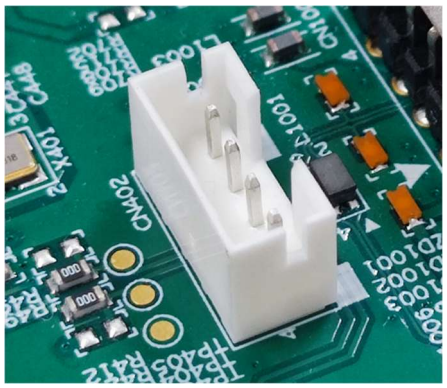
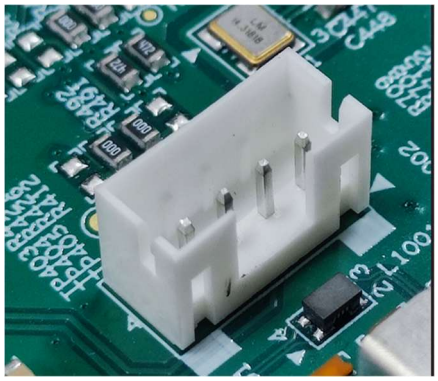
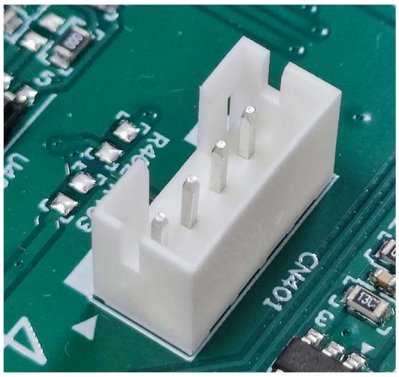
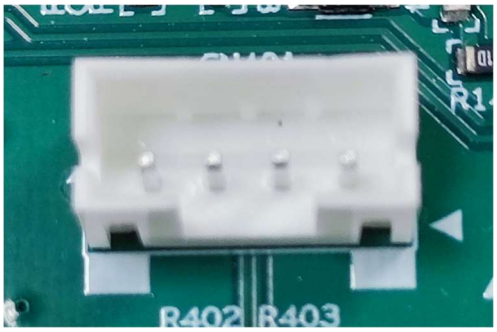
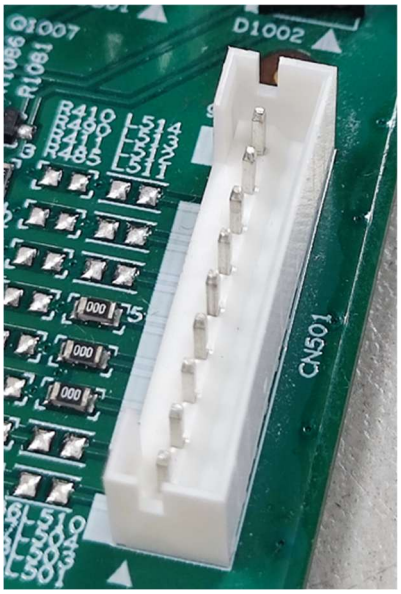
## 4Pin 實照

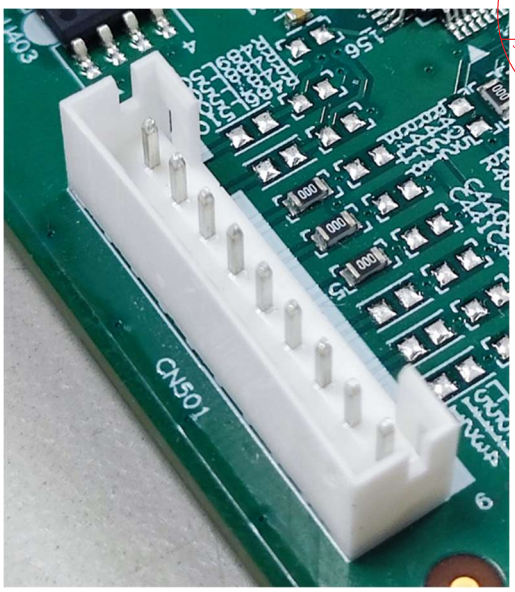




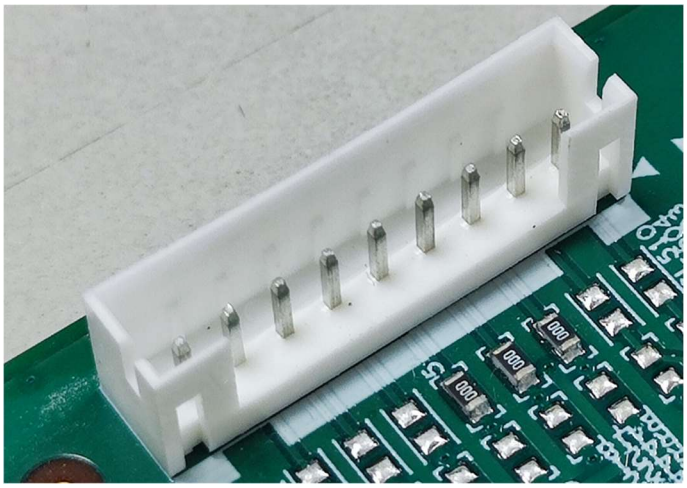



## 9Pin 實照

設計驗證
工程課
2024-12-18
發行
紅緯科技開發股份有限公司







# 乔讯电子（上海）有限公司

# Chyao Shiunn Electronics(Shang Hai) Co.,Ltd.

## ***Specification For Approval***

| | |
|---|---|
| Customer | 钰纬 |
| Part No. | JS-1125-04KD(M)&JS-1125-09KD(M) |
| Customer Part No. | 3FM00417010&3FM00917010(F0309) |
| Description | **2.0mm pitch Conector** |
| Samples | **5 PCS** |

設計驗證
工程課
2024-12-18
發行
鈺緯科技開發股份有限公司

**This Specification Is**

| Prepared By | Checked By | Approved By |
|---|---|---|
| Li Lian | Tang Nian | Tang Nian |
| Ini. Date | Rev. Date | Revision |
| 2024.12.06 | 2024.12.06 | A |

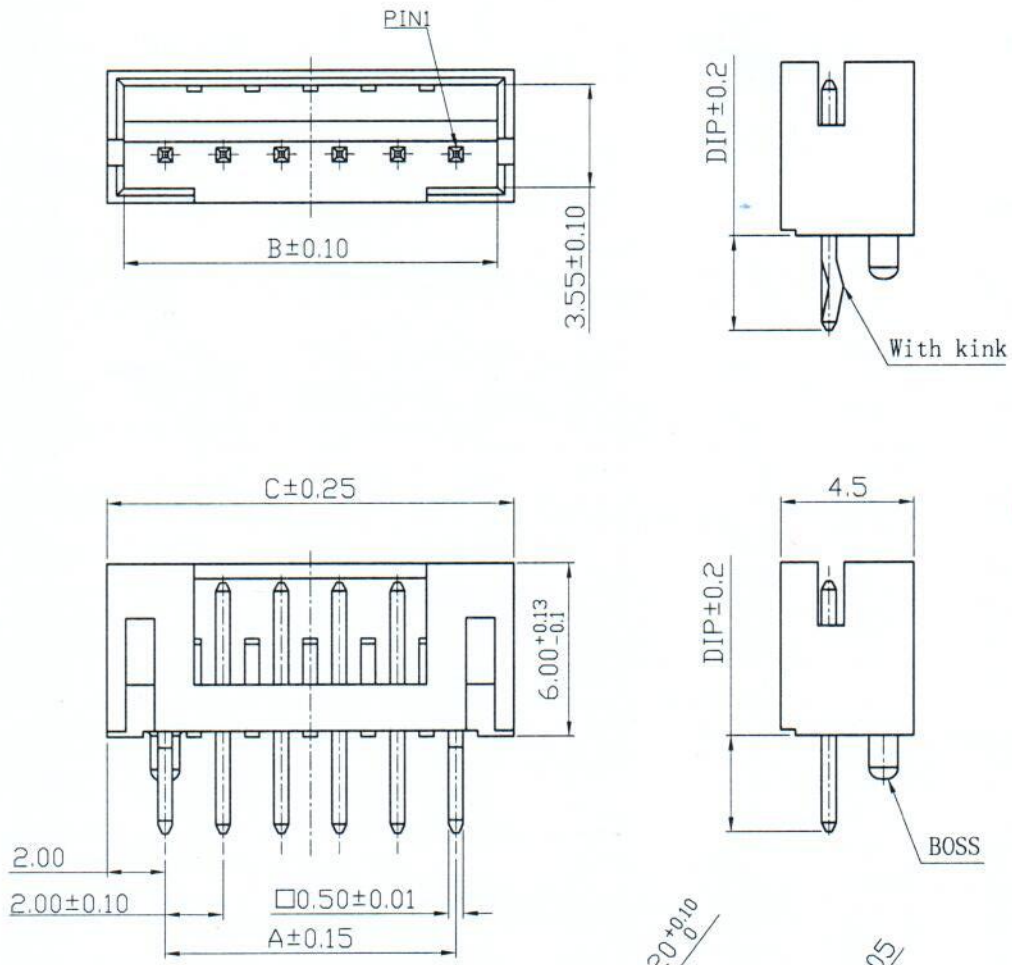
**Address:** Unit B,1/F, Block 46,No,299,Fu Te Chung Road Waigaoqiao Free Trade Zone,ShangHai China

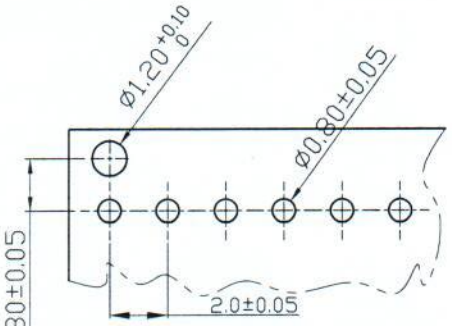
上海市外高桥保税区富特中路299号46号厂房

**TEL:** (86-21)-5046-1169,5046-1680 FAX:(86-21)5046-1063,5046-3014

**E-mail:**cssh@cssh.net.cn

| REV | ECN. NO. | REVISIONS | REV. DRAWN | DATE |
|---|---|---|---|---|
| A | ---- | 整合图纸，初版发行 | zhangqiang | 2019.05.29 |
| B | ---- | 公差修改 | zhangqiang | 2020.11.24 |
| C | ---- | 公差修改 | chenjianguo | 2021.01.07 |




P.C.B. Hole Diomensions

WAFER.

. Part No1: JS-1125X-XXXXXX-XXXX-NH

(Boss) Blank: Without boss
B: With boss
Poles: 02~16
Blank: Normal
K: K FOOT
Blank: DIP=3.30
B: DIP=2.40
C: DIP=2.30
D: DIP=2.70

(plating) Blank: Tin Plated
(M): Matte sn
(materail) Blank: PA66
D1:PA66+15%GF

NH: Halogen Free
Blank: Normal
Blank: Nature (color)
RD: Red
GN: Green
BK: Black
BU: Blue

出图 2021.01.07 工程部

設計驗證 工程課 2024-12-18 發行 鈺鐘科技開發股份有限公司

| POLES | DIMENSION | | |
|---|---|---|---|
| | A | B | C |
| 02 | 2.00 | 4.85 | 6.00 |
| 03 | 4.00 | 6.85 | 8.00 |
| 04 | 6.00 | 8.85 | 10.00 |
| 05 | 8.00 | 10.85 | 12.00 |
| 06 | 10.00 | 12.85 | 14.00 |
| 07 | 12.00 | 14.85 | 16.00 |
| 08 | 14.00 | 16.85 | 18.00 |
| 09 | 16.00 | 18.85 | 20.00 |
| 10 | 18.00 | 20.85 | 22.00 |
| 11 | 20.00 | 22.85 | 24.00 |
| 12 | 22.00 | 24.85 | 26.00 |
| 13 | 24.00 | 26.85 | 28.00 |
| 14 | 26.00 | 28.85 | 30.00 |
| 15 | 28.00 | 30.85 | 32.00 |
| 16 | 30.00 | 32.85 | 34.00 |

SPECIFICATIONS:

. Voltage Rating: 100V AC/DC
. Current Rating : 2A AC/DC
. Withstanding Voltage : 800V AC/minute
. Insulation Resinstance : 1000MΩ min
. Temperature Range : -25° C~+85° C
. Contact Resinstance : 20mΩ max
. Material : Contact : Brass, Tin Plated/Matte sn
Base : Nylon, UL 94V-0
. Q'ty : Bag
. Halogen free product identification LOGO on the packing

| | | | |
|---|---|---|---|
| X.± 0.30 | X°± 3.0° | UNITS mm | NAME(INTENDED USE) Customer |
| .X± 0.20 | .X°± 1.0° | MAT'L | PART NO.(INTENDED USE) JS-1125X-XX |
| .XX± 0.10 | .XX°± 0.5° | FINISH | APPD: |
| .XXX± 0.05 | .XXX°± --- | Q'TY | CHKD: |
| | | | DR: zhangqiang 2019.05.29 |

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CHYAO SHIUNN ELECTRONIC (SHANGHAI) CO.,LTD.

TITLE: 2.00mm Crimp Style Connector

DWG NO.: 020-0013-1125-01

| SCALE | SHEET | REV. |
|---|---|---|
| 4:1 | 1/1 | A |

符合环境管理物质

# 乔讯电子(上海)有限公司
# CHYAO SHIUNN ELECTRONIC (SHANGHAI) CO.，LTD.
## 实验室测试报告

**料号：** JS-1125-04KDM/JS-1125-09KDM **测试日期：** 2024-11-15 **页数：** 1/10

**规 格 书：** JS-1125

**样品数量：** 5PCS

**测试项目：** 外观、尺寸测试

**测试设备：** 影像投影仪

**规格要求：** 见下表




**测试结果：**

| 序号 | 测试规格 | JS-1125-04KD(M) | | | | | |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 判定 |
| 1 | 3.55±0.10 | 3.56 | 3.57 | 3.55 | 3.57 | 3.56 | OK |
| 2 | 8.85±0.10 | 8.87 | 8.85 | 8.87 | 8.86 | 8.88 | OK |
| 3 | 3.30±0.20 | 3.28 | 3.29 | 3.25 | 3.26 | 3.28 | OK |
| 4 | 10.00±0.25 | 10.02 | 10.03 | 10.01 | 10.02 | 10.00 | OK |
| 5 | 0.50±0.10 | 0.50 | 0.50 | 0.50 | 0.50 | 0.50 | OK |
| 6 | 2.00±0.10 | 1.99 | 2.01 | 2.00 | 2.01 | 2.02 | OK |
| 7 | 6.00±0.15 | 6.01 | 6.02 | 6.02 | 5.99 | 6.00 | OK |
| 8 | 6.00+0.13/-0.1 | 6.02 | 6.03 | 6.04 | 6.02 | 6.01 | OK |
| 9 | 4.5±0.20 | 4.53 | 4.52 | 4.50 | 4.52 | 4.53 | OK |
| 10 | 3.30±0.20 | 3.28 | 3.29 | 3.25 | 3.26 | 3.28 | OK |
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
| | 外观 | OK | OK | OK | OK | OK | OK |

**判定结论：** OK

**实验类别：** □周期性试验 □新品测试 □设计变更 □异常验证 ☑其它 业务需求

**核准：** _____ **审核：** _____ **测试：** 李华娟

# 乔讯电子(上海)有限公司
# CHYAO SHIUNN ELECTRONIC (SHANGHAI) CO.，LTD.
## 实验室测试报告

**料号：** JS-1125-04KDM/JS-1125-09KDM **测试日期：** 2024-11-15 **页数：** 2/10

**规 格 书：** JS-1125

**样品数量：** 5PCS

**测试项目：** 外观、尺寸测试

**测试设备：** 影像投影仪

**规格要求：** 见下表




**测试结果：**

| 序号 | 测试规格 | JS-1125-09KD(M) | | | | | |
|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 判定 |
| 1 | 18.85±0.10 | 18.86 | 18.88 | 18.85 | 18.87 | 18.88 | OK |
| 2 | 3.55±0.10 | 3.58 | 3.54 | 3.56 | 3.55 | 3.56 | OK |
| 3 | 3.30±0.2 | 3.29 | 3.33 | 3.32 | 3.30 | 3.30 | OK |
| 4 | 20.00±0.25 | 20.02 | 20.03 | 20.01 | 20.03 | 20.04 | OK |
| 5 | 6.00+0.13/-0.1 | 5.99 | 6.02 | 6.03 | 6.01 | 6.00 | OK |
| 6 | 2.00±0.10 | 2.03 | 2.01 | 2.02 | 2.03 | 2.00 | OK |
| 7 | 2.00±0.10 | 1.98 | 2.03 | 2.00 | 2.01 | 2.02 | OK |
| 8 | 16.00±0.15 | 16.01 | 16.02 | 16.02 | 16.03 | 16.00 | OK |
| 9 | 0.50±0.01 | 0.50 | 0.50 | 0.50 | 0.50 | 0.51 | OK |
| 10 | 4.5±0.20 | 4.51 | 4.52 | 4.50 | 4.49 | 4.52 | OK |
| | | | | | | | |
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| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | 外观 | OK | OK | OK | OK | OK | OK |

