

Test Report

Report No.: 251113032SZN-029

Issue date: Nov. 26, 2025

Applicant: **Distributed in South Africa by Reel Papers**

Sample Description:

Test item description.....: **Direct thermal**

Brand.....: **Distributed in
South Africa by Reel Papers**

Date of Sample Received.....: Nov. 13, 2025

Testing Period: Nov. 14, 2025 to Nov. 18, 2025

Tests conducted:

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

Test location: 5/F of Bldg. 1, Yuanzheng Science and Technology Industrial Park, No. 4012, Wuhe Ave.
North, Bantian Street, Longgang District, Shenzhen, China

Conclusion:

Tested samples	Standard	Result
Submitted sample	EN 71-3:2019+A1:2021 on migration of certain elements	Pass
	U.S. ASTM F963-23 on total Lead content in non-surface coating	Pass
	U.S. ASTM F963-23 on Heavy elements test in non-surface coating	Pass

Authorized by:
For Intertek Testing Services
Shenzhen Ltd.



Navy Wang
Supervisor



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◆ **1 19 Toxic Element Migration Test**

(A) Test Result

As per EN 71-3:2019+A1:2021 and followed by Inductively Coupled Plasma Atomic Emission Spectrometry, Inductively Coupled Argon Mass Spectrometry, Ion Chromatography- Inductively Coupled Plasma-Mass Spectrometry, Ion Chromatography with UV-VIS and Gas Chromatographic - Mass Spectrometry.

Category (III): Scraped-off toy materials:

Element	Result (mg/kg)	Reporting Limit (mg/kg)	Limit (mg/kg)
Aluminium (Al)	790	300	28130
Antimony (Sb)	ND	10	560
Arsenic (As)	ND	10	47
Barium (Ba)	ND	10	18750
Boron (B)	ND	50	15000
Cadmium (Cd)	ND	5	17
Chromium (III) (Cr III) #	ND	10	460
Chromium (VI) (Cr VI)	ND	0.025	0.053
Cobalt (Co)	ND	10	130
Copper (Cu)	ND	10	7700
Lead (Pb)	ND	10	23
Manganese (Mn)	ND	10	15000
Mercury (Hg)	ND	10	94
Nickel (Ni)	ND	10	930
Selenium (Se)	ND	10	460
Strontium (Sr)	ND	100	56000
Tin (Sn)	ND	2.5	180000
Organic tin ++	ND	5	12
Zinc (Zn)	131	100	46000

- mg/kg = milligram per kilogram
- ++ = Unless the test results were marked with "Δ", Organic tin contents were not directly determined and were derived from migration results of total tin.
- ND = Not detected (less than reporting limit)
- Organic tin test result was expressed as tributyl tin.
- # = The reported value of migration of Chromium (III) = migration value of total Chromium – migration value of Chromium (VI).



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- Δ = Confirmation test was performed on the tested component. The reported value was the sum of the migration values of Dimethyl tin, Methyl tin, Butyl tin, Dibutyl tin, Tributyl tin, Tetrabutyl tin, n-Octyl tin, Di-n-octyl tin, Di-n-propyl tin, Diphenyl tin and Triphenyl tin after converted to Tributyl tin by calculation. Other Organic tin compounds may be also be present in sample as stated in EN 71-3:2019+A1:2021.
- Additional acid was required to lower the pH.

(B) Categories of various toy materials

Category I: Dry, brittle, powder like or pliable

Solid toy material from which powder-like material is released during playing and semi-solid materials that may also leave residues on the hands during play. The material can be ingested. Contamination of the hands with the material may contribute to the oral exposure of the material. (e.g. the cores of colouring pencils, chalk, crayons, modelling clays and plaster).

Category II: Liquid or sticky

Fluid or viscous toy material, which can be ingested or to which dermal exposure may occur during playing. (e.g. liquid paints, finger paints, liquid ink in pens, glue sticks, slimes, bubble solution).

Category III: Scraped-off

Solid toy material with or without a coating, which can be ingested as a result of biting, tooth scraping, sucking or licking. (e.g. coatings, lacquers, plastics, paper, textiles, glass, ceramic, metallic, wooden, bone, leather and other materials).

Tested sample: White adhesive paper.

◆ **2 Total Lead (Pb) Content in Non-Surface Coating (U.S. ASTM F963-23)**

With reference to Section 4.3.5 of the ASTM Standard Consumer Safety Specification on Toy Safety F963-23, test method CPSC-CH-E1001-08.3 or/and CPSC-CH-E1002-08.3 were used and total Lead content was determined by Inductively Coupled Plasma - Optical Emission Spectrometry and/or Atomic Absorption Spectrometry.

Element	Result (ppm)	Detection Limit (ppm)	Limit (ppm)
Lead (Pb)	ND	10	100
— ppm = part per million = mg/kg — ND = Not detected (less than detection limit)			

Tested sample: White adhesive paper.



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◆ **3 Heavy Elements Analysis in Non-Surface Coating (Except modelling clay) (U.S. ASTM F963-23)**

Soluble heavy Elements Content

As per Section 4.3.5 and Section 8.3.2 to 8.3.5 of the ASTM Standard Consumer Safety Specification on Toy Safety F963-23, heavy elements migration content were determined by Inductively Coupled Argon Plasma Spectrometry.

Element	Result (ppm)	Detection Limit (ppm)	Limit (ppm)
Sol. Barium (Ba)	ND	5	1000
Sol. Lead (Pb)	ND	5	90
Sol. Cadmium (Cd)	ND	5	75
Sol. Antimony (Sb)	ND	5	60
Sol. Selenium (Se)	ND	5	500
Sol. Chromium (Cr)	ND	5	60
Sol. Mercury (Hg)	ND	5	60
Sol. Arsenic (As)	ND	2.5	25
– Sol. = Soluble – ppm = part per million = mg/kg – ND = Not detected (less than detection limit) – Additional acid was required to lower the pH.			

Tested sample: White adhesive paper.

Photos for Test Sample:





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