

承 认 书

Approval Sheet

客户 (Customer): /

客户料号 (Cus .P/N): /

华联威料号 (HLW P/N): DC JACK

品名规格 (PronameSpec): JK1-147-C188

送样日期 (Delivery Date):2021/11/17

承认日期 (Acknowledge Date):2021/11/20

| | | | |
|---|------------------|---------------------------|--------------------|
| Approved No: | | 客 户 Customer | |
| 采 购 部 Purchasing Dept | 品 质 部 QC Dept | 工 程 部 Engineering Dept | 确 认 Approved By |
| | | | |
| 深 圳 市 华 联 威 电 子 科 技 有 限 公 司 SHEN ZHEN SHI HUA LIAN WEI ELECTRONICS TECHNOLOGY CO; LTD. | | | |
| 业 务 部 Sales Dept | 品 管 部 QC Dept | 工 程 部 Engineering Dept | 核 准 Checked By |
| 将成英 | 欠必锋 | 魏红 | 唐竹君 |

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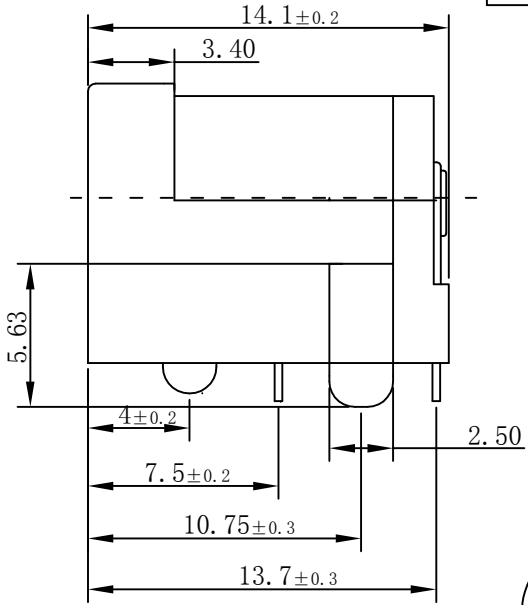
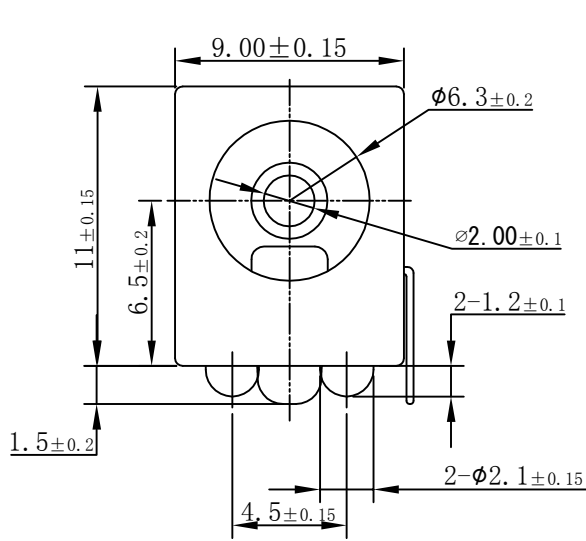
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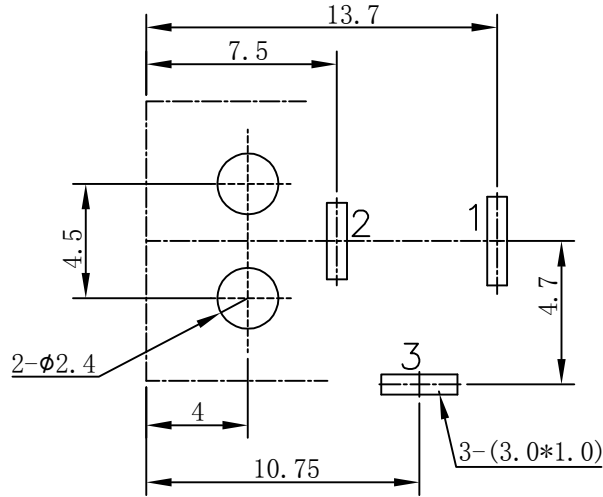
| | | | | | | | | |
|---------|---|-----------------|---|---|------|------|-------|---|
| 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |
| ECN.NO. | | ECN DESCRIPTION | | | REV. | DATE | APPD. | |
| / | | 新版发行 | | | A | | | |