**判定结论：** OK

**实验类别：** □周期性试验 □新品测试 □设计变更 □异常验证 ☑其它 业务需求

**核准：** _____ **审核：** _____ **测试：** 李华娟

# 乔讯电子(上海)有限公司
# CHYAO SHIUNN ELECTRONIC (SHANGHAI) CO.，LTD.
## 实验室测试报告

**料号：** JS-1125-04KDM/JS-1125-09KDM **测试日期：** 2024-11-15 **页数：** 3/10

**规 格 书：** JS-1125

**样品数量：** 各 5PCS

**测试项目：** PIN 保持力

**测试设备：** 自动插拔力机

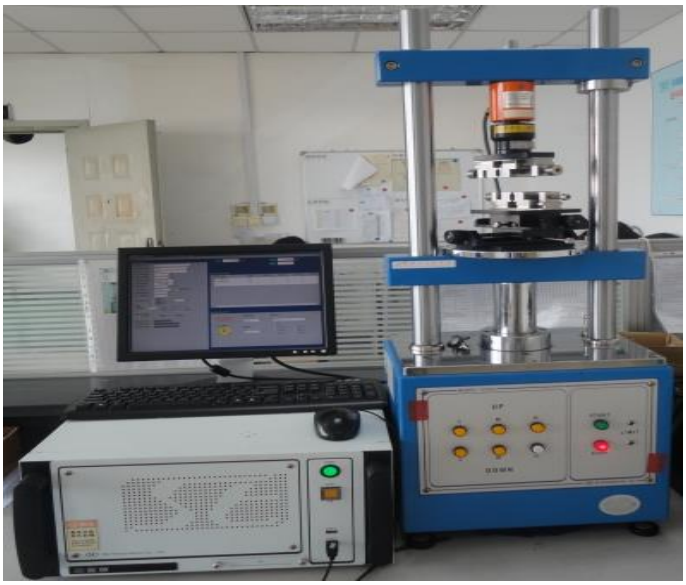
**测试条件：** 自动插拔力机测试速度 25.4mm±3 mm/min

**规格要求：** 1.0 Kgf min

**测试结果：**

| 样品编号 | 1 | 2 | 3 | 4 | 5 | 平均值 |
|---|---|---|---|---|---|---|
| 4P | 4.341 | 4.039 | 4.109 | 4.125 | 4.321 | 4.187 |
| 9P | 4.252 | 4.123 | 4.236 | 4.367 | 4.015 | 4.199 |

**判定结论：** OK



**实验类别：** □周期性试验 □新品测试 □设计变更 □异常验证 ☑其它 业务需求

**核准：** _____ **审核：** _____ **测试：** 李华娟

# 乔讯电子(上海)有限公司
# CHYAO SHIUNN ELECTRONIC (SHANGHAI) CO.，LTD.
## 实验室测试报告

**料号：** JS-1125-04KDM/JS-1125-09KDM **测试日期：** 2024-11-15 **页数：** 4/10

**规 格 书：** JS-1125

**样品数量：** 各 5PCS

**测试项目：** 沾锡后 PIN 保持力

**测试设备：** 自动插拔力机

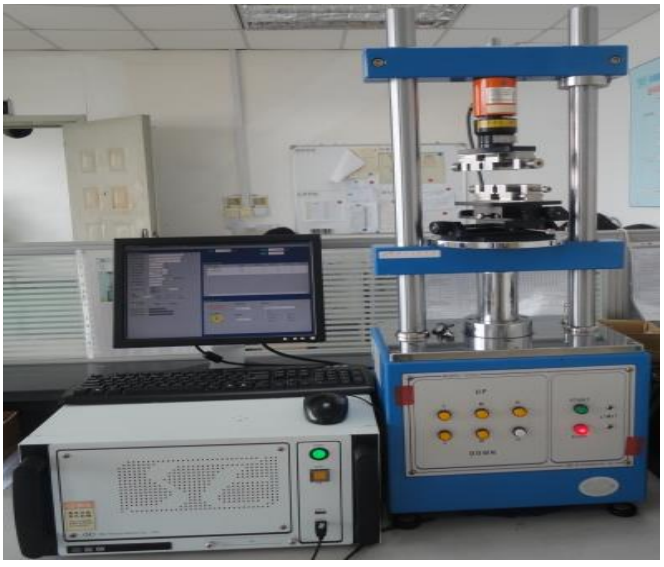
**测试条件：** 自动插拔力机测试速度 25.4mm±3 mm/min
260±5℃，5s（实际温度 260℃）

**规格要求：** 0.5 Kgf min

**测试结果：**

| 样品编号 | 沾锡后 | | | | | |
|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 平均值 |
| 4p | 1.656 | 1.712 | 2.218 | 2.096 | 2.106 | 1.958 |
| 9P | 1.710 | 1.615 | 1.816 | 2.234 | 2.098 | 1.895 |

**判定结论：** OK



**实验类别：** □周期性试验 □新品测试 □设计变更 □异常验证 ☑其它 业务需求

**核准：** _____ **审核：** _____ **测试：** 李华娟

# 乔讯电子(上海)有限公司
# CHYAO SHIUNN ELECTRONIC (SHANGHAI) CO.，LTD.
## 实验室测试报告

**料号：** JS-1125-04KDM/JS-1125-09KDM **测试日期：** 2024-11-15 **页数：** 5/10

**规 格 书：** JS-1125

**样品数量：** 各 5PCS

**测试项目：** 电阻计

**测试设备：** 数字式微欧姆计

**规格要求：** MAX20mΩ

**测试结果：**

| 样品编号 / 测试结果 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 4p | 2.68 | 3.04 | 2.73 | 3.15 | 3.09 |
| 9p | 2.71 | 3.03 | 2.86 | 3.19 | 3.07 |

**判定结论：**OK




**实验类别：** □周期性试验 □新品测试 □设计变更 □异常验证 ☑其它 业务需求

**核准：** _____ **审核：** _____ **测试：** 李华娟

# 乔讯电子(上海)有限公司
# CHYAO SHIUNN ELECTRONIC (SHANGHAI) CO.，LTD.
## 实验室测试报告

**料号：** JS-1125-04KDM/JS-1125-09KDM **测试日期：** 2024-11-15 **页数：** 6/10

**规 格 书：** JS-1125

**样品数量：** 各 5PCS

**测试项目：** 绝缘电阻测试

**测试设备：** 绝缘电阻测试仪

**规格要求：** 500V D/C shall be applied between adjacent contacts to measure the insulation resistance.

**规格要求：** MIN1000MΩ

**测试结果：**

| 样品编号 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 4P | PASS | PASS | PASS | PASS | PASS |
| 9P | PASS | PASS | PASS | PASS | PASS |

**判定结论：** OK




**实验类别：** ☐周期性试验 ☐新品测试 ☐设计变更 ☐异常验证 ☑其它 业务需求

**核准：** _____ **审核：** _____ **测试：** 李华娟

# 乔讯电子(上海)有限公司
# CHYAO SHIUNN ELECTRONIC (SHANGHAI) CO.，LTD.
## 实验室测试报告

**料号：** JS-1125-04KDM/JS-1125-09KDM **测试日期：** 2024-11-15 **页数：** 7/10

**规 格 书：** JS-1125

**样品数量：** 各 5PCS

**测试项目：** 耐电压测试

**测试设备：** 绝缘电阻测试仪

**规格要求：** 800V A/C shall be applied between adjacent contacts to measure the insulation resistance.

**规格要求：** NO breakdown NO flashover

**测试结果：**

| 样品编号 | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| 4p | OK | OK | OK | OK | OK |
| 9p | OK | OK | OK | OK | OK |

**判定结论：** OK



**实验类别：** ☐周期性试验 ☐新品测试 ☐设计变更 ☐异常验证 ☑其它 业务需求

**核准：** _____ **审核：** _____ **测试：** 李华娟

# 乔讯电子(上海)有限公司
# CHYAO SHIUNN ELECTRONIC (SHANGHAI) CO.，LTD.
## 实验室测试报告

**料号：** JS-1125-04KDM/JS-1125-09KDM **测试日期：** 2024-11-15 **页数：** 8/10

**规 格 书：** JS-1125

**样品数量：** 各 3PCS

**测试项目：** 高低温测试

**测试设备：** 高低温试验箱/数字式微欧姆计

**测试条件：** 高温 85±2℃的环境中持续 96h

**测试结果：**

| 测试规格 | 高低温测试 | | | | | |
|---|---|---|---|---|---|---|
| | 4P | | | 9p | | |
| | 1 | 2 | 3 | 1 | 2 | 3 |
| Contact Resistance 40mΩ Max | 4.04 | 3.96 | 4.15 | 4.30 | 4.55 | 4.67 |
| Appearance | Ok | Ok | Ok | Ok | Ok | Ok |

**判定结论：** Ok




**实验类别：** ☐周期性试验 ☐新品测试 ☐设计变更 ☐异常验证 ☑其它 业务需求

**核准：** _____ **审核：** _____ **测试：** 李华娟

# 乔讯电子(上海)有限公司
# CHYAO SHIUNN ELECTRONIC (SHANGHAI) CO.，LTD.
## 实验室测试报告

**料号：** JS-1125-04KDM/JS-1125-09KDM **测试日期：** 2024-11-15 **页数：** 9/10

**规 格 书：** JS-1125

**样品数量：** 各 3PCS

**测试项目：** 焊锡性测试

**测试设备：** 锡炉

**测试条件：** 温度 245±5℃的锡炉中持续 3±0.5 秒

**规格要求：** 焊接能力覆盖率大于 95%

**测试结果：**

| 样品编号 | 焊锡能力 | | | | | |
|---|---|---|---|---|---|---|
| | 4p | | | 9p | | |
| | 1 | 2 | 3 | 1 | 2 | 3 |
| 测试结果 | OK | OK | Ok | Ok | Ok | Ok |

**判定结论：** OK




**实验类别：** ☐周期性试验 ☐新品测试 ☐设计变更 ☐异常验证 ☑其它 业务需求

**核准：** _____ **审核：** _____ **测试：** 李华娟

# 乔讯电子(上海)有限公司
# CHYAO SHIUNN ELECTRONIC (SHANGHAI) CO.，LTD.
## 实验室测试报告

**料号：** JS-1125-04KDM/JS-1125-09KDM **测试日期：** 2024-11-15 **页数：** 10/10

**规 格 书：** JS-1125

**样品数量：** 各 3PCS

**测试项目：** 盐水喷雾测试

**测试设备：** 盐雾腐蚀试验箱/数字式微欧姆计

**测试条件：** 盐水温度 35±2℃、盐水浓度为 5±1%的盐雾环境中持续 24H

**测试结果**

| 测试规格 | 盐雾测试 | | | | | |
|---|---|---|---|---|---|---|
| | 4p | | | 9p | | |
| | 1 | 2 | 3 | 1 | 2 | 3 |
| Appearance | OK | OK | Ok | OK | OK | Ok |
| Contact Resistance 40mΩ Max | 3.29 | 3.72 | 3.26 | 3.19 | 3.24 | 3.23 |

**判定结论：** OK




**实验类别：** ☐周期性试验 ☐新品测试 ☐设计变更 ☐异常验证 ☑其它 业务需求

**核准：** _____ **审核：** _____ **测试：** 李华娟

喬訊電子工業股份有限公司
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| Type Document | Product Specification | Revised / Edition | *J* |
|---|---|---|---|
| Date Issued | *1993/07/01* | Data Revised | *2016/05/25* |
| *Subject: JS-1124 JS-1124-T JS-1125 JS-1125S JS-1125R Pitch 2.00mm DIP Series Wire to Board Connector* | | | Issued By: Engineering Dept. |

*This specification is referred to the 2.00mm DIP series wire to board connector.*

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## 1.0 Product Name/Part Number & Drawing Number:

| Product Name | | Part Number | Drawing Number |
|---|---|---|---|
| Crimp Terminal | | JS-1124-T | JS-1124-T |
| | | JS-1124-TC | JS-1124-TC |
| Housing | | JS-1124-XX | JS-1124-XX |
| Wafer | Straight | JS-1125-XX / JS-1125B-XX (Normal square pin) | JS-1125-XX JS-1125B-XX |
| | | JS-1125-XXK (Normal square pin) | JS-1125-XXK |
| | | JS-1125S-XXK (Square pin with holding construction) | JS-1125S-XXK |
| | Right Angle | JS-1125R-XX (Normal square pin) | JS-1125R-XX |
| | | JS-1125R-XXK (Normal square pin) | JS-1125R-XXK |

## 2.0 Construction/Dimensions/Material & Surface Finish:

| Part Name | | Material | Surface Finish |
|---|---|---|---|
| Crimp Terminal | | Phosphor Bronze | Tin-Plated(Electroplating later stamping) Gold-Plated(Stamping later electroplating) |
| Housing | | Nylon 66 | UL 94V-0 |
| Wafer | Normal Square Pin | Brass | Tin-Plated Matte-Plated Gold-Played |
| | Square Pin with Holding Construction | | |
| | Base | Nylon 66/ Nylon 66(G.F.) | UL 94V-0 |

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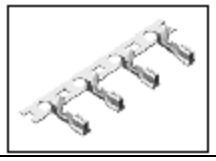
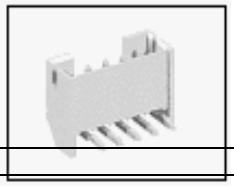
## 3.0 Characteristic:

| Item | | | Standard |
|---|---|---|---|
| 3.1 | Rated Current 额定电流 | | 2A AC/DC (With AWG #24 is applied) |
| 3.2 | Ambient Temperature Range 适用温度 | | Operating Temp. : -25℃~+85℃<br>Including 30℃ Terminal Temperature Rise at rated Current ;<br>Storage Temp. : -25℃~+85℃ |
| 3.3 | Applicable Wire 适用线型 | 3.3.1 | Conductor Construction Size: AWG #22~#28 |
| | | 3.3.2 | Wire Insulation O.D.: 1.2mm~1.6mm |
| 3.4 | Applicable Printed Circuit Board (PCB) 适用 PCB 板 | 3.4.1 | Thickness: 0.8 mm ~ 1.6 mm |
| | | 3.4.2 | Hole Size: 0.85±0.05 mm |
| | | 3.4.3 | Hole Pitch: 2.00 ± 0.05 mm |

## 4.0 Specimen:

| Part Name | | Part Number | Picture or Photograph |
|---|---|---|---|
| Crimp Terminal | | JS-1124-T<br>JS-1124-TC |  |
| Housing | | JS-1124-xx |  |
| Wafer | Straight | JS-1125<br>JS-1125B |  |
| | Right Angle | JS-1125R |  |

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**5.0 Applicable Standards:**

MIL-STD-202 Methods by test of connectors for electronic equipment.
EIA 364 Testing method for electrical connectors.

**6.0 Mechanical Performance:**

| Item | | Test Condition | | Requirement |
|---|---|---|---|---|
| 6.1 | Insertion & Retention Force 插入与拔出力 | Insert and withdraw with connectors at the speed rate of 25 25±6 mm/minute. (EIA 364-13) | | Refer to paragraph 9.1 |
| 6.2 | Crimp Tensile Strength (Axial) 压线拉力(轴向) | Pull out the cable from contact terminal at the speed rate of 25± 6mm/minute. | AWG#22 size wire | 5.0kgf/Min. |
| | | | AWG#24 size wire | 3.0kgf/Min. |
| | | | AWG#26 size wire | 2.0kgf/Min. |
| | | | AWG#28 size wire | 1.3kgf/Min. |
| 6.3 | Contact Retention Force 端子保持力 | Axial pullout force on the terminal in the housing at the speed rate of 25 ± 6 mm per minute. | | Per Contact 1.5kgf/Min. |
| 6.4 | Square Pin Retention Force PIN针保持力 | Axial pullout force on the square pin in the base at the speed rate of 25 ± 6 mm per minute. (EIA 364-29C) | | Per Contact 1.0kgf/Min. |
| | | | | After Soldering Heat Per Contact 0.5kgf/Min |

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## 7.0 Electrical Performance:

| Item | | Test Condition | Requirement |
|---|---|---|---|
| 7.1 | Contact Resistance 接触电阻 | A maximum voltage of 20mV and a maximum current of 10mA are applied to the Mate connectors. (EIA 364-23) | Contact Resistance: 20 milliohms Max. |
| 7.2 | Current Continuity 瞬间电流 | Each circuit of the connector shall be connected in series continuity meter shall detect current discontinuity longer than 1 microsecond during the vibration test. | No discontinuity current is longer than 1 microsecond. |
| 7.3 | Insulation Resistance 绝缘电阻 | Apply 500V D/C to any two adjacent contacts to measure the insulation resistance. (EIA 364-21) | Insulation Resistance: Initial 1000 megohms Min. |
| 7.4 | Withstanding Voltage 高压测试 | Apply 800V A/C (rms) for 1 minute and the leakage current shall not excced 0.5mA to the adjacent terminal and ground of the Mate connectors. (EIA 364-20) | No breakdown or flashover. |

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## 8.0 Environmental Performance:

| Item | | Test Condition | Requirement |
|---|---|---|---|
| 8.1 | Durability 耐久性 | Mate Connectors up 50 Cycles at a Maximun rate of 10 cycles Per minute prior to environmental test (EIA/ECA 364-09C ) | (After the test) Contact Resistance: 40 milliohms Max. |
| 8.2 | Vibration 耐振动 | Frequency: 10~55~10 Hz/minute.<br>Amplitude: 1.5 mm P-P.<br>Direction: 1. Axis of up and down.<br>2. Axis of right the left.<br>3. Axis of front and back.<br>Period: 2 hours for each direction.<br>(EIA 364-28A-23) | Initial Contact Resistance : 20 milliohms Max.<br>(After the test) Contact Resistance: 40 milliohms Max. |
| | | | No discontinuity current is longer than 1 microsecond. |
| 8.3 | Humidity Steady State 恒温恒湿 | Temperature: 40±2℃.<br>Humidity: 90%~95% (RH).<br>Period: 96 hours continuously.<br>(EIA 364-31) | (After the test) Contact Resistance: 40 milliohms Max. |
| | | | (After the test) Insulation Resistance：500 Megohms Min. |
| | | | (After the test) Withstanding Voltage : No breakdown or flashover |
| 8.4 | Thermal Shock 冷热冲击 | One Cycle Consists Of:<br>-55 +0/-3℃for 30 minutes. → Room Temp.5 minutes<br>85+3/-0℃ for 30 minutes. → Room Temp.5 minutes<br>Total Cycles: 25 Cycles.(EIA 364-32) | Same as paragraph 8.2 |

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| Item | | Test Condition | Requirement |
|---|---|---|---|
| 8.5 | Heat Aging<br>高温老化 | Temperature: 85±2℃.<br>Period: 96 hours continuously.<br>(EIA 364-17) | (After the test)<br>Contact Resistance:<br>40 milliohms Max. |
| 8.6 | Salt Spray<br>盐水喷雾 | Temperature: 35±2℃.<br>Density: 5 % in weight.<br>Period: Terminal or contact (Stamping after tin plated for 8 hours ) ;<br>Terminal or contact (Stamping before tin plated for 24 hours)<br>(EIA 364-26) | (After the test)<br>Contact Resistance:<br>40 milliohms Max |
| 8.7 | Solder Ability<br>焊接能力 | Solder Temperature: 245 ± 5℃.<br>Immersion Period: 3±0.5 Seconds<br>Method : 1.5mm From Square Pin Tip.<br>(EIA 364-52) | Solder entirely 95% of immersed area must show no voids or pinholes. |
| 8.8 | Resistance To Soldering Heat<br>高温耐热焊接 | Resistance to soldering heat when using normal square pin:<br>Solder Temperature: 230 ± 5℃.<br>Immersion Period: 3~5±0.5 Seconds | No deformation or damage. |
| | | Resistance to soldering heat when using square pin with holding construction or using PA66(G.F.):<br>Solder Temperature: 260 ± 5℃.<br>Immersion Period : 3~5±0.5 Seconds<br>(The part can't suitable to pass the IR reflow ) | |
| | | By soldering iron:350 ± 5℃ 3±0.5 Seconds.<br>Method : 1.5mm From Square Pin Tip | |

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## 9.0 Insertion Force (I.F.) & Retention Force (R.F.)

