



CICADA EDUCATION LTD SECOND FLOOR 4, THE LIMES INGATESTONE ESSEX CM4 0BE

Attn: Tamarind Finch

Test Report No. BTO 210546/1a

Amalgamating Test Reports BTO 210546/1 and BTO 210546/2

Issue Date: 23rd March 2016

The following sample was submitted and identified by the client as:

Sample Name: Set of 2 Double Sided Easel With Dryer

Sample Reference: C6233

Sample Description: Blue plastic trough, 14 paint holders with lids and string cord. Yellow metal frame,

swivel wheels. Instruction booklet, pack of various screws for assembly.

(Intended for educational purposes in schools)

**Sample Submitted:** 7<sup>th</sup> October 2015

Additional sample submitted 21st October 2015

**Testing Period:** Testing conducted between 20<sup>th</sup> February 2016 and 26<sup>th</sup> February 2016

Additional testing conducted between 7th March 2016 and 15th March 2016

Age Grading Applied: >36 Months

**Testing Required**: For compliance with the European Standard on Safety of Toys:

BSEN 71-2:2011+A1:2014 Pass
BSEN71-3:2013 Pass<sup>(1)(2)</sup>

(1) Confirmation testing is Non UKAS

Confirmation testing for Chromium (VI) on sample 7 was conducted at another laboratory within the SGS group of companies.

laboratory within the 3G3 group of companies.

The submitted samples as detailed above, complied with the requirements as listed above.

Signed for and on behalf of SGS United Kingdom Ltd.

Chris Walker, BSc (Hons) Technical Manager

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## **APPENDIX A**

# **BSEN 71-2:2011+A1:2014 FLAMMABILITY OF TOYS**

Clause: Details: Results: 4.1 General Requirements Pass

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## **APPENDIX B**

# EN71-3:2013 Migration of Certain Elements

Method: With reference to EN71-3:2013.

Analysis of general elements was performed by ICP-MS. Category (III) scraped off toy material.

## Adjusted Analytical Results: Results Quoted as mg of soluble element per Kg material.

	Category Limits			Sample Reference				
	<u> </u>	<u>II</u>	<u>III</u>	1	2	3	4	5
Aluminium (AI)	5625	1406	70000	<50	124.83	<50	<50	<50
Antimony (Sb)	45	11.3	560	<1	<1	<1	<1	<1
Arsenic (As)	3.8	0.9	47	<0.15	0.68	<0.15	< 0.15	<0.15
Barium (Ba)	1500	375	18750	<50	438.10	<50	<50	<50
Boron (B)	1200	300	15000	<50	<50	<50	<50	<50
Cadmium (Cd)	1.3	0.3	17	<0.15	< 0.15	<0.15	< 0.15	<0.15
Chromium (Cr)	-	1	-	1.03	1.89	< 0.003	< 0.003	< 0.003
Chromium (III) (Cr (III))	37.5	9.4	460	Not Conducted#				
Chromium(VI) (Cr (VI))	0.02	0.005	0.2	Not Conducted#				
Cobalt (Co)	10.5	2.6	130	<1	<1	<1	<1	<1
Copper (Cu)	622.5	156	7700	<5	<5	<5	<5	<5
Lead (Pb)	13.5	3.4	160	0.84	0.45	<0.15	<0.15	0.18
Manganese (Mn)	1200	300	15000	<50	<50	<50	<50	<50
Mercury (Hg)	7.5	1.9	94	<0.25	< 0.25	< 0.25	< 0.25	< 0.25
Nickel (Ni)	75	18.8	930	<50	<50	<50	<50	<50
Selenium (Se)	37.5	9.4	460	<1	<1	<1	<1	<1
Strontium (Sr)	4500	1125	56000	<50	<50	<50	<50	<50
Tin (Sn)	15000	3750	180000	<0.1	0.41	<0.1	<0.1	<0.1
Organic Tin	0.9	0.2	12	Not Conducted <sup>^</sup>				
Zinc (Zn)	3750	938	46000	236.91	745.60	<50	<50	<50

# Results of Analysis - Pass -

See Appendix C for Chromium confirmation on samples 1 and 2 and Appendix D for Chromium confirmation on sample 7

Sample Ref:	Sample Description & Location		Category		
		- 1	Ш	Ш	
1.	Black plastic feet			✓	
2.	Yellow paint from frame			✓	
3.	Blue plastic from tray			✓	
4.	Blue plastic from shelving			✓	
5.	Clear plastic from tubs			✓	

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# Adjusted Analytical Results: Results Quoted as mg of soluble element per Kg material.