技术要求

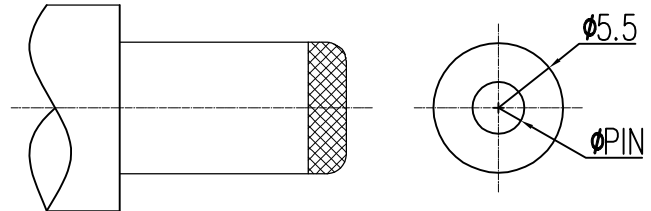
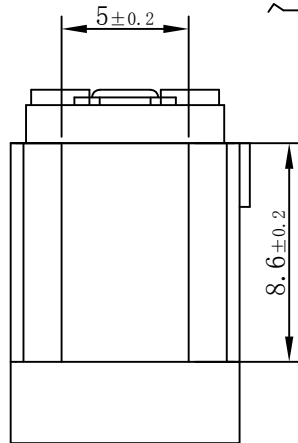
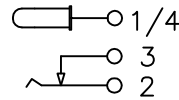
- 1、插入力: 2.94~29.4N(0.3~3.0kgf)
- 2、拔出力: 2.94~29.4N(0.3~3.0kgf)
- 3、接触电阻: ≤50mΩ
- 4、绝缘电阻: >100MΩ DC 500V
- 5、耐电压: AC 500V 1min无飞弧及击穿
- 6、寿命: 5000 10~20次/min
- 7、额定负载: DC 12V 3A
- 8、适用温度范围: -25~85° C
- 9、推荐使用插头:



T:1.0 Dimensions of PC board holes
Tolerance : ±0.1(Printed-sided view)



CIRCUIT DIAGRAM



DC MATE PLUG

| | | | | | |
|----|-----|------|--------------|-------|----|
| 6 | 盖子 | 1PCS | PA9T (BLACK) | 黑色 | 环保 |
| 5 | 塑料座 | 1PCS | PA9T (BLACK) | 黑色 | 环保 |
| 4 | PIN | 1PCS | H65黄铜=3.0 | 镀锡 | 环保 |
| 3 | 3号脚 | 1PCS | C5210黄铜=0.3 | 镀锡 | 环保 |
| 2 | 2号脚 | 1PCS | 锰钢=0.25 | CT | 环保 |
| 1 | 1号脚 | 1PCS | C5210黄铜=0.3 | 镀锡 | 环保 |
| 序号 | 名称 | 数量 | 材料 | 镀层/颜色 | 备注 |

| | | | | | |
|--------------------------------------|--|--|---|--------|--------|
| TOLERANCE UNLESS OTHERWISE SPECIFIED | | FLW 深圳市华联威电子科技有限公司 | | | |
| .XXX ±0.10 .XX ±0.20 .X ±0.30 | | HUA LIAN WEI TECHNOLOGY ELECTRONICS CO.;LTD. | | | |
| APPROVED | | PART NAME: | DC JACK 中心柱为φ2.0 (14.1*9*11) PA9T黑色, 镀锡 | | |
| CHECKED | | PART No: | JK1-147-C188 | | C |
| DRAWN | | PROJECTION: | UNIT: | SCALE: | SHEET: |
| DATE | | | mm | 1:1 | 10F1 |
| | | | | | REV. A |