### 9.1 Requirement:

| No. Of Circuits | AT INITIAL | | AT 50TH | No. Of Circuits | AT INITIAL | | AT 50TH |
|---|---|---|---|---|---|---|---|
| | I.F. (MAX) | R.F. (MIN) | R.F. (MIN) | | I.F. (MAX) | R.F. (MIN) | R.F. (MIN) |
| | | | | 11 | 6.00 | 1.95 | 1.40 |
| 02 | 2.40 | 0.60 | 0.50 | 12 | 6.40 | 2.10 | 1.50 |
| 03 | 2.80 | 0.75 | 0.60 | 13 | 6.80 | 2.25 | 1.60 |
| 04 | 3.20 | 0.90 | 0.70 | 14 | 7.20 | 2.40 | 1.70 |
| 05 | 3.60 | 1.05 | 0.80 | 15 | 7.60 | 2.55 | 1.80 |
| 06 | 4.00 | 1.20 | 0.90 | 16 | 8.00 | 2.70 | 1.90 |
| 07 | 4.40 | 1.35 | 1.00 | | | | |
| 08 | 4.80 | 1.50 | 1.10 | | | | |
| 09 | 5.20 | 1.65 | 1.20 | | | | |
| 10 | 5.60 | 1.80 | 1.30 | | | | |

Unit: Kgf

10.0 Remark: Any change or revision for the product specification will not be announced in advance. Please contact our sales representative for the latest information.

# 检测报告
# Test Report



**检测依据 Test Method**

| 测试项目<br>Test Item(s) | 测试方法<br>Test Method | 测试仪器<br>Measured Equipment(s) |
|---|---|---|
| 铅<br>Lead (Pb) | 参考IEC 62321-5:2013<br>Refer to IEC 62321-5:2013 | ICP-OES |
| 镉<br>Cadmium (Cd) | 参考IEC 62321-5:2013<br>Refer to IEC 62321-5:2013 | ICP-OES |
| 汞<br>Mercury (Hg) | 参考IEC 62321-4:2013+AMD1:2017 CSV<br>Refer to IEC 62321-4:2013+AMD1:2017 CSV | ICP-OES |
| 六价铬<br>Hexavalent Chromium (Cr(VI)) | IEC 62321-7-1:2015 | UV-Vis |
| 多溴联苯<br>Polybrominated Biphenyls (PBBs) | IEC 62321-6:2015 | GC-MS |
| 多溴二苯醚<br>Polybrominated Diphenyl Ethers (PBDEs) | IEC 62321-6:2015 | GC-MS |
| 邻苯二甲酸酯<br>Phthalates (DBP, BBP, DEHP, DIBP) | IEC 62321-8:2017 | GC-MS |

# 检测报告
# Test Report

**报告编号** A2240162085101004E
**Report No.** A2240162085101004E



**检测结果 Test Result(s)**

| 测试项目 Tested Item(s) | 结果 Result | 方法检出限 MDL |
|---|---|---|
| | 004 | |
| 铅 Lead (Pb) | N.D. | 2 mg/kg |
| 镉 Cadmium (Cd) | N.D. | 2 mg/kg |
| 汞 Mercury (Hg) | N.D. | 2 mg/kg |
| 六价铬 Hexavalent Chromium (Cr(VI)) | N.D. ▼ | 0.10 μg/cm² (LOQ) |

| 测试项目 Tested Item(s) | 结果 Result | 方法检出限 MDL |
|---|---|---|
| | 004 | |
| **多溴联苯 Polybrominated Biphenyls (PBBs)** | | |
| 一溴联苯 Monobromobiphenyl | N.D. | 5 mg/kg |
| 二溴联苯 Dibromobiphenyl | N.D. | 5 mg/kg |
| 三溴联苯 Tribromobiphenyl | N.D. | 5 mg/kg |
| 四溴联苯 Tetrabromobiphenyl | N.D. | 5 mg/kg |
| 五溴联苯 Pentabromobiphenyl | N.D. | 5 mg/kg |
| 六溴联苯 Hexabromobiphenyl | N.D. | 5 mg/kg |
| 七溴联苯 Heptabromobiphenyl | N.D. | 5 mg/kg |
| 八溴联苯 Octabromobiphenyl | N.D. | 5 mg/kg |
| 九溴联苯 Nonabromobiphenyl | N.D. | 5 mg/kg |
| 十溴联苯 Decabromobiphenyl | N.D. | 5 mg/kg |

| 测试项目 Tested Item(s) | 结果 Result | 方法检出限 MDL |
|---|---|---|
| | 004 | |
| **多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)** | | |
| 一溴二苯醚 Monobromodiphenyl ether | N.D. | 5 mg/kg |
| 二溴二苯醚 Dibromodiphenyl ether | N.D. | 5 mg/kg |
| 三溴二苯醚 Tribromodiphenyl ether | N.D. | 5 mg/kg |
| 四溴二苯醚 Tetrabromodiphenyl ether | N.D. | 5 mg/kg |
| 五溴二苯醚 Pentabromodiphenyl ether | N.D. | 5 mg/kg |
| 六溴二苯醚 Hexabromodiphenyl ether | N.D. | 5 mg/kg |
| 七溴二苯醚 Heptabromodiphenyl ether | N.D. | 5 mg/kg |
| 八溴二苯醚 Octabromodiphenyl ether | N.D. | 5 mg/kg |
| 九溴二苯醚 Nonabromodiphenyl ether | N.D. | 5 mg/kg |
| 十溴二苯醚 Decabromodiphenyl ether | N.D. | 5 mg/kg |

# 检测报告
# Test Report



**检测结果 Test Result(s)**

| 测试项目 Tested Item(s) | 结果 Result | 方法检出限 MDL |
|---|---|---|
| | 004 | |
| **邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)** | | |
| 邻苯二甲酸二丁酯 Dibutyl phthalate (DBP) CAS#:84-74-2 | N.D. | 50 mg/kg |
| 邻苯二甲酸丁基苄基酯 Butyl benzyl phthalate (BBP) CAS#:85-68-7 | N.D. | 50 mg/kg |
| 邻苯二甲酸二(2-乙基)己酯 Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7 | N.D. | 50 mg/kg |
| 邻苯二甲酸二异丁酯 Diisobutyl phthalate (DIBP) CAS#:84-69-5 | N.D. | 50 mg/kg |

**样品/部位描述Sample/Part Description**

| 序号 No. | CTI样品ID CTI Sample ID | 描述 Description |
|---|---|---|
| 1 | 004 | 银色镀层 Silvery plating |

**备注:** **对于检测铅，镉，汞之样品已消解完全。**

-N.D. = 未检出（小于方法检出限或定量限）

-mg/kg = ppm = 百万分之一

-LOQ = 定量限，六价铬的定量限为0.10 μg/cm²

-▼六价铬浓度小于0.10 μg/cm²，样品未检出六价铬。由于未获知样品的存储条件和生产日期，样品的六价铬测试结果仅能代表测试时样品含六价铬的状态。

**Remark:** **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL or LOQ)

-mg/kg = ppm = parts per million

-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 μg/cm²

-▼The sample is negative for Cr(VI) − The Cr(VI) concentration is below 0.10 μg/cm². The coating is considered a non-Cr(VI) based coating. Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

**注释:** **本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。**

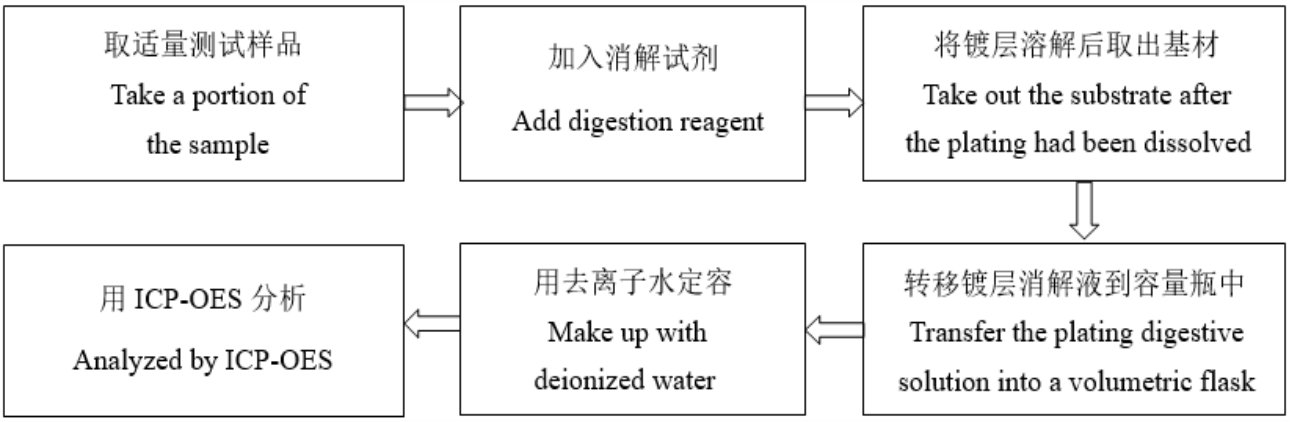
**Note:** **The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.**

# 检测报告
# Test Report

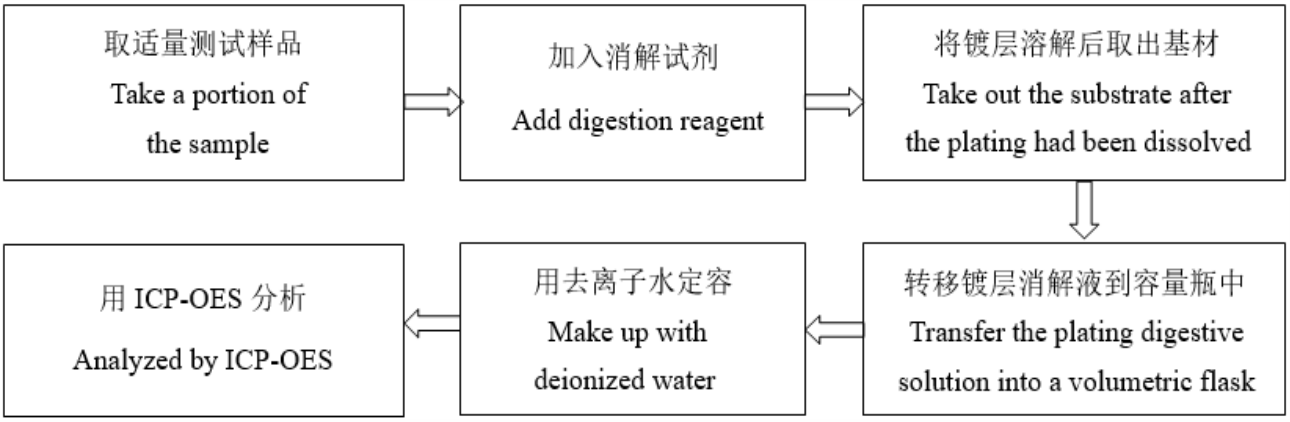


**检测流程 Test Process**

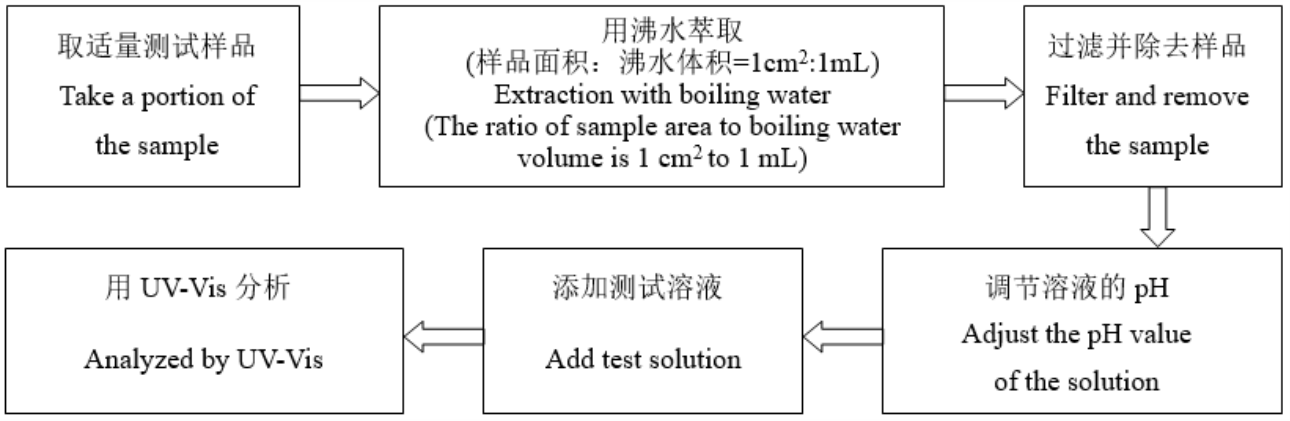
1. 铅(Pb)， 镉(Cd)
   **Lead (Pb), Cadmium (Cd)**




2. 汞(Hg)
   **Mercury (Hg)**

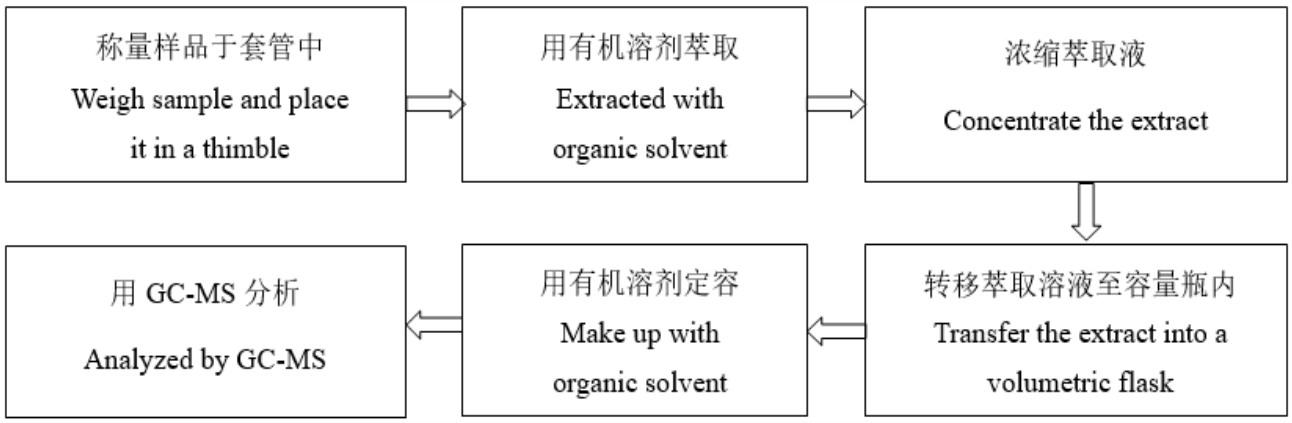



3. 六价铬(Cr(VI))
   **Hexavalent Chromium (Cr(VI))**



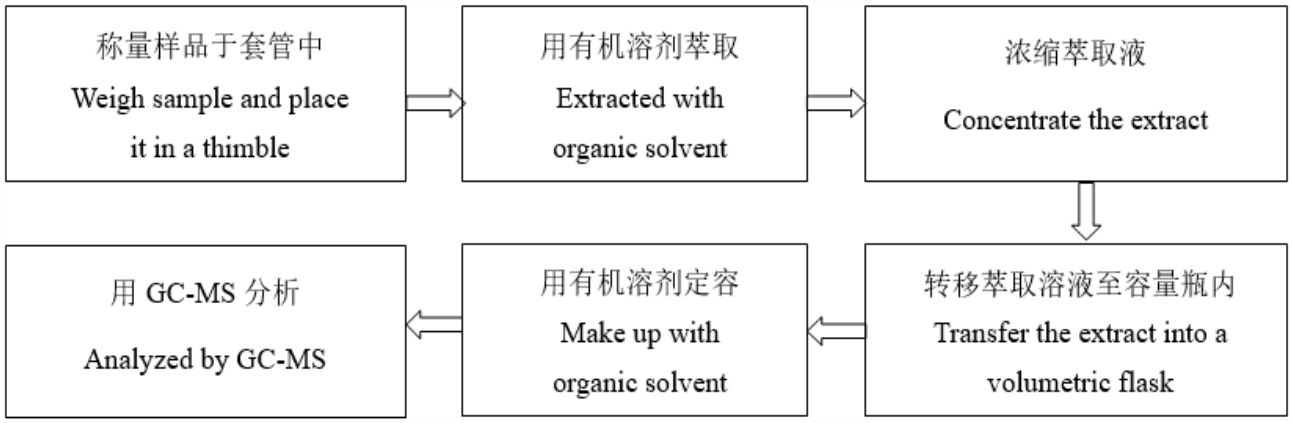
**4. 多溴联苯(PBBs)， 多溴二苯醚(PBDEs)**

**Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)**




**5. 邻苯二甲酸酯(DBP， BBP， DEHP， DIBP)**

**Phthalates (DBP, BBP, DEHP, DIBP)**



# 检测报告
# Test Report



## 样品图片
## Photo(s) of the sample(s)




声明Statement：

1. 检测报告无批准人签字、“专用章”及报告骑缝章无效；
   This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. 报告抬头公司名称及地址、样品及样品信息由申请者提供，申请者应对其真实性负责，CTI未核实其真实性；
   The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn’t verified;
3. 本报告检测结果仅对受测样品负责；
   The result(s) shown in this report refer(s) only to the sample(s) tested;
4. 除非另有说明，报告参照ILAC-G8:09/2019 / CNAS-GL015:2022使用简单接受(w=0)二元判定规则进行符合性判定;
   Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
5. 未经CTI书面同意，不得部分复制本报告；
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   In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

