

Attn:

Test Report No. BTO 179713/1a
Amalgamating Test Reports BTO 179713/1 and BTO 179713/2
Issue Date: 5th September 2013

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

Sample Name: Aquapaint
Sample Description: Flexible plastic sheets 26x19cm. Upper layer become transparent when wet revealing underlying picture.
 (Intended for use by people with dementia)
Sample Submitted: 5th August 2013
Testing Period: Testing conducted between 7th August 2013 and 12th August 2013
 Additional testing conducted between 26th August 2013 and 28th August 2013
Age Grading Applied: All Ages
Testing Required: Although this item is not a toy SGS was requested to test for compliance with the European Standard on Safety of Toys

BSEN 71-1:2011 – Mechanical & Physical	Result:
BSEN 71-2:2011 – Flammability	Pass ¹
BSEN71-3:2013 – Migration of Certain Elements ²	Pass ¹
<small>(Please note that this testing was conducted at another laboratory within the SGS group of companies)</small>	Pass ²

¹See Appendix for labelling details
²Non UKAS Accredited

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

Signed for and on behalf of
 SGS United Kingdom Ltd.



N.L. Pratt BSc (Hons)
 Senior Technologist

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APPENDIX A

**BSEN 71-1:2011
MECHANICAL AND PHYSICAL PROPERTIES**

Clause:	Details:	Results:
4	General Requirements	
4.1	Material Cleanliness <i>Toys shall be visually clean and free from infestation (Visual Assessment).</i>	Pass
4.3	Flexible Plastic Sheeting <i>Sheeting with an area $\geq 100\text{mm} \times 100\text{mm}$ was found to have a thickness of 0.33mm (Minimum Thickness 0.038mm).</i>	Pass
4.7	Edges <i>There shall be no non functional or hazardous sharp edges present. Functional sharp edges should be warned accordingly</i>	Pass
4.8	Points And Metallic Wires <i>There shall be no non functional or hazardous sharp points present. Functional sharp points should be warned accordingly.</i>	Pass
5.0	Toys Intended For Children Under 36 Months <i>(See Comment 1)</i>	--
5.1	General Requirements <i>Toys shall not produce small parts, sharp edges or sharp points before or after abuse testing.</i>	Pass
7	Warnings and Instructions for Use <i>(See Comment 1)</i>	--

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**BSEN 71-2:2011
FLAMMABILITY OF TOYS**

Clause: 4.1
Details: **General Requirements**
(See Comment 1)

Results:
Pass

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Comment 1									
In order to comply with the requirements of this clause:									
Washing/Cleaning Label	See Remark								
(Sub-content is extracted from the context of EN 71-1:2011 and EN 71-2:2011)									
According to Directive 2009/48/EC the following safety requirements apply regarding cleaning and washing: A toy intended for use by children under 36 months must be designed and manufactured in such a way that it can be cleaned. A textile toy must, to this end, be washable, except if it contains a mechanism that may be damaged if soak washed. The toy must fulfil the safety requirements also after having been cleaned in accordance with this point and the manufacturer's instructions. The manufacturer should, if applicable, provide instructions on how the toy has to be cleaned.									
Remark: Washing/cleaning label was not found on the toy									
Comment 2									
In order to comply with the requirements of this clause:									
CE mark, importer / manufacturer mark (name, address), product identification	See Remark								
(Sub-content is extracted from the context of EN 71-1:2011)									
Toys made available on the market must bear the CE marking. The CE marking must be subject to the general principles 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									
The manufacturer's name, registered trade name or registered trade mark and the address at which the manufacturer 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.									
Manufacturers 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.									
<table border="1"> <tr> <td>CE Mark (minimum 5mm)</td> <td>Present</td> </tr> <tr> <td>Manufacturers Name/Address</td> <td>Present</td> </tr> <tr> <td>Importers Name/Address</td> <td>Not Applicable</td> </tr> <tr> <td>Batch Code or Suitable Alternative</td> <td>Not Present</td> </tr> </table>	CE Mark (minimum 5mm)	Present	Manufacturers Name/Address	Present	Importers Name/Address	Not Applicable	Batch Code or Suitable Alternative	Not Present	
CE Mark (minimum 5mm)	Present								
Manufacturers Name/Address	Present								
Importers Name/Address	Not Applicable								
Batch Code or Suitable Alternative	Not Present								
(Remark: It is drawn to your attention that the product identification number, name and address of manufacturer and importer in EEC country together with CE-marking should appear as specified in Directive-2009/48/EC-Safety of toys)									