| TEST ITEM | | REQUIREMENT | PROCEDURE |
|-------------------------------|---------------------------------|--|---|
| 1 | Examination of Product | Meets requirements of product drawing. No physical damage. | Visual inspection. |
| 2 | Operating Temperature | -25°C to 85 °C | |
| 3 | Storage Temperature | -25°C to 85 °C | |
| ELECTRICAL REQUIREMENT | | | |
| 4 | Rating Voltage | 12V AC max | on any signal pin with respect to the shield |
| 5 | Rating Current | 3.0 A per contact | 55°C ,maximum ambient 85°C ,maximum temperature change (ANSI/EIA 364-70,TP-70) |
| 6 | Contact Resistance | [50] m Ohm Max | Subject mated contacts assembled in housing to 20mV Max open circuit at 100mA Max. EIA-364-23. |
| 7 | Dielectric withstanding Voltage | No flashover ,no creeping discharge, no breakdown | 500 VAC for 1 minute between adjacent terminals. EIA 364-20 |
| 8 | Insulation Resistance | [100] M Ohm Min. | Mated connector with a voltage of 500V DC for 1 minutes between adjacent terminals EIA 364-21 |
| 9 | Temperature Rising | 30°C Max. Under loaded rating current | Contact series-wired, apply test current of loaded rating current to the circuit, and measure the temperature rising by probing on soldered areas of contacts, after the temperature becomes stabilized deduct ambient temperature from the measured value. |
| Mechanical Requirement | | | |
| 10 | Connector Mating Force | <u>3.0 kgf Max</u> | Mating the connector with standard audio plug at a rate of 12.7 mm per minute EIA 364-13 |
| 11 | Connector Unmating Force | <u>0.30~3.0 kgf</u> | Unmating the connector with standard audio plug at a rate of 12.7 mm per minute EIA 364-13 |
| 12 | Durability | Visual Inspection-No physical damage LLCR-50 mΩ max per contact initial,100 mΩ after 5000 insertions. | Insertion and extraction with plug up to 5000 cycles at a maximum rate of 200 cycles per hour. EIA 364-09 |
| 13 | Vibration | No discontinuity at 1 μ s or longer(each contact) when continuity is tested per ANSI/EIA-364-46 | ANSI/EIA-364-28,Condition III,Method 5A,15 minute/axis |
| 14 | Mechanical Shock | No discontinuity at 1 μ s or longer(each contact) when continuity is tested per ANSI/EIA-364-46 | ANSI/EIA-364-27 Condition A(specified pulse) |
| 15 | Solder ability | At least 95% of the immersed area shall be covered with new solder | 1)Temperature of fused solder: 265±5°C °C . 2)Dipping time:5±0.5s EIA 364-52 |