***报告结束***

*** End of report ***

# 检测报告
# Test Report



**检测依据 Test Method**

| 测试项目<br>Test Item(s) | 测试方法<br>Test Method | 测试仪器<br>Measured Equipment(s) |
|---|---|---|
| 铅<br>Lead (Pb) | 参考IEC 62321-5:2013<br>Refer to IEC 62321-5:2013 | ICP-OES |
| 镉<br>Cadmium (Cd) | 参考IEC 62321-5:2013<br>Refer to IEC 62321-5:2013 | ICP-OES |
| 汞<br>Mercury (Hg) | 参考IEC 62321-4:2013+AMD1:2017 CSV<br>Refer to IEC 62321-4:2013+AMD1:2017 CSV | ICP-OES |
| 六价铬<br>Hexavalent Chromium (Cr(VI)) | IEC 62321-7-1:2015 | UV-Vis |
| 多溴联苯<br>Polybrominated Biphenyls (PBBs) | IEC 62321-6:2015 | GC-MS |
| 多溴二苯醚<br>Polybrominated Diphenyl Ethers (PBDEs) | IEC 62321-6:2015 | GC-MS |
| 邻苯二甲酸酯<br>Phthalates (DBP, BBP, DEHP, DIBP) | IEC 62321-8:2017 | GC-MS |

# 检测报告
# Test Report

**报告编号** A2240162085101001E
**Report No.** A2240162085101001E



**检测结果 Test Result(s)**

| 测试项目 Tested Item(s) | 结果 Result | 方法检出限 MDL |
|---|---|---|
| | 001 | |
| 铅 Lead (Pb) | 44 mg/kg | 2 mg/kg |
| 镉 Cadmium (Cd) | N.D. | 2 mg/kg |
| 汞 Mercury (Hg) | N.D. | 2 mg/kg |
| 六价铬 Hexavalent Chromium (Cr(VI)) | N.D. ▼ | 0.10 μg/cm² (LOQ) |

| 测试项目 Tested Item(s) | 结果 Result | 方法检出限 MDL |
|---|---|---|
| | 001 | |
| **多溴联苯 Polybrominated Biphenyls (PBBs)** | | |
| 一溴联苯 Monobromobiphenyl | N.D. | 5 mg/kg |
| 二溴联苯 Dibromobiphenyl | N.D. | 5 mg/kg |
| 三溴联苯 Tribromobiphenyl | N.D. | 5 mg/kg |
| 四溴联苯 Tetrabromobiphenyl | N.D. | 5 mg/kg |
| 五溴联苯 Pentabromobiphenyl | N.D. | 5 mg/kg |
| 六溴联苯 Hexabromobiphenyl | N.D. | 5 mg/kg |
| 七溴联苯 Heptabromobiphenyl | N.D. | 5 mg/kg |
| 八溴联苯 Octabromobiphenyl | N.D. | 5 mg/kg |
| 九溴联苯 Nonabromobiphenyl | N.D. | 5 mg/kg |
| 十溴联苯 Decabromobiphenyl | N.D. | 5 mg/kg |

| 测试项目 Tested Item(s) | 结果 Result | 方法检出限 MDL |
|---|---|---|
| | 001 | |
| **多溴二苯醚 Polybrominated Diphenyl Ethers (PBDEs)** | | |
| 一溴二苯醚 Monobromodiphenyl ether | N.D. | 5 mg/kg |
| 二溴二苯醚 Dibromodiphenyl ether | N.D. | 5 mg/kg |
| 三溴二苯醚 Tribromodiphenyl ether | N.D. | 5 mg/kg |
| 四溴二苯醚 Tetrabromodiphenyl ether | N.D. | 5 mg/kg |
| 五溴二苯醚 Pentabromodiphenyl ether | N.D. | 5 mg/kg |
| 六溴二苯醚 Hexabromodiphenyl ether | N.D. | 5 mg/kg |
| 七溴二苯醚 Heptabromodiphenyl ether | N.D. | 5 mg/kg |
| 八溴二苯醚 Octabromodiphenyl ether | N.D. | 5 mg/kg |
| 九溴二苯醚 Nonabromodiphenyl ether | N.D. | 5 mg/kg |
| 十溴二苯醚 Decabromodiphenyl ether | N.D. | 5 mg/kg |

# 检测报告
# Test Report



**检测结果 Test Result(s)**

| 测试项目 Tested Item(s) | 结果 Result | 方法检出限 MDL |
|---|---|---|
| | 001 | |
| **邻苯二甲酸酯 Phthalates (DBP, BBP, DEHP, DIBP)** | | |
| 邻苯二甲酸二丁酯 Dibutyl phthalate (DBP)<br>CAS#:84-74-2 | N.D. | 50 mg/kg |
| 邻苯二甲酸丁基苄基酯 Butyl benzyl phthalate (BBP)<br>CAS#:85-68-7 | N.D. | 50 mg/kg |
| 邻苯二甲酸二(2-乙基)己酯 Di-(2-ethylhexyl) phthalate (DEHP)<br>CAS#:117-81-7 | N.D. | 50 mg/kg |
| 邻苯二甲酸二异丁酯 Diisobutyl phthalate (DIBP)<br>CAS#:84-69-5 | N.D. | 50 mg/kg |

**样品/部位描述Sample/Part Description**

| 序号 No. | CTI样品ID CTI Sample ID | 描述 Description |
|---|---|---|
| 1 | 001 | 银白色镀层 Silvery white plating |

**备注:** **对于检测铅，镉，汞之样品已消解完全。**

-N.D. = 未检出（小于方法检出限或定量限）

-mg/kg = ppm = 百万分之一

-LOQ = 定量限，六价铬的定量限为0.10 μg/cm²

-▼六价铬浓度小于0.10 μg/cm²，样品未检出六价铬。由于未获知样品的存储条件和生产日期，样品的六价铬测试结果仅能代表测试时样品含六价铬的状态。

**Remark:** **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury.**

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL or LOQ)

-mg/kg = ppm = parts per million

-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 μg/cm²

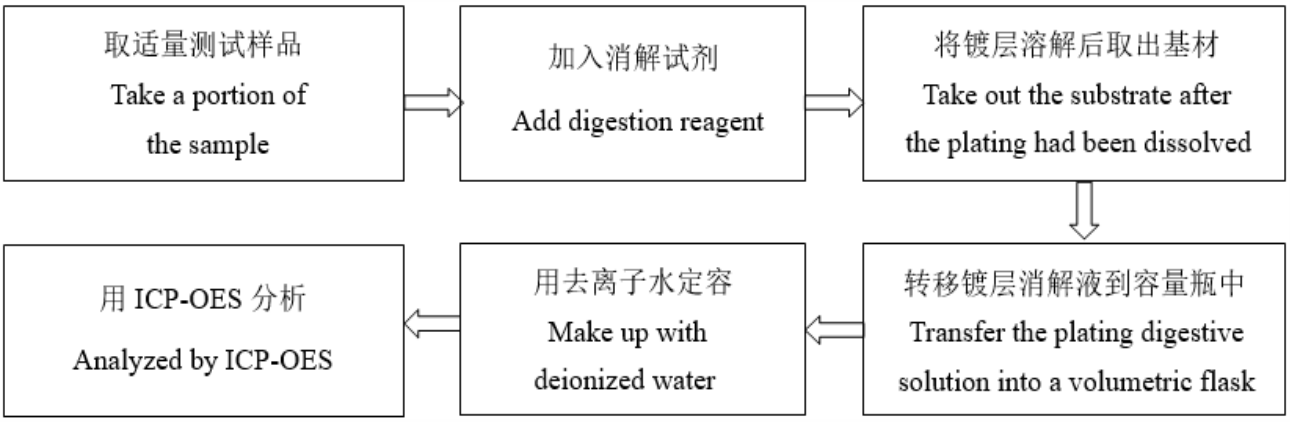
-▼The sample is negative for Cr(VI) − The Cr(VI) concentration is below 0.10 μg/cm². The coating is considered a non-Cr(VI) based coating. Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

**注释:** **本报告中的数据结果供科研、教学、企业内部质量控制、企业产品研发等目的用。**

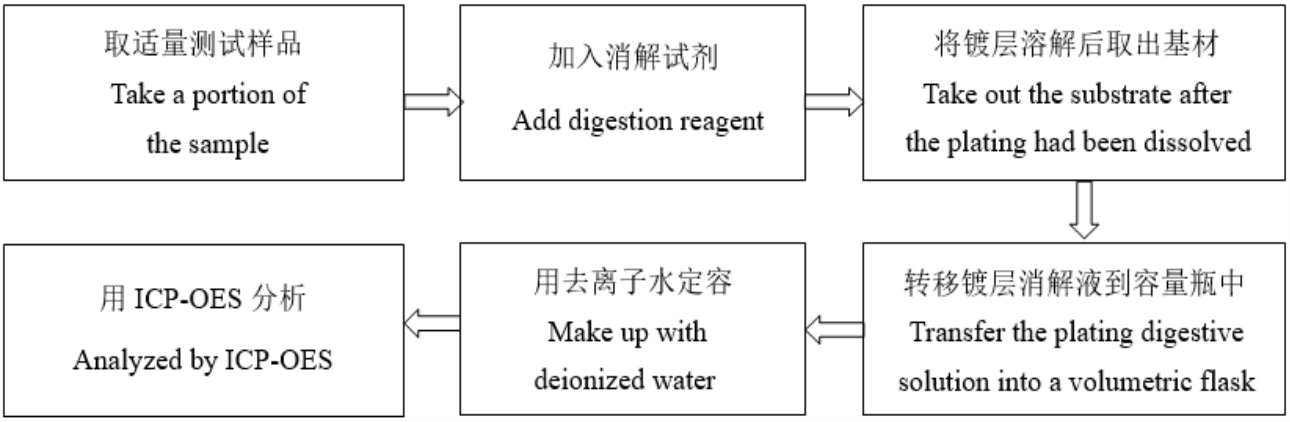
**Note:** **The testing data and result(s) in this report is(are) just for scientific research, education, internal quality control and product development etc.**

检测流程 Test Process

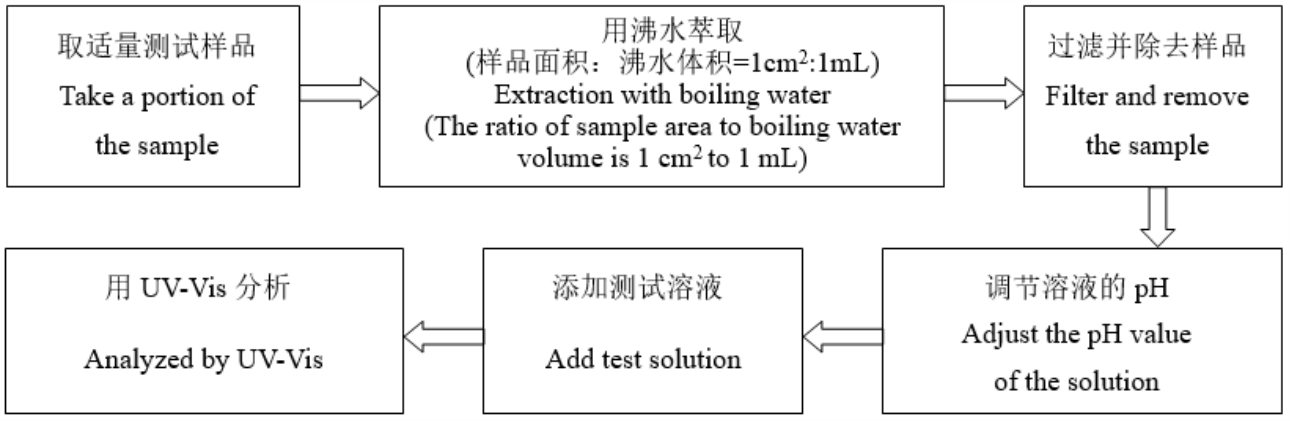
1. 铅(Pb)， 镉(Cd)
   Lead (Pb), Cadmium (Cd)




2. 汞(Hg)
   Mercury (Hg)

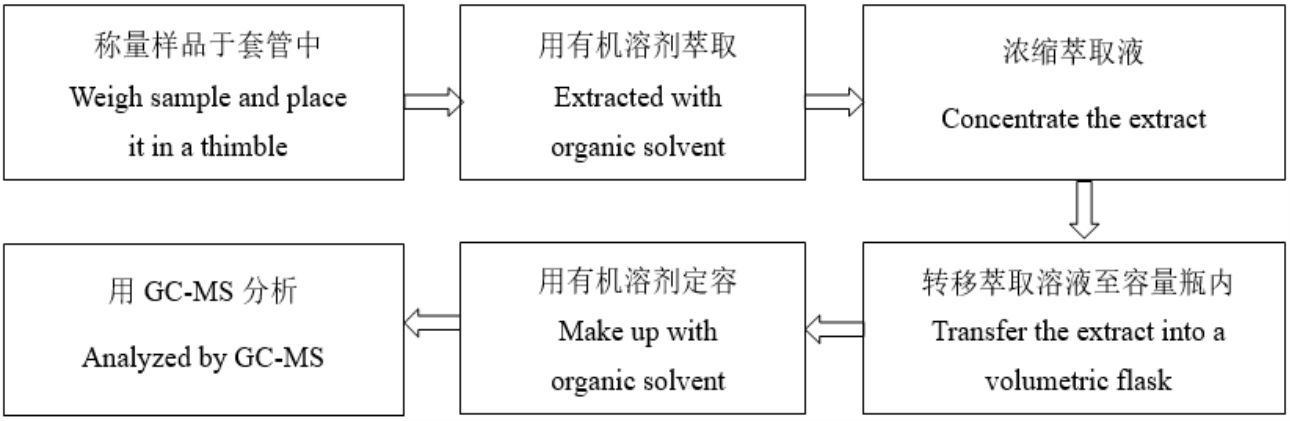



3. 六价铬(Cr(VI))
   Hexavalent Chromium (Cr(VI))



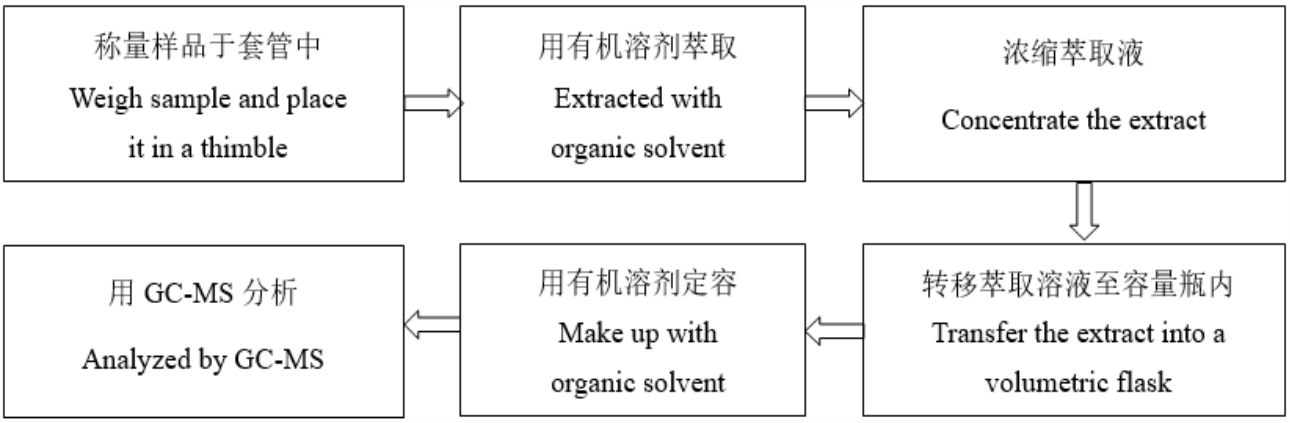
**4. 多溴联苯(PBBs)， 多溴二苯醚(PBDEs)**

**Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)**




**5. 邻苯二甲酸酯(DBP， BBP， DEHP， DIBP)**

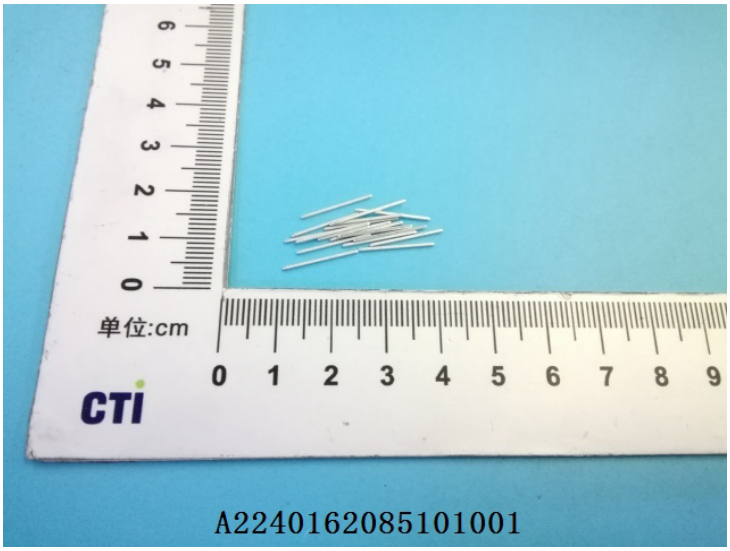
**Phthalates (DBP, BBP, DEHP, DIBP)**



# 检测报告
# Test Report



## 样品图片
## Photo(s) of the sample(s)




声明Statement：

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   The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn’t verified;
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   Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
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***报告结束***

*** End of report ***

# SDS Report

**No. SHAEC1900451901** Date: Jan. 16, 2019 Page 1 of 1

Kunshan City win Metal Products Co.,Ltd
369 Xingpu Middle Road, Shipu, Qiandeng Town, Kunshan City, Jiangsu Province

| | | |
|---|---|---|
| SGS Ref. No. | : | SP19-000706-SH |
| Sample Name | : | Brass PIN needle |
| End Uses | : | Electronic Connector |
| Composition/Ingredient of sample (as per client submission) | : | See *Section 3 Composition/information on ingredients* on the SDS report |
| Job Receiving Date | : | Jan 08, 2019 |
| Last Information Date | : | Jan 09, 2019 |
| SDS Preparation Period | : | Jan 08 – Jan 15, 2019 |

Service Requested : Preparation of Safety Data Sheet (SDS) for the sample with submitted information.

