000 | <18000 | <18000 | <18000 | <18000 | <18000 |
| Organic tin       | mg/kg | 12     | <12*   | <12*   | <12*   | <12*   | <12*   | <12*   |
| Antimony (Sb)     | mg/kg | 560    | <56    | <56    | <56    | <56    | <56    | <56    |
| Barium (Ba)       | mg/kg | 18750  | <1875  | <1875  | <1875  | <1875  | <1875  | <1875  |
| Mercury (Hg)      | mg/kg | 94     | <9.4   | <9.4   | <9.4   | <9.4   | <9.4   | <9.4   |
| Lead (Pb)         | mg/kg | 23     | <2.3   | <2.3   | <2.3   | <2.3   | <2.3   | <2.3   |
| <b>Conclusion</b> | -     | -      | PASS   | PASS   | PASS   | PASS   | PASS   | PASS   |

| Analyte                  | Limit:<br>(mg/kg) | Result (mg/kg) |        |        |        |        |        |
|--------------------------|-------------------|----------------|--------|--------|--------|--------|--------|
|                          |                   | Sample ID      |        |        |        |        |        |
|                          |                   | 7*             | 8*     | 9*     | 18     | 19     | 20     |
| Boron (B)                | 15000             | <1500          | <1500  | <1500  | <1500  | <1500  | <1500  |
| Aluminium (Al)           | 28130             | <2813          | <2813  | <2813  | <2813  | <2813  | <2813  |
| Chromium III<br>(Cr III) | 460               | <46            | <46    | <46    | <46    | <46    | <46    |
| Chromium VI<br>(Cr VI)   | 0.053             | <0.02          | <0.02  | <0.02  | <0.02  | <0.02  | <0.02  |
| Manganese<br>(Mn)        | 15000             | <1500          | <1500  | <1500  | <1500  | <1500  | <1500  |
| Cobalt (Co)              | 130               | <13            | <13    | <13    | <13    | <13    | <13    |
| Nickel (Ni)              | 930               | <93            | <93    | <93    | <93    | <93    | <93    |
| Copper (Cu)              | 7700              | <770           | <770   | <770   | <770   | <770   | <770   |
| Zinc (Zn)                | 46000             | <4600          | <4600  | <4600  | <4600  | <4600  | <4600  |
| Arsenic (As)             | 47                | <4.7           | <4.7   | <4.7   | <4.7   | <4.7   | <4.7   |
| Selenium (Se)            | 460               | <46            | <46    | <46    | <46    | <46    | <46    |
| Strontium (Sr)           | 56000             | <5600          | <5600  | <5600  | <5600  | <5600  | <5600  |
| Cadmium (Cd)             | 17                | <1.7           | <1.7   | <1.7   | <1.7   | <1.7   | <1.7   |
| Tin (Sn)                 | 180000            | <18000         | <18000 | <18000 | <18000 | <18000 | <18000 |
| Organic tin              | 12                | <1.2           | <1.2   | <1.2   | <1.2   | <1.2   | <1.2   |
| Antimony (Sb)            | 560               | <56            | <56    | <56    | <56    | <56    | <56    |
| Barium (Ba)              | 18750             | <1875          | <1875  | <1875  | <1875  | <1875  | <1875  |
| Mercury (Hg)             | 94                | <9.4           | <9.4   | <9.4   | <9.4   | <9.4   | <9.4   |
| Lead (Pb)                | 23                | <2.3           | <2.3   | <2.3   | <2.3   | <2.3   | <2.3   |
| Conclusion               |                   | Pass           | Pass   | Pass   | Pass   | Pass   | Pass   |

Note / Key:

Req. = Requirement      mg/kg = milligram per kilogram

Remark:

- Test Item(s) was (were) tested according to European Standard EN 71-3: 2019 + A1: 2021, Section 8.
- Results of Cr III and Cr VI were reported as sum of soluble chromium content unless further verified.
- \*Result(s) of organic tin was (were) calculated by assuming the soluble tin content was wholly contributed from tributyltin (TBT) cation unless further specified.
- The pH measured shall be reported after migration if it was outside the range of 1.1 to 1.3.
- European Standard EN 71 Part 3: 2019 is currently harmonized under European Parliament and Council Directive 2009/48/EC and will be superseded when European Standard EN 71 Part 3: 2019 + A1: 2021 is harmonized.

- Test Item(s) < Example : I005 > was (were) de-waxed by isooctane before testing.
- The received sample(s) contained accessible component(s) of less than 10 milligrams by weight on one single sample, therefore such component(s) was (were) not subject to migration of certain elements of European Standard, "Safety of Toys, EN 71 Part 3: 2019 + A1: 2021", as specified in Section 7.1 - Selection of test portions.
- Cr VI is very likely to be present in Test Item(s) < Example : I003 >, client is strongly advised to review its (their) chemical formulation.
- Organic tin is very likely to be present in Test Item(s) < Example : I003 >, client is strongly advised to review its (their) chemical formulation.
- \* denotes as result(s) was (were) verified by :  
For organic tin content - Test method with reference to European Standard EN 71-3: 2019 + A1: 2021 and reported as tributyltin (TBT) cation.  
For Cr VI content - In house ion chromatography analysis.



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SAMPLE REFERENCE PHOTO:



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