| TEST ITEM | | REQUIREMENT | PROCEDURE | | | | | | | |
|---|-------------------------------|--|---|------|------|------|------|------|------|------|
| Environmental Requirements | | | | | | | | | | |
| 16 | Resistance to Solder Heat | Forming resin shall not be distorted, and terminations shall not be separated. | 1) Depth of dipping termination: the distance between the mounting surface and solder surface shall be 1 mm to 2mm. 2) Temperature: 265±5°C. 3) Dipping time: 10±1s Socket EIA 364-56 | | | | | | | |
| 17 | Thermal Shock | No physical damage to the samples and LLCR-50 mΩ max per contact | Mated connectors exposed to 10 cycles between - 55°C to 85°C, 30 minutes duration at both temperature extremes EIA 364-32 | | | | | | | |
| 18 | Steady State Humidity | No physical damage to the samples and can pass the Dielectric Withstanding Voltage & Insulation Resistance | Expose mated connectors to a temperature of 40±2°C with relative humidity of 90-95% for 168 hours Min(seven complete cycles). Remove surface moisture and air dry for 24 hours. prior to measurement. EIA 364-31 | | | | | | | |
| 19 | Temperature Life (Heat Aging) | [100] M Ohm Min. (insulation resistance) 30 m ohms Max (contact resistance) | ANSI/EIA-364-17 Condition 4 105°C for 168 hours, Method A, mated | | | | | | | |
| 20 | Salt Spray | Visual Inspection-No physical damage LLCR-50 mΩ max per contact | Mated connector expose to 5% salt concentration for 24 hours at temperature 35±2 °C. AAFtfterer thethe ttesestt ssppecimenssecimens shshaalllll bbee | | | | | | | |
| | | | / | | | | | | | |
| | | | / | | | | | | | |
| Product Qualification and Requalification test | | | | | | | | | | |
| Test or Examination | Test Group | | | | | | | | | |
| | A | B | C | D | E | F | G | H | I | J |
| | Test Sequence (a) | | | | | | | | | |
| Examination of Product | 1, 7 | 1, 9 | 1, 6 | 1, 5 | 1, 5 | 1, 5 | 1, 5 | 1, 3 | 1, 3 | 1, 3 |
| Contact Resistance | | 2, 8 | 2, 5 | 2, 4 | 2, 4 | 2, 4 | 2, 4 | | | |
| Dielectric withstanding | 3, 6 | | | | | | | | | |
| Insulation Resistance | 2, 5 | | | | | | | | | |
| Temperature Rising | | | | | | | | 2 | | |
| Mating Force | | 3, 7 | | | | | | | | |
| Unmating Force | | 4, 6 | | | | | | | | |
| Durability | | 5 | | | | | | | | |
| Vibration | | | 3 | | | | | | | |
| Mechanical Shock | | | 4 | | | | | | | |
| Solderability | | | | | | | | | | 2 |
| Resistance to Soldering | | | | | | | | | 2 | |
| Thermal Shock | | | | 3 | | | | | | |
| Humidity Temperature | 4 | | | | 3 | | | | | |
| Temperature Life | | | | | | 3 | | | | |
| Salt Spray | | | | | | | 3 | | | |
| 備注 | 無客戶指定增加測試項目外，依照此標準進行產品可靠性評估。 | | | | | | | | | |

| | | | | | | | | | | | |
|---|-----------------------------|--|---|-----------------------|------|------|------|------|------|---|--|
| 3 | Cold test | Temperature: -25 ±3°C Duration:168H | PROGRAM CONTROLLED TEMP. & HUMIDTY CHAMBER | No physical damage | Pass | Pass | Pass | Pass | Pass | P | |
| 4 | Temperature cycling test | Temperature:85~-25°C Duration:5 cycle | PROGRAM CONTROLLED TEMP. & HUMIDTY CHAMBER | No physical damage | Pass | Pass | Pass | Pass | Pass | P | |

四.物理測試 PHYSICAL TEST

| 序 號 NO. | 測試項目 Testing Item | 測試條件 Testing Conditions | 測試設備 Testing Equipment | 規格 SPEC | 測試記錄 Testing Result | | | | | 判定 Judge | |
|---------------|---|---|---|------------------------|---------------------|------|------|------|------|----------|------|
| | | | | | 1 | 2 | 3 | 4 | 5 | Pass | Fail |
| 1 | Salt spray test | Temperature: 35±2°C Concentration:5±1 %Duration:24H | SALT SPRAY TESTER | No Oxidation | Pass | Pass | Pass | Pass | Pass | P | |
| 2 | Resistance to soldering heat test | Temperature: 265±5°C Duration:10±1sec | OVEN | No physical damage | Pass | Pass | Pass | Pass | Pass | P | |
| 3 | Solder ability test | Temperature: 265±5°C Duration:5±0.5 sec | CONTROLLED CONSTANT-TEMP SOLDER POT | Soldering area ≥95% | Pass | Pass | Pass | Pass | Pass | P | |
| 判定 Result | | <input checked="" type="checkbox"/> 合格 (ACCEPT) <input type="checkbox"/> 不合格 (REJECT) | | | | | | | | | |