Summary : As per request, the contents and formats of the SDS are prepared in accordance with European Commission Regulation (EC) No 1907/2006, Regulation (EC) No 1272/2008 and Regulation (EU) No 2015/830, and is provided per attached.

Remark:
This sample is likely to be classified as article with substances not intended to be released and is out of scope of a SDS as set out in Regulation (EC) No 1907/2006. This SDS is generated for client's reference only.

Signed for and on behalf of
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

_____
Wei WANG, Terry
Approved Signatory

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中国·上海·徐汇区宜山路889号3号楼 邮编: 200233 t HL (86-21) 61402594 f HL (86-21)61156899 e sgs.china@sgs.com

# Safety data sheet
## Regulation (EC) No.1907/2006 and 1272/2008

**Printing date 15.01.2019** **Version number 1** **Revision: 11.01.2019**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**
· **Trade name:** Brass PIN needle

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· **Application of the substance / the mixture:** Electronic Connector

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Kunshan City win Metal Products Co.,Ltd
369 Xingpu Middle Road, Shipu, Qiandeng Town, Kunshan City, Jiangsu Province
Tel: 0512-57753999
E-mail: ksdianquan@126.com
· **Only Representative/ other EU contact point:** Not available
· **Further information obtainable from:** Kunshan City win Metal Products Co.,Ltd

· **1.4 Emergency telephone number:**
Yenayan
Tel: 13773158087

· **1.5 Reference Number:** SP19-000706-SH; SHAEC1900451901

· **1.6 Remark:**
This sample is likely to be classified as article with substances not intended to be released and is out of scope of a SDS as set out in Regulation (EC) No 1907/2006. This SDS is generated for client's reference only.

## SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**
· **Classification according to Regulation (EC) No 1272/2008**



GHS09 environment

Aquatic Acute 1 H400 Very toxic to aquatic life.
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

· **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of Regulation (EC) No. 1272/2008.
· **Classification system:**
The classification is according to the latest edition of EU Regulation (EC) No. 1272/2008, and extended by company and literature data.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the CLP regulation.
· **Hazard pictograms**



GHS09

· **Signal word** Warning

· **Hazard-determining components of labelling:** Not applicable.
· **Hazard statements**
H410 Very toxic to aquatic life with long lasting effects.
· **Precautionary statements**
P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P273 Avoid release to the environment.
P391 Collect spillage.

(Contd. on page 2)

# Safety data sheet
## Regulation (EC) No.1907/2006 and 1272/2008

**Printing date 15.01.2019** **Version number 1** **Revision: 11.01.2019**

**Trade name:** Brass PIN needle

(Contd. of page 1)

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:**
Mixture of the substances listed below with nonhazardous additions.
For the wording of the listed hazard statements refer to Section 16.

· **Composition:**

| | | | |
|---|---|---|---|
| CAS: 7440-50-8<br>EINECS: 231-159-6 | copper | substance with a Community workplace exposure limit | 63.5-68% |
| CAS: 7440-66-6<br>EINECS: 231-175-3 | Zinc | Aquatic Acute 1, H400; Aquatic Chronic 1, H410 | 32.5-35% |
| CAS: 7439-89-6<br>EINECS: 231-096-4 | iron | | ≤0.03% |
| CAS: 7439-92-1<br>EINECS: 231-100-4<br>Index number: 082-014-00-7 | lead | Repr. 1A, H360FD-H362 | ≤0.009% |

## SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **After inhalation:**
Drink plenty of water and vomit it to a well-ventilated and cool place for rest. Keep warm with a towel. If it is serious, it will be sent to the hospital for examination and diagnosis.
· **After skin contact:**
Clean with clean water. Clothing must be thoroughly cleaned before it can be worn again. If skin irritation, rash or persistent recurrence still occurs, the patient should go to the hospital for diagnosis and treatment.
· **After eye contact:**
Rinse the upper and lower eyelids with plenty of water (at least 15 minutes). If the eyes are irritated and uncomfortable, send them to the doctor immediately for examination.
· **After swallowing:**
Rinse out mouth with water.
Never give anything by mouth to an unconscious person.
Seek medical treatment.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

## SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.

· **5.3 Advice for firefighters**
· **Protective equipment:**
Mouth respiratory protective device.

(Contd. on page 3)

# Safety data sheet
## Regulation (EC) No.1907/2006 and 1272/2008

**Printing date 15.01.2019** **Version number 1** **Revision: 11.01.2019**

**Trade name:** Brass PIN needle

(Contd. of page 2)

Wear fully protective suit.

## SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation.
Avoid formation of dust.

· **6.2 Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.

· **6.3 Methods and material for containment and cleaning up:**
Pick up mechanically.
Dispose contaminated material as waste according to item 13.

· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

## SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
For the general occupational hygienic measures refer to Section 8.
· **Information about fire - and explosion protection:** Normal measures for preventive fire protection.

· **7.2 Conditions for safe storage, including any incompatibilities**
· **Requirements to be met by storerooms and receptacles:** Store in a cool location.
· **Information about storage in one common storage facility:**
Store away from foodstuffs.
Do not store together with oxidising and acidic materials.
· **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.

· **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

| · **Ingredients with limit values that require monitoring at the workplace:** | |
|---|---|
| **7440-50-8 copper (63.5-68%)** | |
| MAK (Germany) | Long-term value: 0.01 A mg/m³<br>als Cu |
| VME (France) | Short-term value: 2** mg/m³<br>Long-term value: 0.2* 1** mg/m³<br>*fumées **poussières, en Cu |
| WEL (Great Britain) | Short-term value: 2** mg/m³<br>Long-term value: 0.2* 1** mg/m³<br>*fume **dusts and mists (as Cu) |
| **7440-66-6 Zinc (32.5-35%)** | |
| MAK (Germany) | Long-term value: 0.1A* 2E** mg/m³<br>*alveolengängig; **einatembar |

(Contd. on page 4)

# Safety data sheet
## Regulation (EC) No.1907/2006 and 1272/2008

**Printing date 15.01.2019** **Version number 1** **Revision: 11.01.2019**

**Trade name:** Brass PIN needle

(Contd. of page 3)

| **7439-92-1 lead (≤0.009%)** | |
|---|---|
| BOELV (EU) | Long-term value: 0.15 mg/m³<br>as Pb |
| MAK (Germany) | vgl.Abschn.XII |
| VME (France) | Long-term value: 0.15 mg/m³ |

· **Regulatory information**
MAK (Germany): MAK- und BAT-Liste
VME (France): ED 984, 10.2016
WEL (Great Britain): EH40/2018
BOELV (EU): 98/24/EG
· **DNELs:** Data not available.
· **PNECs:** Data not available.

| · **Ingredients with biological limit values:** | |
|---|---|
| **7439-92-1 lead** | |
| BGW (Germany) | 300 µg/l<br>Untersuchungsmaterial: Vollblut<br>Probennahmezeitpunkt: keine Beschränkung<br>Parameter: Blei Frauen < 45 J.<br><br>400 µg/l<br>Untersuchungsmaterial: Vollblut<br>Probennahmezeitpunkt: keine Beschränkung<br>Parameter: Blei |

· **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**
· **Based on the composition shown in Section 3, the following measures are suggested for occupational safety measure**
· **Appropriate engineering controls**
Wash hands before breaks and at the end of work.
See Section 7 for information about design of technical facilities.

· **Personal protective equipment**
· **Respiratory protection:** Suitable respiratory protective device recommended.
· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
· **Material of gloves:**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material:**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

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# Safety data sheet
## Regulation (EC) No.1907/2006 and 1272/2008

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· **Eye protection:**



Tightly sealed goggles

· **Environmental exposure controls:**
Control measures must be made in accordance with Community environmental protection legislation.

## SECTION 9: Physical and chemical properties

| | |
|---|---|
| · **9.1 Information on basic physical and chemical properties** | |
| · **General Information** | |
| · **Appearance:** | |
| **Form:** | Solid |
| **Colour:** | Yellow |
| · **Odour:** | Odourless |
| · **Odour threshold:** | Data not available. |
| · **pH-value:** | Data not available. |
| · **Change in condition:** | |
| **Melting point/freezing point:** | 904-954 °C |
| **Initial boiling point and boiling range:** | Data not available. |
| · **Flash point:** | Data not available. |
| · **Flammability (solid, gas):** | Data not available. |
| · **Auto-ignition temperature:** | Data not available. |
| · **Decomposition temperature:** | Data not available. |
| · **Self-igniting:** | Product is not selfigniting. |
| · **Explosive properties:** | Product does not present an explosion hazard. |
| · **Explosion limits** | |
| **Lower:** | Data not available. |
| **Upper:** | Data not available. |
| · **Oxidizing properties:** | Data not available. |
| · **Vapour pressure:** | Data not available. |
| · **Density:** | Data not available. |
| · **Relative density:** | Data not available. |
| · **Vapour density:** | Data not available. |
| · **Evaporation rate:** | Data not available. |
| · **Solubility in / Miscibility with** | |
| **water:** | Data not available. |
| · **Partition coefficient: n-octanol/water:** | Data not available. |
| · **Viscosity:** | |
| **Dynamic:** | Data not available. |
| **Kinematic:** | Data not available. |
| · **9.2 Other information** | No further relevant information available. |

## SECTION 10: Stability and reactivity

· **10.1 Reactivity** No decomposition if used according to specifications.

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· **10.2 Chemical stability**
At normal room temperature and atmospheric pressure, it is a stable substance and an inactive substance.

· **10.3 Possibility of hazardous reactions** No dangerous reactions known.

· **10.4 Conditions to avoid** No further relevant information available.

· **10.5 Incompatible materials:** No further relevant information available.

· **10.6 Hazardous decomposition products:**
When heated to the decomposition temperature, metal oxides and metal fumigation occur. Metal fumigation may cause flu-like symptoms.

## SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.

| · **LD/LC50 values relevant for classification:** | | |
|---|---|---|
| **7439-89-6 iron** | | |
| Oral | LD50 | 30,000 mg/kg (rat) |

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

## SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.

· **12.2 Persistence and degradability** No further relevant information available.

· **12.3 Bioaccumulative potential** No further relevant information available.

· **12.4 Mobility in soil** No further relevant information available.

· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

· **12.7 Additional ecological information:**
· **General notes:**
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water.
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms



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## SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation:**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packaging**
· **Recommendation:** Disposal must be made according to official regulations.

## SECTION 14: Transport information

| | |
|---|---|
| · **14.1 UN-Number** | |
| · **ADR/RID/ADN, IMDG, IATA** | UN3077 |
| · **14.2 UN proper shipping name** | |
| · **ADR/RID/ADN, IATA** | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc) |
| · **IMDG** | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc), MARINE POLLUTANT |
| · **14.3 Transport hazard class(es)** | |
| · **ADR/RID/ADN, IMDG, IATA** |  |
| · **Class** | 9 Miscellaneous dangerous substances and articles. |
| · **Label** | 9 |
| · **14.4 Packing group** | |
| · **ADR/RID/ADN, IMDG, IATA** | III |
| · **14.5 Environmental hazards** | |
| · **Marine pollutant:** | Symbol (fish and tree) |
| · **Special marking (ADR/RID/ADN):** | Symbol (fish and tree) |
| · **Special marking (IATA):** | Symbol (fish and tree) |
| · **14.6 Special precautions for user** | Warning: Miscellaneous dangerous substances and articles. |
| · **Danger code (Kemler):** | 90 |
| · **EMS Number:** | F-A,S-F |
| · **Stowage Category** | A |
| · **Stowage Code** | SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9. |
| · **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** | Not applicable. |
| · **14.8 Transport/Additional information:** | |
| · **ADR/RID/ADN** | |
| · **Limited quantities (LQ):** | 5 kg |
| · **Excepted quantities (EQ)** | Code: E1<br>Maximum net quantity per inner packaging: 30 g<br>Maximum net quantity per outer packaging: 1000 g |
| · **Transport category:** | 3 |
| · **Tunnel restriction code:** | - |

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| | |
|---|---|
| · **IMDG** | |
| · **Limited quantities (LQ)** | 5 kg |
| · **Excepted quantities (EQ)** | Code: E1<br>Maximum net quantity per inner packaging: 30 g<br>Maximum net quantity per outer packaging: 1000 g |
| · **UN "Model Regulation":** | UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (ZINC), 9, III |
| · **Remark** | When transporting, the product should not be in direct contact with water, and should pay attention to the danger of slipping and falling. |

## SECTION 15: Regulatory information

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **MAK(German Maximum Workplace Concentration)**

| | | |
|---|---|---|
| 7439-92-1 | lead | 2 |

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category** E1 Hazardous to the Aquatic Environment
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
· **National regulations:**
· **Waterhazard class:** Water hazard class 2 (Self-assessment): hazardous for water.
· **Other regulations, limitations and prohibitive regulations**

· **SVHC Candidate List of REACH Regulation Annex XIV Authorisation (27/6/2018)**

None of the ingredients is listed.

· **REACH Regulation Annex XVII Restriction (10/10/2018)**
**See Section 16 for information about restriction of use.**

None of the ingredients is listed.

· **REACH Regulation Annex XIV Authorisation List (13/6/2017)**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other information

· **Relevant hazard statements**
H360FD May damage fertility. May damage the unborn child.
H362 May cause harm to breast-fed children.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

· **Classification according to Regulation (EC) No 1272/2008**

| | |
|---|---|
| Hazardous to the aquatic environment - short-term (acute) aquatic hazard<br>Hazardous to the aquatic environment - long-term (chronic) aquatic hazard | The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008. |

. **********

The contents and format of this SDS are in accordance with Regulation (EC) No 1907/2006, 1272/2008 and Regulation (EU) No 2015/830.

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# Safety data sheet
## Regulation (EC) No.1907/2006 and 1272/2008



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*or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.*

· **Remark**

*This sample is likely to be classified as article with substances not intended to be released and is out of scope of a SDS as set out in Regulation (EC) No 1907/2006. This SDS is generated for client's reference only.*

· **Abbreviations and acronyms:**

*ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*
*IMDG: International Maritime Code for Dangerous Goods*
*IATA: International Air Transport Association*
*GHS: Globally Harmonised System of Classification and Labelling of Chemicals*
*EINECS: European Inventory of Existing Commercial Chemical Substances*
*ELINCS: European List of Notified Chemical Substances*
*CAS: Chemical Abstracts Service (division of the American Chemical Society)*
*DNEL: Derived No-Effect Level (REACH)*
*PNEC: Predicted No-Effect Concentration (REACH)*
*LC50: Lethal concentration, 50 percent*
*LD50: Lethal dose, 50 percent*
*PBT: Persistent, Bioaccumulative and Toxic*
*vPvB: very Persistent and very Bioaccumulative*
*Repr. 1A: Reproductive toxicity – Category 1A*
*Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1*
*Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1*

. **********

*End of document*

# Test Report

**No.:** SHAEC24016938501 **Date:** Aug 01, 2024 

Client Name: Kunshan City win Metal Products Co.,Ltd

Client Address: No. 499, Xingpu Middle Road, Shipu, Qiandeng Town, Kunshan City, Jiangsu Province

Sample Name: H65 Brass wire

The above sample(s) and information were provided by the client.

---

SGS Job No.: SHP24-024640

Sample Receiving Date: Jul 26, 2024

Testing Period: Jul 26, 2024 ~ Aug 01, 2024

Test Requested: Select test(s) as requested by the client.

Test Method(s): Please refer to next page(s).

Test Result(s): Please refer to next page(s).

| Test Requirement | Conclusion |
|---|---|
| EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) | Pass |
| Tetrabromobisphenol A (TBBP-A) | See Results |
| Alkanes C14-C17, chloro (medium- chain chlorinated paraffins) (MCCPs) | See Results |

Signed for and on behalf of
SGS-CSTC Standards Technical Services (Shanghai) Co., Ltd.