	Category Limits			Sample Reference			
	<u> </u>	<u>II</u>	<u>III</u>	6	7	8	9
Aluminium (AI)	5625	1406	70000	<50	<50	<50	201.05
Antimony (Sb)	45	11.3	560	<1	<1	<1	<1
Arsenic (As)	3.8	0.9	47	<0.15	<0.15	< 0.15	<0.15
Barium (Ba)	1500	375	18750	<50	<50	<50	<50
Boron (B)	1200	300	15000	<50	<50	<50	<50
Cadmium (Cd)	1.3	0.3	17	<0.15	<0.15	< 0.15	<0.15
Chromium (Cr)	-	1	-	0.05 <b>0.35</b> 0.16 0.02			0.02
Chromium (III) (Cr (III))	37.5	9.4	460	Not Conducted#			
Chromium(VI) (Cr (VI))	0.02	0.005	0.2	Not Conducted#			
Cobalt (Co)	10.5	2.6	130	<1	1 <1 <1 <1		
Copper (Cu)	622.5	156	7700	<5	<5	<5	<5
Lead (Pb)	13.5	3.4	160	0.24	<0.15	0.95	0.52
Manganese (Mn)	1200	300	15000	<50	<50	124.54	<50
Mercury (Hg)	7.5	1.9	94	< 0.25	<0.25	< 0.25	< 0.25
Nickel (Ni)	75	18.8	930	<50	<50	<50	<50
Selenium (Se)	37.5	9.4	460	<1 <1 <1 <1		<1	
Strontium (Sr)	4500	1125	56000	<50	<50	<50	<50
Tin (Sn)	15000	3750	180000	<0.1	0.23	<0.1	<0.1
Organic Tin	0.9	0.2	12	Not Conducted <sup>^</sup>			
Zinc (Zn)	3750	938	46000	<50	<50	<50	<50

Sample Ref:	Sample Description & Location		Category		
			П	III	
6.	Blue flexible plastic topper from tub			✓	
7.	Blue cord from topper from tub			✓	
8.	Brown cord from frame			✓	
9.	White coating from frame (60mg)			✓	

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Note: - mg/kg = milligram per kilogram - 1% = 10000 mg/kg = 10000 ppm

- \*Levels of Soluble Chromium (III) & Chromium (VI) were not separately determined.

As the level of Soluble Chromium on samples 1, 2 and 7 detected exceeded the stricter limit for Chromium (VI) as specified in EN71-3:2013 further testing is recommended to determine the levels of Chromium (VI)

See Appendix C for Chromium confirmation conducted in this report on samples 1 and 2

See Appendix D for Chromium confirmation on sample 7

- ^ The level of Soluble Organic Tin was not determined.

The level of Soluble Tin, after conversion, detected on samples did not exceed the stricter limit for Organic Tin as specified in EN71-3: 2013.

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# APPENDIX C - Non UKAS

## BSEN71-3:2013 - Migration of Certain Elements Confirmation of Chromium (VI)

Category (III) scraped off toy material.

Method:

Indicative test by UV-Vis.

Chromium (III) was obtained by calculation, Chromium (VI) was analysed by UV-Vis.

## Analytical Results: Results Quoted as mg of soluble element per Kg material.

Sample	Chromium III	Chromium VI
Limits	460mg/kg	0.2mg/kg
Black plastic feet	<5	<0.2
2.Yellow paint from frame	<5	<0.2

Note : - mg/kg = milligram per kilogram

- 1% = 10000 mg/kg = 10000 ppm

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# **APPENDIX D - Non UKAS**

Test Results:

## 1. EN 71 Part 3:2013 + A1:2014 - Safety of Toys - Part 3 - Migration of Certain Elements

Category III: Scraped off toy material

Method: With reference to EN 71 Part 3: 2013 +A1:2014. Chromium (III) was obtained by calculation, chromium (VI) was analyzed by IC-UV/VIS.

Test Item(s)			Result(s)	MDL	Permissible Limit
Specimen No.			1		
Mass of trace amount		(mg)			
Soluble Chromium (III)	(Cr (III))	(mg/kg)	ND	1	460
Soluble Chromium (VI)	(Cr (VI))	(mg/kg)	ND	0.12	0.2

## Specimen Description:

1. Blue cord from topper tub

## Note:

- mg/kg = milligram per kilogram
- mg = milligram
- ND = Not Detected (lower than MDL)
- MDL = Method Detection Limit
- -1% = 10000 mg/kg = 10000 ppm

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