審核(Approver): 汪志根

測試(Tester): 但芬

FLW 深圳市华联威电子科技有限公司

檢驗報告

首件檢驗
 入庫檢驗
 出貨檢驗
 客退檢驗
 退料檢驗
 其他
 2021年11月20日 版次:A1

| 料號 | JK1-147-C188 | | 制令單號 | / | | 送檢單位 | 工程部 | | 首件製作者 | 裝配 | | | |
|------------------|-----------------|----------|--|-------|-----------|----------|-----------|-------|---------|----------|-----|-----|----|
| 品名 | DC JACK | | 客戶代號 | / | | 批 量 | / | | 送檢時間 | / | | | |
| | | | | | | 數 量 | 5PCS | | 確認時間 | / | | | |
| 抽樣標準 | | | <input checked="" type="checkbox"/> 單次 <input type="checkbox"/> 雙次 | | | 抽樣數 | AQL | CRI:0 | MAJ:0.4 | MIN:0.65 | | | |
| MIL-STD-105E(II) | | | <input checked="" type="checkbox"/> 正常 <input type="checkbox"/> 加嚴 <input type="checkbox"/> 減量 | | | (5PCS) | ACC/REJ | 0 | / | / | | | |
| 不良數: | | | CRI (/) | | MAJ (/) | | MIN (/) | | 不良率(%) | | / | | |
| NO. | 檢驗項目 單位:MM/G | 檢測 儀器 | 檢 驗 記 錄 | | | | | 品管判定 | | CRI | MAJ | MIN | 備注 |
| | | | 1 | 2 | 3 | 4 | 5 | AC | RE | | | | |
| 尺 寸 測 量 | 9.00±0.20 | D | 8.94 | 8.96 | 8.98 | 9.00 | 9.02 | √ | | | | | |
| | 14.20±0.25 | D | 14.03 | 14.06 | 14.09 | 14.12 | 14.15 | √ | | | | | |
| | 11.00±0.20 | D | 10.95 | 10.98 | 11.08 | 11.04 | 11.07 | √ | | | | | |
| | 6.50±0.20 | D | 6.36 | 6.38 | 6.40 | 6.42 | 6.44 | √ | | | | | |
| | 1.50±0.20 | D | 1.44 | 1.45 | 1.46 | 1.47 | 1.48 | √ | | | | | |
| | 1.20±0.20 | D | 1.17 | 1.18 | 1.19 | 1.20 | 1.21 | √ | | | | | |
| | 6.30±0.20 | D | 6.23 | 6.26 | 6.29 | 6.32 | 6.35 | √ | | | | | |
| | 2.00±0.20 | D | 1.92 | 1.95 | 1.98 | 2.01 | 2.04 | √ | | | | | |
| | 4.00±0.15 | D | 3.97 | 3.98 | 3.99 | 4.00 | 4.01 | √ | | | | | |
| | 7.50±0.20 | D | 7.37 | 7.39 | 7.41 | 7.43 | 7.45 | √ | | | | | |
| | 10.75±0.20 | D | 10.65 | 10.68 | 10.71 | 10.74 | 10.77 | √ | | | | | |
| | 2.50±0.20 | D | 2.48 | 2.49 | 2.50 | 2.51 | 2.52 | √ | | | | | |
| | 13.70±0.20 | D | 13.63 | 13.65 | 13.67 | 13.69 | 13.71 | √ | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |
| | | | | | | | | | | | | | |

檢驗依據: 《工程圖紙》
 《檢驗規範》
 《承認書》
 樣品
 其它

檢測儀器: A游標卡尺 B千分尺 C厚薄儀 D投影鏡 E放大鏡 F顯微鏡 G錫爐 H插拔力器 I間位尺 J其它

品保判定: 合格Accept
 退貨Reject
 特采Waive
 挑選Sort

| | | | | | |
|-----|-----|-----|-----|-------|----|
| 核 准 | 汪志根 | 審 核 | 刘联英 | 檢 驗 員 | 但芬 |
|-----|-----|-----|-----|-------|----|

保存期限:三年

保存部門:品保部

QR-M-003



电镀报告表

| | |
|-----------------|--------|
| 品名:DC JACK (端子) | 版次:A.0 |
|-----------------|--------|

| | | |
|--------------|---------------|--------|
| 电镀规格:Sn:30u" | 日期:2020-11-09 | 页次:1/1 |
|--------------|---------------|--------|