Tom Ni

Tom Ni
Approved Signatory

scan to see the report

9160A21C

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**Test Result(s):**

Test Part Description：

| SN ID | Sample No. | SGS Sample ID | Description |
|---|---|---|---|
| SN1 | A1 | SHA24-0169385-0001.C001 | Golden metal wire |

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%
(2) MDL = Method Detection Limit
(3) ND = Not Detected (< MDL)
(4) "-" = Not Regulated

**EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)**

**Test Method:** With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, IEC 62321-6:2015 and IEC62321-8:2017, analysis was performed by ICP-OES/AAS, UV-Vis and GC-MS.

| Test Item(s) | Limit | Unit(s) | MDL | A1 |
|---|---|---|---|---|
| Lead (Pb) | 1000 | mg/kg | 2 | 19 |
| Mercury (Hg) | 1000 | mg/kg | 2 | ND |
| Cadmium (Cd) | 100 | mg/kg | 2 | ND |
| Hexavalent Chromium (Cr(VI))▼ | - | µg/cm² | 0.10 | ND |
| Polybromobiphenyl (PBB) | 1000 | mg/kg | - | ND |
| Monobrominated biphenyl (MonoBB) | - | mg/kg | 5 | ND |
| Dibrominated biphenyl (DiBB) | - | mg/kg | 5 | ND |
| Tribrominated biphenyl (TriBB) | - | mg/kg | 5 | ND |
| Tetrabrominated biphenyl (TetraBB) | - | mg/kg | 5 | ND |
| Pentabrominated biphenyl (PentaBB) | - | mg/kg | 5 | ND |
| Hexabrominated biphenyl (HexaBB) | - | mg/kg | 5 | ND |
| Heptabrominated biphenyl (HeptaBB) | - | mg/kg | 5 | ND |
| Octabrominated biphenyl (OctaBB) | - | mg/kg | 5 | ND |
| Nonabrominated biphenyl (NonaBB) | - | mg/kg | 5 | ND |
| Decabrominated biphenyl (DecaBB) | - | mg/kg | 5 | ND |
| Polybromodiphenyl ether(PBDE) | 1000 | mg/kg | - | ND |
| Monobrominated diphenyl ether (MonoBDE) | - | mg/kg | 5 | ND |
| Dibrominated diphenyl ether (DiBDE) | - | mg/kg | 5 | ND |
| Tribrominated diphenyl ether (TriBDE) | - | mg/kg | 5 | ND |
| Tetrabrominated diphenyl ether (TetraBDE) | - | mg/kg | 5 | ND |
| Pentabrominated diphenyl ether (PentaBDE) | - | mg/kg | 5 | ND |
| Hexabrominated diphenyl ether (HexaBDE) | - | mg/kg | 5 | ND |
| Heptabrominated diphenyl ether (HeptaBDE) | - | mg/kg | 5 | ND |

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| Test Item(s) | Limit | Unit(s) | MDL | A1 |
|---|---|---|---|---|
| Octabrominated diphenyl ether (OctaBDE) | - | mg/kg | 5 | ND |
| Nonabrominated diphenyl ether (NonaBDE) | - | mg/kg | 5 | ND |
| Decabrominated diphenyl ether (DecaBDE) | - | mg/kg | 5 | ND |
| Bis(2-ethylhexyl) phthalate (DEHP) | 1000 | mg/kg | 50 | ND |
| Butyl benzyl phthalate (BBP) | 1000 | mg/kg | 50 | ND |
| Dibutyl phthalate (DBP) | 1000 | mg/kg | 50 | ND |
| Diisobutyl phthalate (DIBP) | 1000 | mg/kg | 50 | ND |

**Notes:**

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.

(2) IEC 62321 series is equivalent to EN 62321 series.

(3) ▼ =
a. The sample is positive for Cr(VI) if the Cr(VI)concentration is greater than 0.13 μg/cm$^2$. The sample coating is considered to contain Cr(VI).
b. The sample is negative for Cr(VI) if Cr(VI) is ND (concentration less than 0.10 μg/cm$^2$). The coating is considered a non-Cr(VI) based coating.
c. The result between 0.10 μg/cm$^2$ and 0.13 μg/cm$^2$ is considered to be inconclusive-unavoidable coating variations may influence the determination.

Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

**Tetrabromobisphenol A (TBBP-A)**

**Test Method:** With reference to US EPA 3550C: 2007, analysis was performed by GC-MS or LC-MS or LC-MS/MS.

| Test Item(s) | CAS No. | Unit(s) | MDL | A1 |
|---|---|---|---|---|
| Tetrabromobisphenol A(TBBP-A) | 79-94-7 | mg/kg | 10 | ND |

**Alkanes C14-C17, chloro (medium- chain chlorinated paraffins) (MCCPs)**

**Test Method:** With reference to ISO 22818:2021,analysis was performed by GC-NCI-MS.

| Test Item(s) | CAS No. | Unit(s) | MDL | A1 |
|---|---|---|---|---|
| Alkanes $C_{14}$-$C_{17}$, chloro (medium- chain chlorinated paraffins) (MCCPs) | 85535-85-9 and others | mg/kg | 50 | ND |

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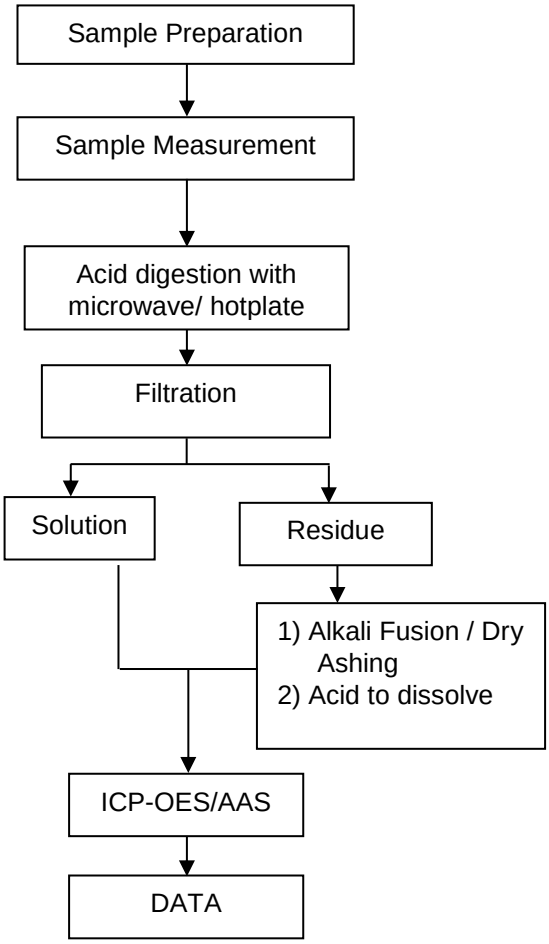
**Elements Testing Flow Chart**

These samples were dissolved totally by pre-conditioning method according to below flow chart.

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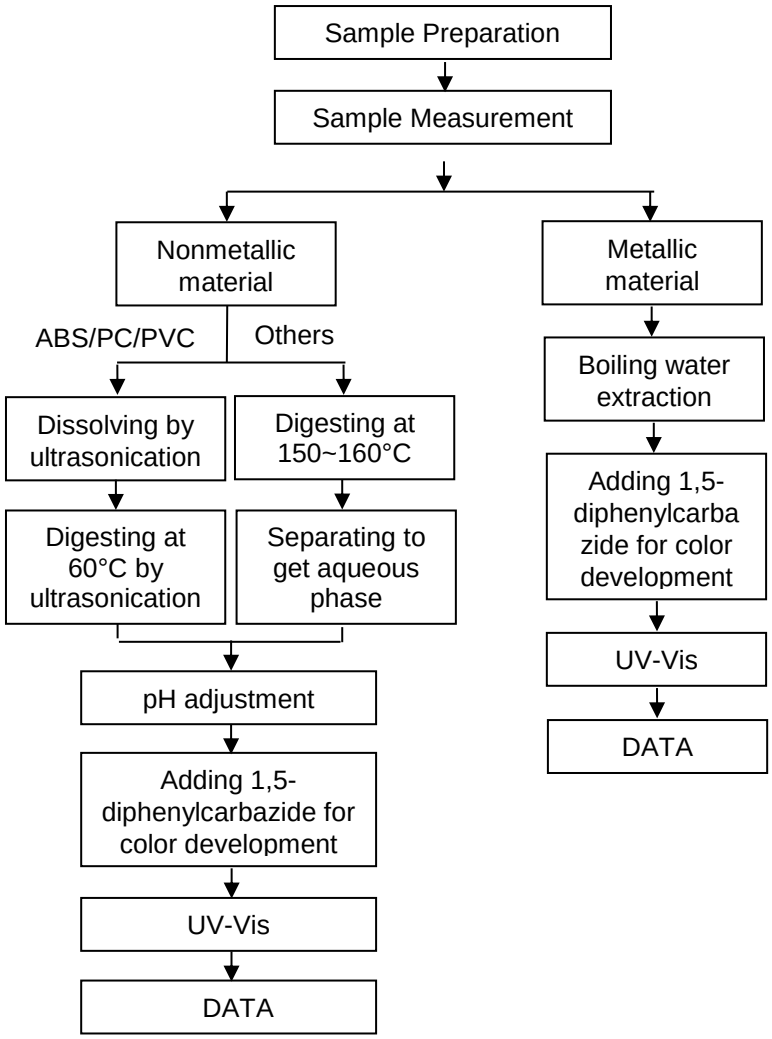
**Hexavalent Chromium (Cr(VI)) Testing Flow Chart**

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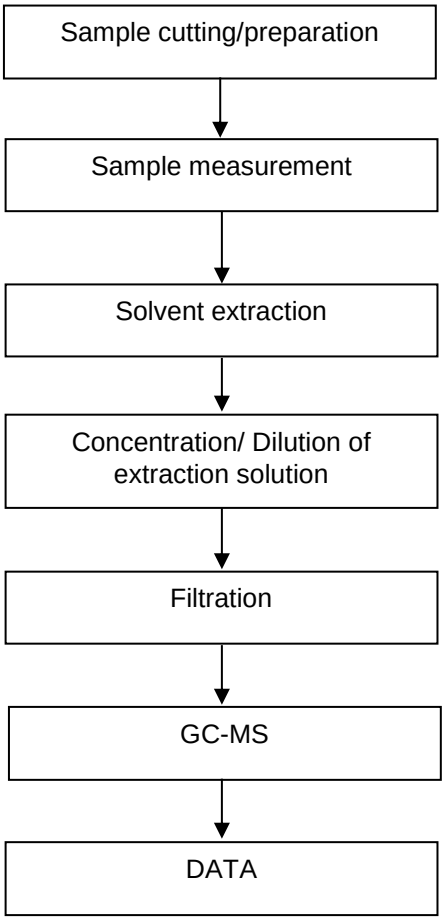
**PBB/PBDE Testing Flow Chart**

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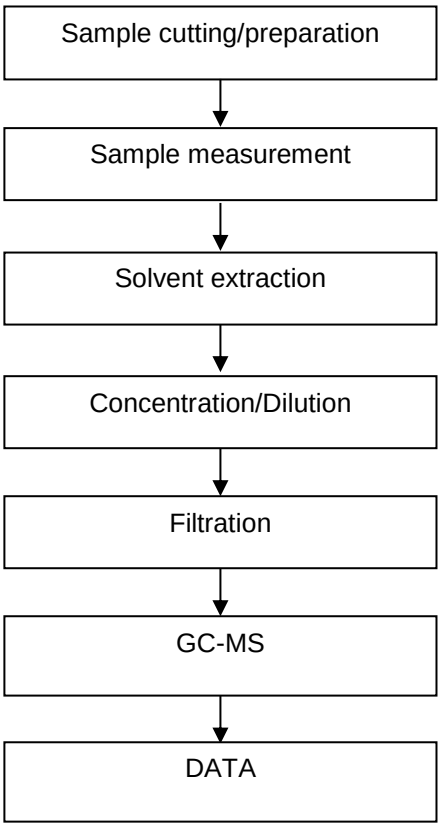
**Phthalates Testing Flow Chart**

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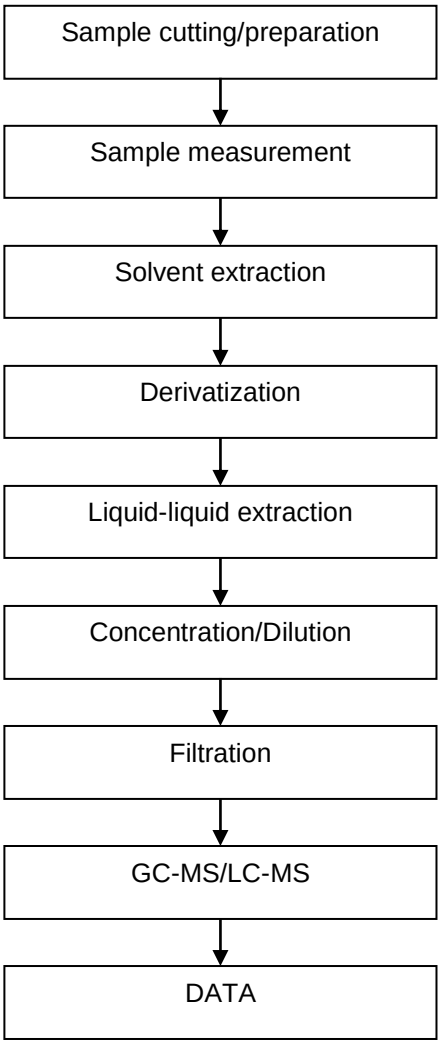
## TBBP-A Testing Flow Chart

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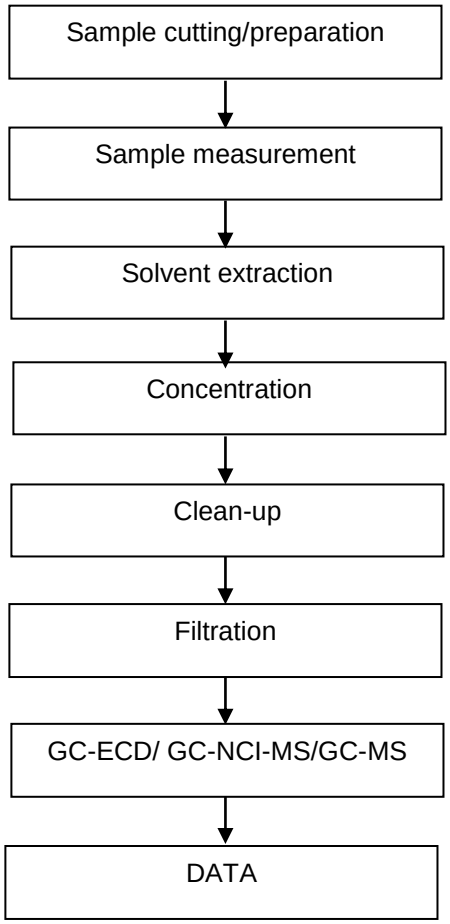
## Chlorinated Paraffin Testing Flow Chart

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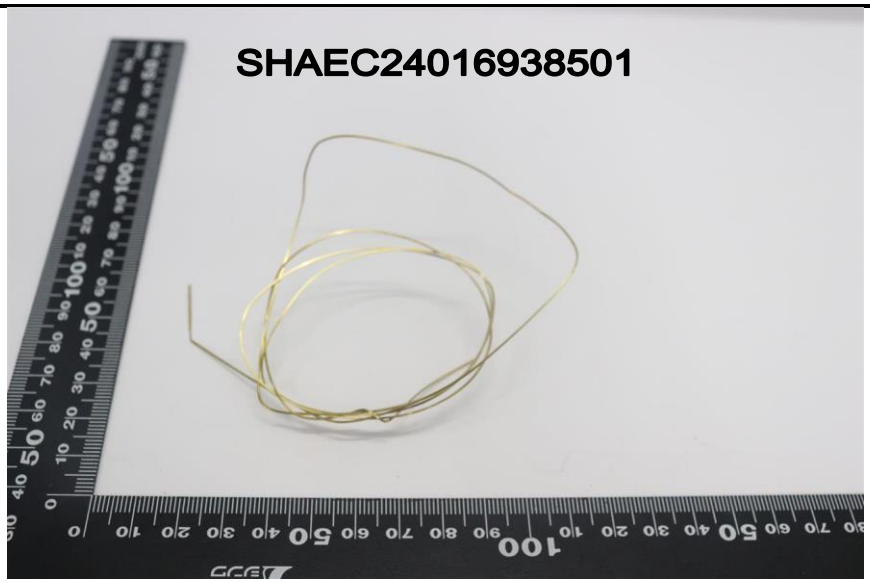
**Sample Photo:**




SHA24-0169385-0001.C001

SGS authenticate the photo on original report only

*** End of Report ***

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# ShenZhen HongLi Electroplate Co.,ltd

## Material Safety Data Sheet

### 一、 Chemical and Enterprise Label

English name of the chemical: nickel

Local name or trade name of the chemical: nickel sheet, nickel corner, nickel block, nickel bead, nickel cake

Structural formula: Ni

Relative molecular weight: 58.70

Chemical classification:inert metal

Enterprise name: Norilsk Nickel Harjavalta Oy

Address: Finnish Poison Center

Tel: +358(0)2 53711

Fax: +358(0)2 5371 2250

Set Date 2016-07-15

Retention Period:5year

### 二、Ingredients/components Information

Main components: Ni

Chemical Abstracts Service No.( CAS.NO): 7440-02-0

Conent:Ni99.99% Co0.0079% Cu0.001% Fe0.0005% S0.0002% Pb0.0001% Zn0.003%

Appearance or character: silvery white hard metal

Main application: it can be used t produce stainless steel, and other anti-corrosive alloy, activator, electric wire, china and nickelic compound; to color the glass to be green, plated and polyacrylic, etc.

### 三、General Information of Dangerous Goods

Influenced Way: inhaled, ingested.

Hazard on health: can result in nickel dermatitis, as well called to be“prurigo”. Skin feels seriously itching, and then appears papilla and bleb; the serious one may be suffered fester and canker. Long period inhaling of nickel powder may result in stimulation on respiratory tract, chronic rhinitis, and even perforation of nasal septum; as well as result in allergic pneumonia, bronchitis and asthma, etc.

Hazard on environment: flammable

### 四、Emergency Solution

Skin contact: Put off the polluted clothes immediately and wash the skin with soap and clean water thoroughly.

Eye contact: lift the eyelid immediately, flush with a lot of flow water or normal saline thoroughly and visit for a doctor.

Inhaled: be away from the location to a place with fresh air immediately, keep the respiratory tract smooth. If it is difficult to breathe, offer oxygen therapy, If the breath stops, please make the artificial respiration and visit for a doctor immediately.

Ingested: drink enough warm water, make emetic method and visit for a doctor.

## 五、Fire Protection Solution

Hazard characteristics: its powder has high chemical activity, there will be oxidation reaction, even self-firing may be occured when it is exposed in the air.the powder is flammable, could form the explosive mixture when it mixes with air. Its metal solid is featured with corrosion resistance and will not be oxidized in the air. When it reacts with strong acid, there will produce hydrogen.

Method and Extinguisher: dry powder and sand.
Extinguishing notice: the fireman must equip with filtration-type gas mask (full covered) or isolated respirator, wear the anti-fire and gas defense clothes with the whole body, and put out the fire from the upper place.

## 六、Emergency Solution for Leakage

Emergency disposal: isolate the area where leaks pollutions, and prevent others to enter, and cut off the fire source. As suggested, the emergency disposal person shall equip with self-support filtration-type dustproof respirator and wear gas defense clothes, avoid contacting the leakage directly.

Disposal Way: collect it to the container which is dry, clean and covered with non-sparking tool, and transfer for reclaiming.

## 七、Safe Disposal and Storage Method

Operation Notice: during operation, please wear the work clothes capable to defend chemicals, and equip with defense mask, chemicals-proof glasses and gloves.

