

# Test Report

Report No.: ECL01G013835

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**Applicant :** Montessori World LLC  
**Address :** 20021 80th Ave S Suite C-6, Kent, WA, 98032

**Report on the submitted sample(s) said to be:**

Sample Name : Constructive Blue Triangles  
Item No. : SE025  
Quantity of Sample : 1 PC  
Exported to : Europe, USA  
Client Specified Age Grading : 3-6 YEARS  
Labeled Age Grading : NOT STATED  
Age Group Applied in Testing : 3+ YEARS  
Sample Received Date : Aug.27, 2014  
Further Information Date : Sep. 5, 2014, Sep.16, 2014  
Sample Tested Date : Aug.27, 2014 to Sep.16, 2014

**Test Conducted:**

As requested by the applicant, for details refer to next page(s)

Tested by Helen Tang

Reviewed by Hester Huang

Approved by Victor Wang

Date Sep.16, 2014

Victor Wang  
Lab Manager

No. T166587420

Centre Testing International Co., Ltd. Shanghai Branch

No.1996, New Jinqiao Road, Pudong District, Shanghai, China

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## Executive Summary:

### TEST REQUEST

European Standard on Safety of Toys:

- EN 71-1:2011+A3:2014 Mechanical and Physical Properties
- EN 71-2:2011+A1:2014 Flammability of Toys
- EN 71-3:2013 Migration of certain elements
- Labeling requirement (CE mark, Manufacture/Importer mark and product identification)—Directive 2009/48/EC Safety of toys

### CONCLUSION

**PASS**

**PASS**

**PASS**

**REFER TO NEXT  
PAGES**

\*\*\*\*\* For Further Details, Please Refer To the Following Page(s) \*\*\*\*\*

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## EUROPEAN STANDARD ON SAFETY OF TOYS

### ▼ Mechanical and physical properties

As specified in European Standard on Safety of Toys EN 71 part 1:2011+A3:2014.

<u>Clause</u>	<u>Description</u>	<u>Assessment</u>
4	General requirements	
4.1	Material cleanliness.....	Pass
4.7	Edges .....	Pass
4.8	Points and metallic wires .....	Pass
7	Warnings and instructions for use	
7.1	General .....	Pass
7.2	Toys not intended for children under 36 months .....	N/A

N/A = Not Applicable

### ▼ Flammability of Toys

As specified in European Standard on Safety of Toys EN 71 part 2:2011+A1:2014.

<u>Clause</u>	<u>Description</u>	<u>Assessment</u>
4	Requirements	
4.1	General .....	Pass

(The following materials shall not be used in the manufacture of toys except as provided in EN 71-2:2011+A1:2014 :

Celluloid, materials with the same behaviour in fire as celluloid, materials with a piled surface which produce surface flash, flammable gases, extremely flammable liquids, highly flammable liquids, flammable liquids and flammable gels.)

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**Labeling requirement (CE mark, importer / manufacturer name and address, product identification) according to the Directive 2009/48/EC – Safety of toys**

Summary table:

	Observation Result	Location
CE mark	Found	Packaging
Importer's Name & Address	Found	Packaging
Manufacturer's Name & Address	Found	Packaging
Product ID	Found	Packaging

Note:

①: Toys made available on the market must bear the CE marking. The CE marking must be subject to the general principle set out in Article 30 of Regulation (EC) NO 765/2008. The CE marking must be affixed visibly, legibly and indelibly to the toy, to an affixed label or to the packaging. In the case of small toys and toys consisting of small parts, the CE marking may alternatively be affixed to a label or an accompanying leaflet. Where, in the case of toys sold in counter displays, that is not technically possible, and on condition that the counter display was originally used as packaging for the toy, the CE marking may be affixed to the counter display. Where the CE marking is not visible from outside the packaging, if any, it shall as a minimum be affixed to the packaging. Where specific legislation does not impose specific dimensions, the CE marking must be at least 5 mm high.

②: The manufacturer's name registered trade name or registered trade mark and the address at which the manufacture can be contacted must be indicated on the toy or, where that is not possible, on its packaging or in a document accompanying the toy. This requirement applies also to the name and address etc. of any importer.