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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		
	I	II	III	1	2	3
Aluminium (Al)	5625	1406	70000	<50	4773	3559
Antimony (Sb)	45	11.3	560	<10	<10	<10
Arsenic (As)	3.8	0.9	47	<10	<10	<10
Barium (Ba)	1500	375	18750	<50	<50	<50
Boron (B)	1200	300	15000	<50	<50	<50
Cadmium (Cd)	1.3	0.3	17	<10	<10	<10
Chromium (Cr)	-	-	-	<0.2	2.3	1.7
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	<10	<10	<10
Copper (Cu)	622.5	156	7700	<50	<50	<50
Lead (Pb)	13.5	3.4	160	<10	<10	<10
Manganese (Mn)	1200	300	15000	<50	<50	<50
Mercury (Hg)	7.5	1.9	94	<10	<10	<10
Nickel (Ni)	75	18.8	930	<10	<10	<10
Selenium (Se)	37.5	9.4	460	<10	<10	<10
Strontium (Sr)	4500	1125	56000	<50	<50	<50
Tin (Sn)	15000	3750	180000	<0.5	<0.5	<0.5
Organic Tin	0.9	0.2	12	Not Conducted [†]		
Zinc (Zn)	3750	938	46000	<50	<50	<50

Results of Analysis –

Pass – See Appendix C

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Sample Ref:	Sample Description & Location	Category		
		I	II	III
1.	White plastic			✓
2.	Smooth white coating over card			✓
3.	Black outline print (47mg)			✓

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 2 and 3 detected exceeded the stricter limit for Chromium (VI) as specified a EN71-3:2013 further testing is recommended to determine the levels of Chromium (VI)

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

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

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APPENDIX C

Test Results:

EN 71 Part 3:2013 – Migration of Certain Elements
Category III: Scraped-off toy material

Method: With reference to EN 71 Part 3: 2013. Analysis of general elements was performed by ICP- OES. Chromium (III) was obtained by calculation (VI) was analyzed by IC-UV/VIS

Test Item(s)	Result(s)		MDL	Permissible Limit
	1	2		
Specimen No.			-	-
Mass of trace amount (mg)	--	25.5	-	-
Soluble Aluminium (Al) (mg/kg)	13300	2000	50	70,000
Soluble Antimony (Sb) (mg/kg)	ND	ND	10	560
Soluble Arsenic (As) (mg/kg)	ND	ND	10	47
Soluble Barium (Ba) (mg/kg)	ND	ND	50	18,750
Soluble Boron (B) (mg/kg)	ND	ND	50	15,000
Soluble Cadmium (Cd) (mg/kg)	ND	ND	5	17
Soluble Chromium (Cr) (mg/kg)	5.85	0.94	0.15	--
Soluble Chromium#(III) (Cr (III)) (mg/kg)	5.85	ND	1	460
Soluble Chromium#(VI) (Cr(VI)) (mg/kg)	ND	ND	0.18	0.2
Soluble Cobalt (Co) (mg/kg)	ND	ND	10	130
Soluble Copper (Cu) (mg/kg)	ND	ND	50	7,700
Soluble Lead (Pb) (mg/kg)	ND	ND	10	160
Soluble Manganese (Mn) (mg/kg)	ND	ND	50	15,000
Soluble Mercury (Hg) (mg/kg)	ND	ND	10	94
Soluble Nickel (Ni) (mg/kg)	ND	ND	10	930
Soluble Selenium (Se) (mg/kg)	ND	ND	10	460
Soluble Strontium (Sr) (mg/kg)	ND	ND	50	56,000
Soluble Tin (Sn) (mg/kg)	ND	ND	4.9	180,000
Soluble Organic Tin ^a (mg/kg)	ND	ND	--	12
Soluble Zinc (Zn) (mg/kg)	ND	ND	50	46,000

Specimen Description:

1. White coating on plastic sheet (Card)
2. Black coating on plastic sheet (Card)

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Note:

mg/kg = milligram per kilogram

mg = milligram

ND = Not Detected (lower than MDL)

1% = 10000mg/kg = 10000ppm

Confirmation test of soluble chromium (III) and chromium (VI) is not required in case of soluble chromium does not exceed their requirements as specified in EN71-3: 2013.

^ Confirmation test of soluble organic tin is not required in case of soluble tin, after conversion, does not exceed the soluble organic tin requirements as specified in EN71-3:20



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*** End of Report ***

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