Storage notice: store in the warehouse where is cool, dry and good ventilated, be way from fire, heat source, and avoid direct sunshine, separate from oxidant and acid. When delivers, please carefully to load and unload so as to prevent from damaging the package and container.

## 八、Exposure Control/Individual Protection

Procedure control: airproof operation and special area ventilated.

Breath system defense: when it is possible to contact its powder, the self-suction filtration type dustproof mask shall be equipped.

Eye protection: please wear the glasses which could defend chemicals.

Body protection: wear the air permitted and gas defense clothes.

Hand protection: wear the anti-chemical gloves.

Others: when the work is finished, shower and change the clothes, please pay attention to individual health, please dispose immediately when the skin is scratched during work.

## 九、Physical and Chemical Property

Melting point: 1453° C

Boiling Point: 2732° C

Relative density:(water=1)：8.90

Relative gas density(air=1)

Saturated vapor pressure(kPa): 0.13(1810° C)

Logarithm value of octanol/water distribution coefficient:

Critical temperature(° C)
Critical pressure(Mpa)：
Dissolubility: is not compatible with concentrated nitric acid, but with dilute nitric acid

## 十、bility and Reactivity

Stability: stable
Converged hazard: none
Forbidden condition:
Taboo: acids, strong oxidant and sulfur Burning(decomposition) production:

## 十一、Toxicological Information

Seriousness and toxicity:
Inferior seriousness and chronic toxicity:
Stimulation:
Allergenicity:
Mutagenicity: neoplastic lesions: hamster embryo 5umol/l.
Teratogenicity: the least poisonous dose of larger mouse, ( TDLo) :158mg/kg(multiple succedaneum),the embryo is toxic and fetal mouse is dead.
Carcinogenicity: evaluation on IARC carcinogenicity: the animal is of positive reaction.
Others:

## 十二、Ecological Data

Ecological toxicity: the material is harmful to environment, and special notice shall be paid on its pollution to water.
Biodegradability:
Non- biodegradability:
Bioaccumulation or biological accumulation: Other harmful effect:

## 十三、Abandon Materials Disposal

Abandoned materials disposal: before disposal, related national and local regulations shall be referred. For reusing, please recover the original state of materials. Refer to “Storage & Transportation Notice” for the abandon materials storage.

## 十四、Transportation Information

Package lable: 9
Package classification: I
Package method: stored in the glass bottles with screwed port, or iron cover pressed port, plastic bottle or metal barrel (pot) cased with wooden board outside; The glass bottles with screwed port, plastic bottle or plastic bag shall be stored in the metal barrel (pot) or plastic barrel (pot) cased with wooden board outside.
Transportation notice: be away from fire, heat source and avoid direct sunshine; shall be separate from oxidant, and acids, etc., during transportation. Mixing storage and transportation shall be strictly avoided.

## 十五、Rules of Law

Rules of law: Safety management regulations on chemical hazard(issued on February, 17th, 1987 by State of Council), implementation details of safety management regulations on chemical hazards (HLF (1992) No.677), and safety regulations on chemical usage in working place (<1996>LBF No.432), etc. With reference to the safety usage, production, storage, transportation, assembly and disassembly, etc. of the chemical hazards, there is a full comprehension of the regulations; Classification and labels of dangerous chemical substances commonly used , health standard for nickel and its inorganic compound in the shop (GB16210-1996) , all regulate the permit concentration and inspection method of this material in the shop air.

## 十六、Other Information

Reference: Safety Technology Collection on Dangerous Chemicals, Collection of China Chemical Products, Chemical Analysis Manual, Chemicals Dictionary.
Sheet filling date: 14.6.2007
Sheet filling department: Plating technology department
Data auditing unit: Technology department
Revision: None
Others: it indicates that there is no related information or this item is not suitable for the matter when there is no description following the title.
As far as we known, all above information is correct, however, we are not guarantee that there contains full and accurate information. The applicability of the material is decided by the user finally.

# ShenZhen HongLi Electroplate Co.,Ltd

# Material Safety Data Sheet

## 一、 Chemical and Enterprise Title

China name (Pinyin): Sn
Manufacturer: Yunnan Tin Company Limited
Address: No.121,Jinhu east Rd, Gejiu City,Yunnan Province
Tel: +086-0871-3118624
FAX: +086-0769-85235001

Set Date 2016-07-15
Retention Period:5year

## 二、Ingredients/components Information

Main components:Sn
Component:Sn99.99% Pb0.005% Sb 0.003% Cu 0.001% Zn0.001%

## 三、Dangerous Materials

Chemical Abstracts Service No.( CAS.NO): 7440-31-5
Dangerous components (proportion percentage): plumbum is less than 100ppm

## 四、Hazard ldentification lnformation

1. There will be flammable hydrogen when contacts with strong acids.
2. There will be alumina smoking when melting or heating.

## 五、Emergency solution

1. Inhaled: due to the product appearance, it is not possible to be taken as food.

2.Eye contact: lift the eyelid immediately and flush with a lot of flowed water for 15 minutes. Due to the product appearance, it is not possible to contact with eyes.
3.Skin contact: Wash the skin with soap and clean water immediately, due to the appearance, it is not possible to stimulate the skin.

## 六、Fire Protection Solution

It is non-flammable when the product exists with the appearance of big block。

2.There is explosion damage when it meets with the fire with the appearance of fine powder
3.There will be poisonous or stimulated smoke when the product is melting or burning, please wear the individual protection equipments

## 七、Emergency Solution for Leakage

This section is not suitable for this product due to its solid appearance

## 八、Safe Storage and Notice

Common usage: the edge of this product is sharp flake or scroll, individual protection apparatus shall be equipped during all kinds of operations. For security work, all related staff shall he snecially trained

Storage suggestion: as suggested, the product shall be stored in the place where is prevent from entity damage, humidity and direct sunshine

## 九、Exposure Control/Individual Protection

Major component: stannum Sn, Chemical Abstracts Service No.( CAS.NO):7439-89-6,major proportion: 99.9%

Exposure control OSHAPEL: N/A OSHAPEL: N/A

Surface treatment: the coating materials of the product include the chemicals as following used for anti-corrosion treatment and metal components specially used for certain product

Major component: 1. mineral oil, Chemical Abstracts Service No.( CAS.NO): none

Major proportion: 200-1500g/m2 % Exposure limit control OSHAPEL: N/A ACGIHTLV: N/A

2. Synthetic acid ester, Chemical Abstracts Service No.( CAS.NO): none

Major proportion: <200g/m2 % Exposure limit control OSHAPEL: N/A ACGIHTLV: N/A

Procedure control: 1. the mechanical equipments shall be used when burns, saws, cooper wires, polishes, welds or does other mechanical machining on the product.

Individual protection equipments:

1.Eye protection: please wear the glasses of chemicals defended during the product operation.

2.Skin protection:

Use the penetration-proof gloves to prevent the skin from oils.

3.Body protection:

(1) compact defense clothes

(2) working shoes

(3) showering/eyes flushing equipments

Health Solutions:

1. Smoking, drinking and taking food are forbidden in the working area.
2. After disposal of the product, please wash the hands thoroughly.

## 十、Physical and Chemical Property

Substance state: solid Form: block

Color: metal-grey Odor: ordor

PH: inapplicable Flashing point: flashing point

Solution temperature: 231.3° C explosion point: explosion limit

Natural humidity: inapplicable Solubility: solubility

Density: 7.31

## 十一、Stability and Reactivity

Stability: it is stable under normal condition
Taboo: acids, A type and B type explosion, strong oxide and corrosive

## 十二、Toxicological Information

No corresponding information is available as reference at present.

## 十三、Ecological Information

No corresponding information is available as reference at present.

## 十四、Abandon Materials Disposal

1. dispose according to related regulations
2.The related laws may regulate the disposal limit on metal discards.
3. As suggested, reclaiming the metal discards.

## 十五、Transportation Information

No special transportation method is available.

## 十六、Rules of Law

1. Regulations for labor safety and health installations
2.General identification regulations for hazards and dangerous materials
3. Permitted concentration standards for the dangerous materials in the working area
4. Disposal method and facility standards for the discards storage and clearance of enterprise

# 化学品安全技术说明书

## 1．化学品及企业标识

**化学品名或商品名**　东丽阿米兰尼龙树脂 (Toray Amilan Nylon Resin )
CM3004V0

MSDS编号　CD-N-7

**供应商名称**　东丽塑料（成都）有限公司(Toray Plastics(ChengDu)Limited.)

地址　中国四川省成都市新津县区工业区新材料功能区货运大道东侧新材18路北侧

担当部门　营业部

电话　+86-28-67779100(151)

传真　+86-28-67779104

应急电话　+86-28-67779100(141)
技术部

## 2．危险性概述

**分类**

| | | |
|---|---|---|
| 健康危害 | 急性毒性（经口） | 非此类 |
| | 急性毒性（经皮） | 非此类 |
| | 急性毒性（吸入） | 非此类 |
| | 皮肤腐蚀/刺激 | 非此类 |
| | 严重眼损伤/眼刺激 | 非此类 |
| | 呼吸过敏 | 不能分类 |
| | 皮肤过敏 | 不能分类 |
| | 生殖细胞致突变性 | 不能分类 |
| | 致癌性 | 非此类 |
| | 生殖毒性 | 不能分类 |
| | 特异性靶器官系统毒性（一次接触） | 非此类 |
| | 特异性靶器官系统毒性（反复接触） | 非此类 |
| | 吸入危害 | 不能分类 |
| 环境危害 | 急性水生毒性 | 非此类 |
| | 慢性水生毒性 | 非此类 |

**不为覆盖的其他危险**　可能释放出刺激眼睛、鼻子和喉咙的挥发性气体。
在干燥和成型过程中，使用局部排气充分通风装置。
粉碎加工时，玻纤可能外泄。
将粉碎料立即置于空袋中，尽可能降低玻纤外泄的可能。
接触玻纤可能引起皮肤，眼睛,鼻子和喉咙刺激或瘙痒。
如感觉不适，就医。
清扫和处理泄漏树脂，消除滑倒危险。
不要堆放太高，以避免产品跌落造成伤害。

## 3．成分/组成信息

**单一物质・混合物的区别**　混合物
**化学名（或：通用名）**　聚己二酰己二胺树脂（Poly(hexamethyleneadipamide) resin）
**别名**　聚酰胺66，尼龙66（Polyamide-66 resin, Nylon-66 resin）

| 组分化学名称及俗名 | CAS号 | 化学式 | 含量(%) | 欧洲EC编号 |
|---|---|---|---|---|
| 聚己二酰己二胺（Poly(hexamethyleneadipamide)(1) | 32131-17-2 | $[NH(CH_2)_6NHCO(CH_2)_4CO]n$ | 90-98% | 无资料 |
| 无卤阻燃剂 （氮系）（Non-Halogen flame retarder）(2) | 非公开 | - | 2-8% | 无资料 |

**分子量**　(1), (2) 无资料
**ENCS No.**　(1); 7-382
(2); 无资料
**ISHL No.**　(1); 7-382
(2); 无资料
**TSCA法规**　(1); 已列入
(2); 已列入

## 4．急救措施

**吸　　入**　立即将患者移至空气新鲜处。
如遇事故或感觉不适，立即就医。
将从熔融聚合物那里吸入气体的患者疏散到空气新鲜处。
如果患者没有恢复，就医。
**皮肤接触**　如皮肤接触到聚合物，用大量清水冲洗皮肤或淋浴。
不能强行去除聚合物，如果皮肤灼伤，就医。
**眼睛接触**　轻轻用大量流动清水冲洗眼睛，至少冲洗15分钟，尽快送往最近的医疗机构就医，如患者戴隐形眼镜并可方便取出，取出隐形眼镜并继续冲洗，不要揉眼睛。
**食　　入**　用水漱口，患者饮用一两杯水，将手指放在喉咙催吐，呕吐后仍感觉不适，马上就医。
不能强行去除聚合物，如果发生事故，感觉不适，马上就医。
**主要征兆及症状**　无资料
**急救者的保护**　当转移熔融聚合物或高温聚合物时，戴防护手套。
**医疗注意事项**　无资料

## 5．消防措施

**灭火剂**　使用雾状水、水枪、二氧化碳、干粉、泡沫。

| | |
|---|---|
| **不合适的灭火剂** | 无资料 |
| **火灾时的特别危险性** | 火灾或爆炸时，不要吸入烟雾。<br>燃烧可能释放有毒气体：一氧化碳。<br>包含本物质的火灾会产生大量乌黑的浓烟。<br>发生火灾时，高温分解或燃烧可能会产生刺激和高毒气体。 |
| **特别灭火方法** | 在安全距离处喷水冷却和保护周边地区。<br>如果没有风险，从火场区域移出容器。<br>从火场撤离人员到上风处。<br>无关人员撤离到安全区域。 |
| **消防人员的保护** | 消防人员应佩戴合适的防护装备。 |

## 6．泄漏应急处理

| | |
|---|---|
| **人员注意事项、保护器具及紧急措施** | 清扫泄漏在地面或地板上的颗粒，以防绊倒。 |
| **环境注意事项** | 不要冲洗入下水道或排水沟。<br>如果颗粒释放到环境中，应采取适当措施防止水生动物和鸟类因食用颗粒而死亡。 |
| **收容、清除方法及所使用的处置材料** | 清扫，放在袋子中以便日后处理。 |
| **防止发生次生危害的预防措施** | 切断所有点火源，禁止火花、吸烟、明火。 |

## 7．操作处置与储存

**操作处置**

| | |
|---|---|
| 技术措施 | 操作人员接触控制：<br>操作时不要进食、饮水。<br>操作时不要吸烟。<br>不要吸入粉尘。<br>不要吸入气体、烟雾。<br>只能在通风良好处使用。 |
| 局部通风・全部通风 | 成型过程中不要吸入生成的气体或烟雾。 |
| 注意事项 | 火灾或爆炸防范措施：<br>附近不要随意用火。<br>如果在次级过程中产生粉尘，需采取预防措施防止粉尘爆炸。 |
| 安全处置注意事项 | 防止粉尘沉积。<br>大部分情况下应有充分良好的通风。<br>没有防护的情况下请勿接触高温树脂。<br>不要长时间让本品处于高温条件下。<br>塑料颗粒容易产生静电，如有必要应采取措施消除静电。<br>不要倒入下水道。<br>防止物理损坏。<br>不要跌落到，或划过尖锐物体。<br>避免粗暴操作和跌落。<br>如果产生粉尘，查看每个成分的信息。 |

**存储**

| | |
|---|---|
| 技术措施 | 无资料 |

| | |
|---|---|
| 安全存储的条件 | 推荐储存条件：<br>本品易燃。<br>储存和操作遵循消防法和地方法规。<br>不相容储存条件：<br>远离热源。<br>远离点火源-禁止吸烟。<br>远离热源、蒸气管道，避免阳光直射，存放在阴凉处。 |
| 安全的包装材料 | 无资料 |
| **禁配物** | 无资料 |
| **注意事项** | 无资料 |

## 8．接触控制/个体防护

| | |
|---|---|
| **工程控制** | 操作时，采用局部通风消除产生的气体和粉末-粉尘。 |
| **监测浓度** | 未规定 |
| **容许浓度** | 日本产业卫生学会和ACGIH没有规定容许的粉末-粉尘浓度。<br>以下显示的数据是粉尘的数据： |
| 中国GBZ2.1-2007 | 未规定 |
| 美国ACGIH TLV(s) | 第三类粉尘：每小时加权平均值：吸入粉尘 3mg/$m^3$<br>总粉尘 10mg/$m^3$ |
| 日本产业卫生学会 | 第三类粉尘：每小时加权平均值：吸入粉尘 2mg/$m^3$<br>总粉尘 8mg/$m^3$ |
| **防护器具** | |
| 呼吸系统防护 | 通风不足的情况下，配戴适当的呼吸设备。<br>对粉末-粉尘：粉末-粉尘防护面罩。<br>对来自熔融聚合物的气体：有机气体防护面罩。 |
| 手防护 | 戴合适的手套。<br>处理熔融聚合物时，戴耐热的防护手套。 |
| 眼睛防护 | 戴防护眼镜或化学安全护目镜。 |
| 皮肤和身体防护 | 穿戴合适的防护服。<br>应穿上长袖衣服，防止与皮肤直接接触。<br>处理熔融聚合物时，穿耐热的防护服。 |
| **适宜的卫生要求** | 休息前和工作完毕后要洗手。<br>工作时禁止进食、饮水和吸烟。 |

## 9．理化特性

| | |
|---|---|
| **外观（物理状态、性状、颜色）** | 白色固体颗粒 |
| **气味** | 无嗅 |
| **ｐH值** | 不适用 |
| **融点/凝固点** | 265℃ |
| **沸点、初沸点和沸程** | 无资料 |
| **闪点** | 无资料 |
| **引燃温度（自燃温度）** | ＞400℃ |
| **燃烧性（固体，气体）** | 无资料 |
| **燃烧及爆炸范围(上限、下限)** | 无资料 |

| | |
|---|---|
| **饱和蒸气压** | 无资料 |
| **相对蒸气密度（空气=1）** | 无资料 |
| **蒸发速度** | 无资料 |
| **密度** | 1110-1210 kg/$m^3$ |
| **溶解性** | 无资料 |
| **辛醇/水分配系数** | 无资料 |
| **分解温度** | 无资料 |
| **其他理化性质** | 无资料 |

## １０．稳定性和反应性

| | |
|---|---|
| **稳定性** | 在通常和预期储存及操作条件下，本品具有稳定性。 |
| **危险反应可能性** | 在通常和预期储存及操作条件下，本品具有稳定性。 |
| **避免接触的条件** | 阳光直射、火、热源等。 |
| **禁配物** | 无资料 |
| **分解产物** | 燃烧时，可能生成黑烟、一氧化碳、二氧化碳、氮氧化物。 |
| **其他** | 无资料 |