③: Manufacturer must ensure that their toys bear a type, batch, serial or model number or other element allowing their identification, or where the size or nature of the toy does not allow it, that the required information is provided on the packaging or in a document accompanying the toy.

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## ▼ Migration of certain elements

As specified in European standard on safety of toys EN 71-3:2013 – Migration of certain elements, acid extraction method was used and toxic elements content were determined by ICP-OES, ICP-MS, IC-ICP-MS and GC-MS.

### Category III: scraped-off toy material

<u>Tested Item</u>	<u>Result (mg/kg)</u>				<u>MDL</u> (mg/kg)	<u>Limit</u> (mg/kg)
	(1)	(2)	(3)	(4)		
Aluminium (Al)	ND	ND	2664	ND	50	70000
Antimony (Sb)	ND	ND	ND	ND	5	560
Arsenic (As)	ND	ND	ND	ND	5	47
Barium (Ba)	ND	ND	ND	ND	50	18750
Boron (B)	ND	ND	ND	ND	50	15000
Cadmium (Cd)	ND	ND	ND	ND	1	17
Chromium (Cr) <sup>#1</sup>	ND	0.640	ND	ND	0.2	--
Chromium (III) <sup>#2</sup>	ND	0.640	ND	ND	--	460
Chromium (VI)	ND	ND	ND	ND	0.001	0.2
Cobalt (Co)	ND	ND	ND	ND	5	130
Copper (Cu)	ND	ND	ND	ND	50	7700
Lead (Pb)	ND	ND	ND	ND	5	160
Manganese (Mn)	125	ND	ND	ND	50	15000
Mercury (Hg)	ND	ND	ND	ND	5	94
Nickel (Ni)	ND	ND	ND	ND	5	930
Selenium (Se)	ND	ND	ND	ND	5	460
Strontium (Sr)	ND	ND	ND	ND	50	56000
Tin (Sn) <sup>#3</sup>	ND	ND	ND	ND	2	180000
Organic tin (TBT) <sup>#4</sup>	ND	ND	ND	ND	0.05	12
Zinc (Zn)	ND	ND	63	ND	50	46000

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Tested Component(s):

- (1) Beige wood
- (2) Transparent lacquer(frame) (sample weight:95mg)
- (3) Blue coating(triangles)
- (4) Brown MDF(triangles)

Remark:

- mg/kg = milligram per kilogram = ppm
- ND = Not Detected (less than MDL)
- MDL = Method Detection Limit
- Filter paper was used instead of membrane filter in lab testing.
- Where the test portion has a mass of between 10mg and 100mg, the quantity of the appropriate elements shall be calculated as if 100mg of the test portion had been used.
- <sup>#1</sup> Chromium (Cr) content can be used for screen test for hexavalent chromium and trivalent chromium analysis and to show compliance with the requirement of EN 71-3:2013.
- <sup>#2</sup> Chromium (Cr) = Hexavalent chromium (Cr (VI)) + Trivalent chromium (Cr (III)), where the chromium content exceeded the limits of hexavalent chromium and/or trivalent chromium, then hexavalent chromium was analyzed by HPLC-ICP-MS and trivalent chromium content was calculated using the formula.
- <sup>#3</sup> Tin (Sn) content can be used for screen test for organic tins analysis to show compliance with the requirement of EN 71-3:2013.

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- #4 The migration of organic tin is expressed as tributyltin (TBT). where the tin content exceeded the limit of organic tin, ten organic tins listed in table were determined by GC-MS and the client should be noted there are other organic tins may be present in toy materials.

Organic tins tested under EN 71-3:2013
Methyl tin (MeT)
Butyl tin (BuT)
Dibutyl tin (DBT)
Tributyl tin (TBT)
Tetrabutyl tin (TeBT)
n-Octyl tin (MOT)
Di-n-octyl tin (DOT)
Di-n-propyl tin (DProT)
Diphenyl tin (DPhT)
Triphenyl tin (TPhT)

- All results shown are copied from CTI test report ECL01G012537.

Note:

- Only applicable clauses were shown

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## Photo of the sample



\*\*\* End of Report \*\*\*

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