厂商:同华

测试设备:CMI X-射线膜厚测试仪

1、表层电镀测试 (Sn)

| 数据 | 测试标准 | 实测值 | 判定 | 测试日期 | 测试时间 |
|----|---------|--------|----|------------|----------|
| 1 | 30u"min | 93.4u" | OK | 2020-11-09 | 19:17:14 |
| 2 | 30u"min | 98.6u" | OK | 2020-11-09 | 19:18:50 |
| 3 | 30u"min | 96.3u" | OK | 2020-11-09 | 19:21:11 |
| 4 | 30u"min | 94.5u" | OK | 2020-11-09 | 19:23:05 |

核准:汪志根

检验员:但芬



深圳市华联威电子科技有限公司

盐水喷雾实验报告

| 试验方法 | 盐水喷雾腐蚀试验法 | 参考资料 | MIL-STD-1344 |
|--|----------------------------------|--------|----------------------|
| METHOD | NEUTRL SALT SPRAY CORROSION TEST | REF | |
| 客户 | | 试验起始日期 | 2021年11月19日 20:00 时起 |
| | | DATE | 2019年11月20日 20:00 时止 |
| 样品名称 | DC JACK | 试验数量 | 5PCS |
| P/N | JK1-147-C188 | QTY | |
| 试验条件 (TEST CONDDITION) | | | |
| 1、盐水溶解 (SALT SOLUTION: 浓度 $50 \pm 10\text{g/L}$, PH值6.5-7.2. | | | |
| 2、试验室温度 (TEMP. IT THE SPRAY DHAMBR): $35 \pm 1^\circ\text{C}$. | | | |
| 3、盐水桶温度 (TEMP.OF SALE SOL' N TANK): $35 \pm 1^\circ\text{C}$. | | | |
| 4、压力桶温度 (TEMP.OF SAR SUPPLIERY): $47 \pm 1^\circ\text{C}$. | | | |
| 5、试验室相对湿度 (R.H IN THE CHAMBER) 85%. | | | |
| 6、压缩空气压力 (COMPRESSED AIR PRESSURE): $1.00 \pm 0.01\text{Kg/cm}^2$. | | | |
| 7、样品放置位置 (SPECIMEN SUPPORTED ANGLE): 尼龙绳吊挂 $70^\circ - 90^\circ$. | | | |
| 8、喷雾收集量 (COLLECT RATE OF SALT SOL' N) $1-2\text{mL}/(8 \text{ cm}^2\text{hr})$. | | | |
| 9、盐雾测试时间: 24小时 (H) | | | |
| 判定方法 (ADFUSGD METHOD) | | | |
| 试验后以20倍放大镜观察、无蓝、绿色腐蚀物之现象 (不包含折弯处, 不包含镀锡区), 即判定合格. | | | |
| (Inspext the ecimen at 20 xmagnification no blue or green corrosion products are acceptable) | | | |
| 样品序号 | 试验后现象 | | 判定 |
| | PHENOMENON AFTER TEST | | COMMENT |
| 1 | 无蓝、绿色腐蚀物之现象 | | OK |
| 2 | 无蓝、绿色腐蚀物之现象 | | OK |
| 3 | 无蓝、绿色腐蚀物之现象 | | OK |
| 4 | 无蓝、绿色腐蚀物之现象 | | OK |
| 5 | 无蓝、绿色腐蚀物之现象 | | OK |
| | | | |
| | | | |
| | | | |

核准: 汪志根

审核: /

试验员: 但芬



YouHua Science and Technology Co.,Ltd.