## １１．毒理学资料

**急性毒性（经口/经皮/吸入）**

| | |
|---|---|
| 经口 | 非此类<br>根据混合物判断理论分类为“非此类”。 |
| 经皮 | 非此类<br>根据混合物判断理论分类为“非此类”。 |
| 吸入 | 非此类<br>根据混合物判断理论分类为“非此类”。 |
| **皮肤腐蚀性/刺激性** | 非此类<br>根据混合物判断理论分类为“非此类”。 |
| **严重眼损伤/刺激性** | 非此类<br>根据混合物判断理论分类为“非此类”。 |
| **呼吸或皮肤致敏性** | 不能分类 |
| **生殖细胞致突变性 (致突变性)** | 不能分类 |
| **致癌性** | 非此类<br>根据混合物判断理论分类为“非此类”。 |
| **生殖毒性** | 不能分类 |
| **特异性靶器官系统毒性（一次接触）** | 非此类<br>根据混合物判断理论分类为“非此类”。 |
| **特异性靶器官系统毒性（反复接触）** | 非此类<br>根据混合物判断理论分类为“非此类”。 |
| **吸入危险** | 不能分类 |
| **其他** | “不能分类”是指根据最新的资料，没有对健康和环境有害影响的实例报道。 |

## １２．生态学资料

| | |
|---|---|
| **生态毒性** | 不能分类 |
| **危害水生环境—急性** | 非此类<br>根据混合物判断理论分类为“非此类”。 |
| **危害水生环境—慢性** | 非此类<br>根据混合物判断理论分类为“非此类”。 |
| **生物降解性** | 不能分类 |
| **生物积累性** | 不能分类 |
| **土壤中的迁移性** | 不能分类 |

## １３．废弃处置

| | |
|---|---|
| **废弃物性质** | 危险废物□　　一般工业固体废物■ |
| **废弃处置方法** | |
| 残余废弃物 | 将内容物及容器分批少量依次进行烧毁废弃。 |
| 受污染的包装和容器 | 如果使用后废弃包装（纸包装、柔韧包装等），需检查是否有树脂残留，根据当地废弃物处理的法律法规进行处理，不要将包装用于其他目的。 |
| **废弃注意事项** | 委托经国家或地方政府许可的专业废弃物处理方承担废弃处理业务，在授权的废弃物收集站进行处理。避免对公众造成滋扰，禁止将含有本品的废弃物（废液，固体废物、清洗排水等）直接丢弃入河流或掩埋于地下。 |

## １４．运输信息

| | |
|---|---|
| **国际规定** | |
| UN分类 | 无 |
| UN编号 | 无 |
| 品名（UN运输品名） | 无 |
| 包装类别 | 无 |
| 海洋污染物（是/否） | 否 |
| **运输注意事项** | 为阻隔阳光和雨水，有必要进行遮盖。<br>小心操作，避免包装破损。<br>注意防止因为分散的颗粒而滑倒。<br>**塑料**颗**粒容易**产**生静**电，**如有必要采取措施消除静**电。 |

## １５．法规信息

《危险化学品安全管理条例》(2002年国务院344号令),《工作场所安全使用化学品规定》([1996]劳部发423号)等法规，针对化学危险品的安全使用、生产、储存、运输、装卸等方面均作了相应规定。《中华人民共和国职业病防治法》（2001年第60号主席令）：作业现场应加强个人防护，预防职业病。《劳动防护用品选用规则》（GB11651）：根据作业场所的危害类别，选用合适的个体防护措施。《职业病危害因素分类目录》（卫法监发[2002]63号）：本品长期直接接触作业人员有导致职业性皮肤病和眼病的潜在风险。

根据《化学品分类和危险性公示 通则》（GB13690-2009）、《化学品安全技术说明书 内容和项目顺序》（GB/T 16483-2008）、《化学品安全标签编写规定》（GB15258-2009）对本品进行

分类和辨识。

本品已经收录在《中国现有化学物质名录IECSC》中。

本品未列入中国的《危险货物品名表》（GB12268-2005）、《危险化学品名录》（2002版）、《易制毒化学品目录》（2005年国务院445号令）、《高毒物品目录》（2003版）、《剧毒化学品目录》（2002版）、《中国严格限制进出口有毒化学品目录》（2011年）、《禁止进口货物目录》。

## １６．其他信息

**免责声明：**

以上信息仅对应此种特定物质，如果和其它物质结合或在任何过程中使用可能无效，用户有责任根据自己的实际使用情况对此信息的合理性和完整性进行判定，以满足自己的要求。

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通常树脂本身是安全的，按比例计算，急性毒性（经口）$LD_{50}$的计算值为大于 10000。

**参考文献：**

JIS Z7250(2010)；物质安全数据说明书-第一部分；内容与该项目的顺序。

# Test Report

**No.:** CANEC24002765416 **Date:** Feb 23, 2024 

Client Name: TORAY PLASTICS(SZ)LIMITED

Client Address: 450,NANHUAN RD.WEST,SHAJING,BAOAN,SHENZHEN,GUANG DONG PROVINCE,P.R.CHINA

Sample Name: CM3004V0(Z)

Material No.: PA

Lot No.: Z41F3

The above sample(s) and information were provided by the client.

---

SGS Job No.: SZP24-004766

Sample Receiving Date: Feb 19, 2024

Testing Period: Feb 19, 2024 ~ Feb 23, 2024

Test Requested: Select test(s) as requested by the client.

Test Method(s): Please refer to next page(s).

Test Result(s): Please refer to next page(s).

| Test Requirement | Conclusion |
|---|---|
| EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) | Pass |

Signed for and on behalf of
SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch

Dongyu Xie
Approved Signatory

scan to see the report
882EC235

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Attention: To check the authenticity of testing /inspection report & certificate, please contact us at telephone: (86-755) 8307 1443, or email: CN.Doccheck@sgs.com

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**Test Result(s):**

Test Part Description：

| SN ID | Sample No. | SGS Sample ID | Description |
|---|---|---|---|
| SN1 | A13 | CAN24-0027654-0001.C013 | White plastic grains |

Remarks:

(1) 1 mg/kg = 1 ppm = 0.0001%
(2) MDL = Method Detection Limit
(3) ND = Not Detected (< MDL)
(4) "-" = Not Regulated

**EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU - Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBB), Polybrominated diphenyl ethers (PBDE), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP)**

Test Method: With reference to IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015 and IEC 62321-8:2017, analysis was performed by ICP-OES/AAS, UV-Vis and GC-MS.

| Test Item(s) | Limit | Unit(s) | MDL | A13 |
|---|---|---|---|---|
| Lead (Pb) | 1000 | mg/kg | 2 | ND |
| Mercury (Hg) | 1000 | mg/kg | 2 | ND |
| Cadmium (Cd) | 100 | mg/kg | 2 | ND |
| Hexavalent Chromium (Cr(VI)) | 1000 | mg/kg | 8 | ND |
| Polybrominated biphenyls (PBB) | 1000 | mg/kg | - | ND |
| Monobrominated biphenyl (MonoBB) | - | mg/kg | 5 | ND |
| Dibrominated biphenyl (DiBB) | - | mg/kg | 5 | ND |
| Tribrominated biphenyl (TriBB) | - | mg/kg | 5 | ND |
| Tetrabrominated biphenyl (TetraBB) | - | mg/kg | 5 | ND |
| Pentabrominated biphenyl (PentaBB) | - | mg/kg | 5 | ND |
| Hexabrominated biphenyl (HexaBB) | - | mg/kg | 5 | ND |
| Heptabrominated biphenyl (HeptaBB) | - | mg/kg | 5 | ND |
| Octabrominated biphenyl (OctaBB) | - | mg/kg | 5 | ND |
| Nonabrominated biphenyl (NonaBB) | - | mg/kg | 5 | ND |
| Decabrominated biphenyl (DecaBB) | - | mg/kg | 5 | ND |
| Polybrominated diphenyl ethers (PBDE) | 1000 | mg/kg | - | ND |
| Monobrominated diphenyl ether (MonoBDE) | - | mg/kg | 5 | ND |
| Dibrominated diphenyl ether (DiBDE) | - | mg/kg | 5 | ND |
| Tribrominated diphenyl ether (TriBDE) | - | mg/kg | 5 | ND |
| Tetrabrominated diphenyl ether (TetraBDE) | - | mg/kg | 5 | ND |
| Pentabrominated diphenyl ether (PentaBDE) | - | mg/kg | 5 | ND |
| Hexabrominated diphenyl ether (HexaBDE) | - | mg/kg | 5 | ND |
| Heptabrominated diphenyl ether (HeptaBDE) | - | mg/kg | 5 | ND |

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch Testing Center / Chemical Laboratory
检验检测专用章 Inspection & Testing Services

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| Test Item(s) | Limit | Unit(s) | MDL | A13 |
|---|---|---|---|---|
| Octabrominated diphenyl ether (OctaBDE) | - | mg/kg | 5 | ND |
| Nonabrominated diphenyl ether (NonaBDE) | - | mg/kg | 5 | ND |
| Decabrominated diphenyl ether (DecaBDE) | - | mg/kg | 5 | ND |
| Bis(2-ethylhexyl) phthalate (DEHP) | 1000 | mg/kg | 50 | ND |
| Butyl benzyl phthalate (BBP) | 1000 | mg/kg | 50 | ND |
| Dibutyl phthalate (DBP) | 1000 | mg/kg | 50 | ND |
| Diisobutyl phthalate (DIBP) | 1000 | mg/kg | 50 | ND |

**Notes:**

(1) The maximum permissible limit is quoted from RoHS Directive (EU) 2015/863.

(2) IEC 62321 series is equivalent to EN 62321 series.

(3) The restriction of DEHP, BBP, DBP and DIBP shall apply to medical devices, including in vitro medical devices, and monitoring and control instruments, including industrial monitoring and control instruments, from 22 July 2021.

Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (*w*=0) stated in ILAC-G8:09/2019.

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检验检测专用章 Inspection & Testing Services

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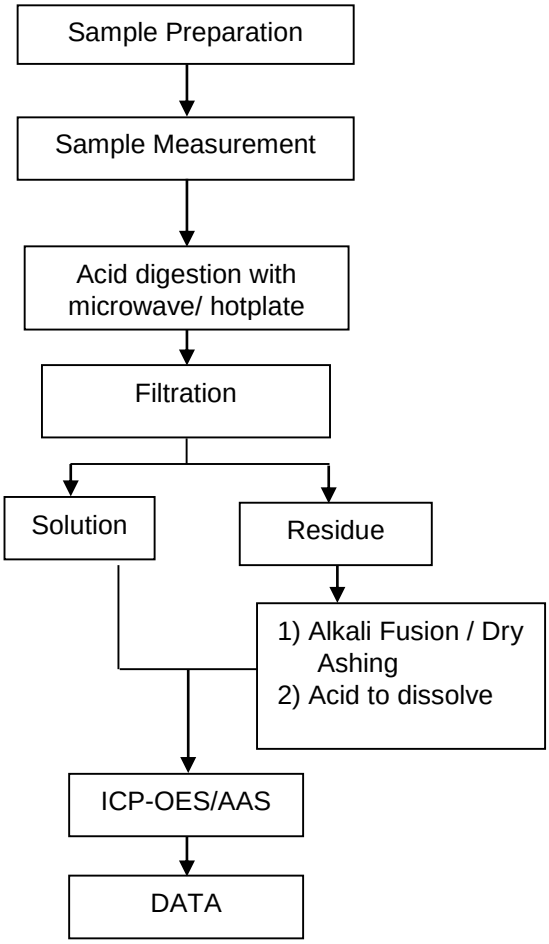
**Elements Testing Flow Chart**

These samples were dissolved totally by pre-conditioning method according to below flow chart.

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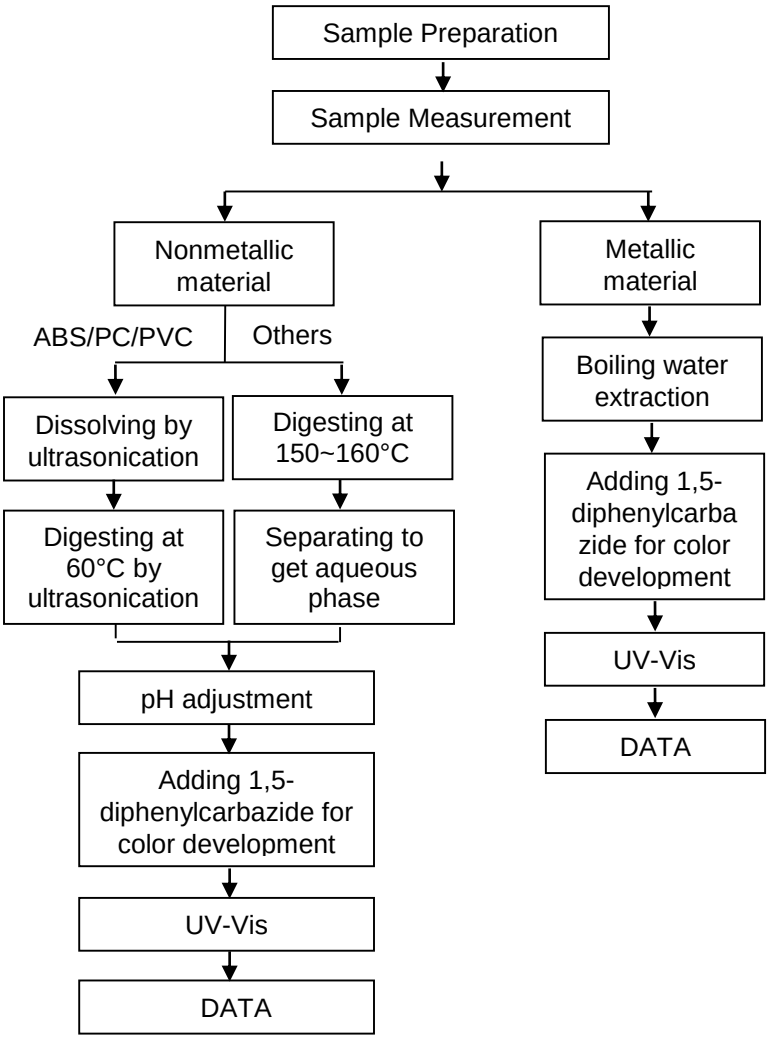
**Hexavalent Chromium (Cr(VI)) Testing Flow Chart**

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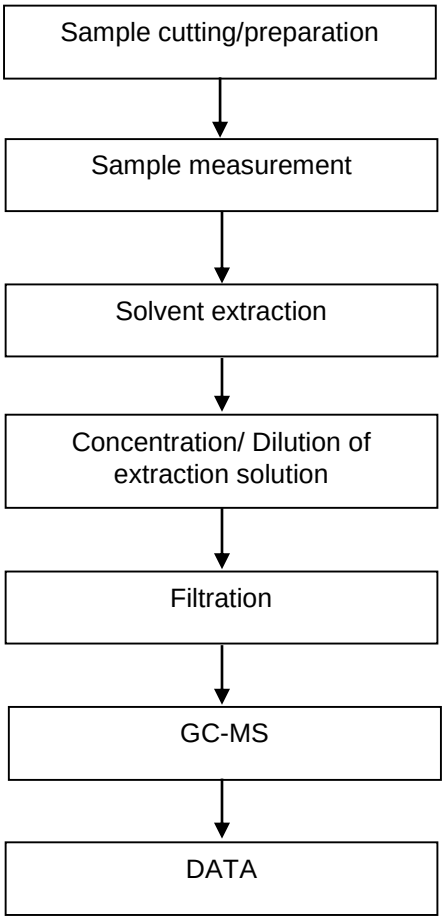
**PBB/PBDE Testing Flow Chart**

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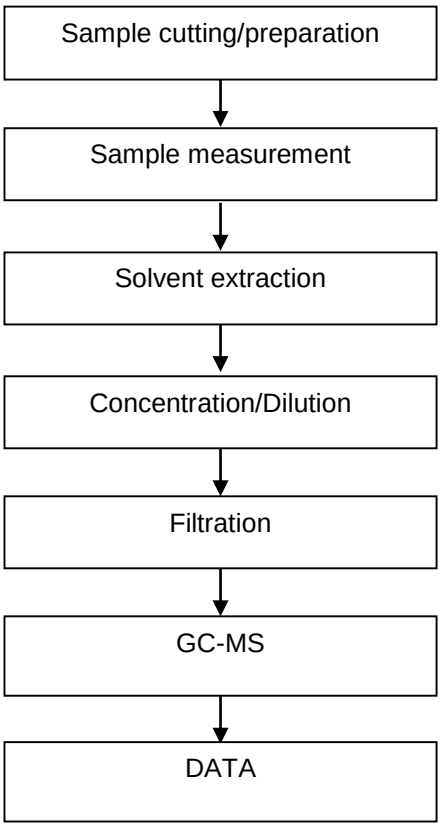
**Phthalates Testing Flow Chart**

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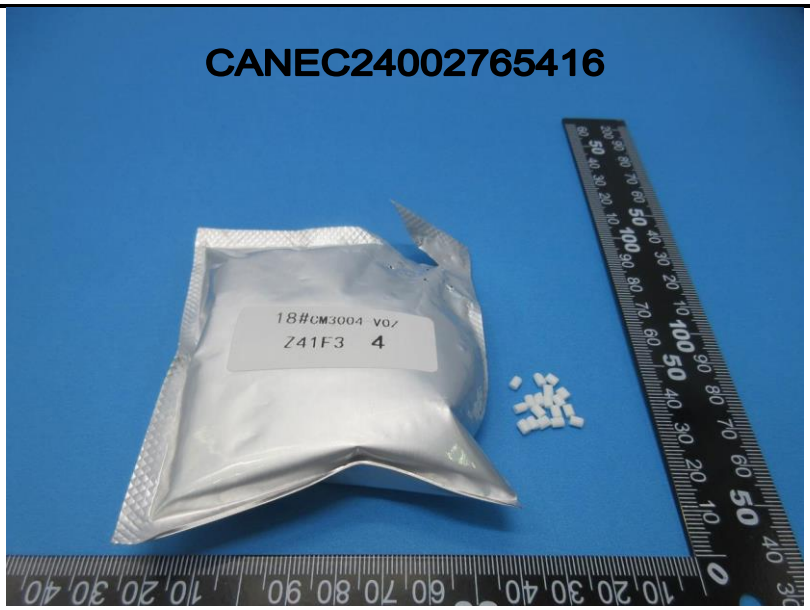
**Sample Photo:**

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*** End of Report ***

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