

Report No. SCL01I004084013

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Applicant DONGGUAN IN MEI COATING CO.,LTD

Address TIANXIN AREA, HUANGJIANG TOWN, DONGGUAN CITY, GUANGDONG

PROVINCE

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the client

Sample Name INK

Client Reference Information S350(SPL), S650(RP)

Sample Received Date Jan. 19, 2016

Testing Period Jan. 19, 2016 to Jan. 22, 2016

Test Conducted:

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

Tested by

Reviewed by

Danny Liu

Date

Jan. 22, 2016

Danny Liu
Technical Manager

No. R158929881

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Executive Summary:

TEST REQUEST	CONCLUSION
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(1) ASTM F963-11 Standard Consumer Safety Specification for Toy Safety

- Clause 4.3.5 Heavy elements – Migration of certain elements PASS

(2) European Standard on Safety of Toys EN 71-3:2013+A1:2014 Migration of certain elements ****** For Further Details, Please Refer To the Following Page(s) *********



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1) ASTM F963-11 Standard Consumer Safety Specification for Toy Safety

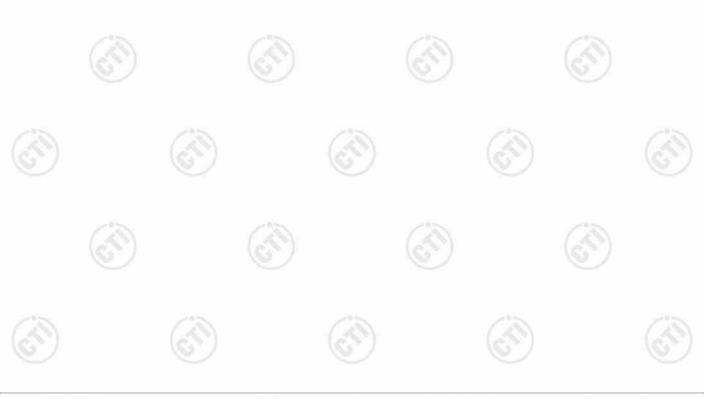
▼ Clause 4.3.5 Heavy elements – Migration of certain elements

Method(s) ASTM F963-11 Clause 8.3 was/were used, and the item(s) was/were analyzed by ICP-OES.

Tested Item(s)	Result (mg/kg)		MDL (mg/kg)	Limit (mg/kg)
Soluble Antimony (Sb)	N.D.		5	60
Soluble Arsenic (As)	N.D.	130	2.5	25
Soluble Barium (Ba)	9	(6)	5	1000
Soluble Cadmium (Cd)	N.D.		5	75
Soluble Chromium (Cr)	N.D.		2.5	60
Soluble Lead (Pb)	N.D.		5	90
Soluble Mercury (Hg)	N.D.		2.5	60
Soluble Selenium (Se)	N.D.		5	500

Remark:

- MDL = Method Detection Limit
- N.D. = Not Detected (<MDL)
- mg/kg = ppm = parts per million
- Results shown of soluble elements are of adjusted analytical results by subtracting analytical Correction factor
- Filter paper was used instead of 0.45µm membrane filter in lab testing.





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2) European Standard on Safety of Toys

▼EN 71-3:2013+A1:2014 Migration of certain elements

Method(s) EN 71-3:2013+A1:2014 was/were used, and the item(s) was/were determined by ICP-OES, ICP-MS, HPLC-ICP-MS and/or GC-MS.

Category Ⅲ: scraped-off toy material

Tested Item(s)	Result (mg/kg)	MDL(mg/kg)	<u>Limit</u> (mg/kg)
Aluminium (Al)	3248	50	70000
Antimony (Sb)	N.D.	5	560
Arsenic (As)	N.D.	5	47
Barium (Ba)	N.D.	50	18750
Boron (B)	N.D.	50	15000
Cadmium (Cd)	N.D.	1	17
Chromium (III) #1	N.D.	0.2	460
Chromium (VI)	N.D.	0.002	0.2
Cobalt (Co)	N.D.	5	130
Copper (Cu)	N.D.	50	7700
Lead (Pb)	N.D.	5	160
Manganese (Mn)	N.D.	50	15000
Mercury (Hg)	N.D.	5	94
Nickel (Ni)	N.D.	5	930
Selenium (Se)	N.D.	5	460
Strontium (Sr)	N.D.	50	56000
Tin (Sn) #2	N.D.	2	180000
Organic tin (TBT) #3	N.D.	0.05	12
Zinc (Zn)	76	50	46000





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Remark:

- MDL = Method Detection Limit
- N.D. = Not Detected (<MDL)
- mg/kg = ppm = parts per million
- Filter paper was used instead of membrane filter in lab testing.
- ^{#1} Trivalent chromium (Cr (III)) = Chromium (Cr) Hexavalent chromium (Cr (VI)), 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.
- ^{#2} Tin (Sn) content can be used for screen test for organic tins analysis to show compliance with the requirement of EN 71-3:2013+A1:2014.
- ^{#3} 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+A1:2014	
Methyl tin (MeT)	3)
Butyl tin (BuT)	1
Dibutyl tin (DBT)	
Tributyl tin (TBT)	
Tetrabutyl tin (TeBT)	(ve
n-Octyl tin (MOT)	1/2
Di-n-octyl tin (DOT)	
Di-n-propyl tin (DProT)	
Diphenyl tin (DPhT)	2)
Triphenyl tin (TPhT)	1

Tested Sample/Part Description

Blue ink

