



Test Report

Report No. A2180145033125

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Applicant DOKUMENTAL GMBH & CO. KG

Address WOELLNERSTRASSE 26, 67065 LUDWIGSHAFEN, DEUTSCHLAND

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

Sample Name WHITE BOARD MARKER INK
 WB 7020 RED LOT#2017429200
 WB 7302.1 DARK BLUE LOT#2017275227
 WB 7311.1 BLACK LOT#2018186993
 WB 7339.1 GREEN LOT#2018042648

Sample Received Date Nov. 12, 2018
Testing Period Nov. 12, 2018 to Nov. 16, 2018

Executive Summary:

TEST REQUEST

CONCLUSION

European Standard on Safety of Toys

- EN71-3:2013+A3:2018 Migration of certain elements

PASS

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



Chen Kaimin

Authorized Signatory

检验检测专用章

Centre Testing International Pinbiao(Shanghai) Co., Ltd.

Date Nov. 16, 2018

No. T277491489

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

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European Standard on Safety of Toys

▼ EN71-3:2013+A3:2018 Migration of certain elements

Method(s) EN71-3:2013+A3:2018 was/were used, and the item(s) was/were determined by ICP-OES, ICP-MS, HPLC-ICP-MS and/or GC-MS.

Category II: liquid or sticky toy material

| Tested Item(s) | Result (mg/kg) | | | | MDL (mg/kg) | Limit (mg/kg) |
|----------------------|----------------|------|------|------|----------------|------------------|
| | 001 | 002 | 003 | 004 | | |
| Aluminium (Al) | N.D. | N.D. | N.D. | N.D. | 50 | 1406 |
| Antimony (Sb) | N.D. | N.D. | N.D. | N.D. | 2 | 11.3 |
| Arsenic (As) | N.D. | N.D. | N.D. | N.D. | 0.1 | 0.9 |
| Barium (Ba) | N.D. | N.D. | N.D. | N.D. | 50 | 375 |
| Boron (B) | N.D. | N.D. | N.D. | N.D. | 50 | 300 |
| Cadmium (Cd) | N.D. | N.D. | N.D. | N.D. | 0.2 | 0.3 |
| Chromium (Cr) #1 | N.D. | N.D. | N.D. | N.D. | 0.004 | -- |
| Chromium (III) #2 | -- | -- | -- | -- | -- | 9.4 |
| Chromium (VI) | -- | -- | -- | -- | 0.005 | 0.005 |
| Cobalt (Co) | N.D. | N.D. | N.D. | N.D. | 0.2 | 2.6 |
| Copper (Cu) | N.D. | N.D. | N.D. | N.D. | 50 | 156 |
| Lead (Pb) | N.D. | N.D. | N.D. | N.D. | 0.2 | 0.5 |
| Manganese (Mn) | N.D. | N.D. | N.D. | N.D. | 50 | 300 |
| Mercury (Hg) | N.D. | N.D. | N.D. | N.D. | 0.6 | 1.9 |
| Nickel (Ni) | N.D. | N.D. | N.D. | N.D. | 5 | 18.8 |
| Selenium (Se) | N.D. | N.D. | N.D. | N.D. | 5 | 9.4 |
| Strontium (Sr) | N.D. | N.D. | N.D. | N.D. | 50 | 1125 |
| Tin (Sn) #3 | N.D. | N.D. | N.D. | N.D. | 0.05 | 3750 |
| Organic tin (TBT) #4 | -- | -- | -- | -- | 0.2 | 0.2 |
| Zinc (Zn) | N.D. | N.D. | N.D. | N.D. | 50 | 938 |

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.

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- #1 Chromium (Cr) content can be used for screen test for hexavalent chromium and trivalent chromium analysis and to show compliance with the requirement of EN71-3:2013+A3:2018.
- #2 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.
- #3 Tin (Sn) content can be used for screen test for organic tins analysis to show compliance with the requirement of EN71-3:2013+A3:2018.
- #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 EN71-3:2013+A3:2018 |
|---|
| 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) |

Tested Sample/Part Description

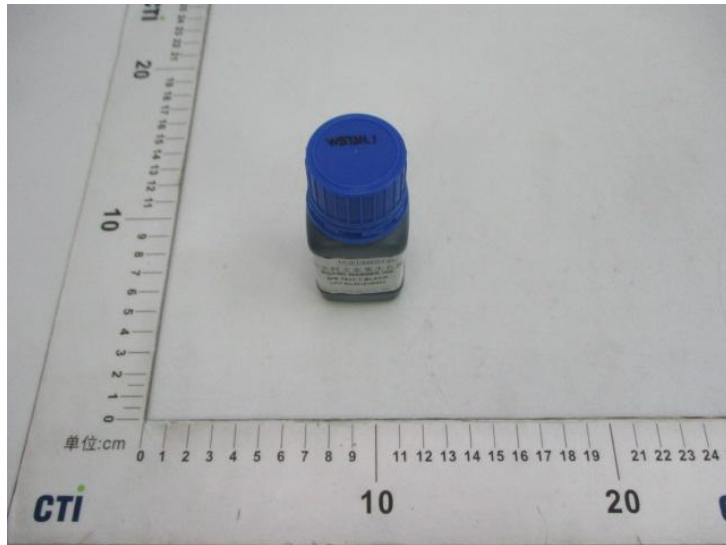
- 001 Red ink(2017429200)
- 002 Dark blue ink(2017275227)
- 003 Black ink(2018186993)
- 004 Green ink(2018042648)

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Photo(s) of the sample(s)



WANGSHI CO., LTD.

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*** End of Report ***

Statement:

- 1.This report is considered invalidated without approval signature, special seal and the seal on the perforation;
- 2.The sample(s) and sample Information was/were provided by the client who should be responsible for the authenticity which CTI hasn't verified;
- 3.The result(s) shown in this report refer(s) only to the sample(s) tested;
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