深圳市优化新材料科技有限公司

(业内首家上央视企业 前海股权挂牌代码:661131)



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地址: 深圳市宝安公明镇塘尾优化工业园

网址:www.szyouhua.cn

物性表

PA9T 9T30FK

| 性能 | Properties | 测试标准 Standard | 测试条件 Condition | 单位 Unit | 数值 Value |
|-------------|------------------------------|------------------|-------------------|-------------------|----------------------|
| 物理性能 | Physical Properties | | | | |
| 密度 | Specific Gravity | ASTM D792 | 23°C | g/cm ³ | 1.62 |
| 成型收缩 | Mold Shrinkage,Flow | ASTM D955 | Cold mold, 48 hrs | % | 0.1-0.6 |
| | Mold Shrinkage,Cross-Flow | | Cold mold, 48 hrs | % | 0.1-0.6 |
| 吸水率 | Moisture Absorption | ASTM D570 | 23 °C; 50 % RH | % | 0.2 |
| 填充量 | Filler Content | | 800°C/2h | % | 30±3 |
| 机械性能 | Mechanical Properties | | | | |
| 拉伸强度 | Tensile Strength | ASTM D638 | 50mm/min | Mpa | 170 |
| 断裂伸长率 | Elongation at Break | ASTM D638 | 50mm/min | % | 2.5 |
| 弯曲强度 | Flexural Strength | ASTM D790 | 3mm/min | Mpa | 230 |
| 弯曲模量 | Flexural Modulus | ASTM D790 | 3mm/min | Mpa | 10000 |
| 悬臂梁冲击强度 | Izod Impact, Notched | ASTM D256 | 23°C | J/m | 80 |
| 熔融指数 | MFR | ASTM D1238 | 320°C/2.16kg | g/10min | 25 |
| 热性能 | Thermal Properties | | | | |
| 热变形温度 | HDT | ASTM D648 | 1.8 Mpa | °C | 285 |
| 阻燃性能 | Flammability | UL94 | 1.5mm | | V-0 |
| 电性能 | Electrical Properties | | | | |
| 体积电阻率 | volume resistivity | IEC 60093 | | Ω · cm | 1.0×10 ¹⁶ |
| 表面电阻率 | surface resistivity | IEC 60243-1 | | Ω | 1.0×10 ¹⁵ |
| 注塑工艺 | | | | | |
| 干燥温度 /时间 | Drying temperatureand time | | | °C/hrs | 140-150/5-8 |
| 加工温度 | Processing temperature | | | °C | 290-330 |
| 模温 | Mold temperature | | | °C | 70-160 |
| 用途 | 电子电器, 汽车部件, 工业零件等 | | | | |

备注:以上数据在优化公司实验室测得, 真实可靠, 但并非绝对值, 并不作任何商业保证。

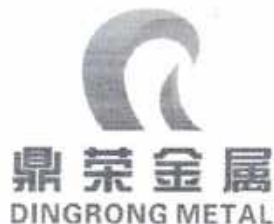
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更多信息请查阅优化新材料官网<http://www.szyouhua.cn/>



东莞市鼎荣金属材料有限公司

DongGuanDingRongMetalsMaterialCo.,Ltd

产品质量证明书

CERTIFICATE OF QUALITY

电话: 0769-85220060

传真: 0769-85220061

网址: www.dingrongjinshu.com

邮箱: dingrong1978@163.com

地址: 东莞市虎门镇雅瑶怀雅大道73号

| | | | | | |
|-----------------------------|----------------|---------------|--|--------------------------|---------------|
| 客户名称 Customer | 华联威 | | | 产品名称 product name | C2680 (H65) |
| 合同编号 Contract No | P0202007070005 | | | 执行标准 Carried Standard | GB/T2059-2017 |
| 尺寸公差 (mm) Size Tolerance | 厚度 (Thickness) | 0.25 +0-0.01 | | 生产日期 Dete | 2020/7/17 |
| | 宽度 (Width) | 50/29 +0-0.08 | | | |

性能与含量

| 序号 NO. | 批号 Lot No. | 状态 Temper | 卷数 Volume | 规格及重量 Material Description | | | 化学成份 Chemioal compositon | | | | | 物理性能 Physical Property | | |
|-----------|---------------|--------------|--------------|-------------------------------|-------------|--------------|-----------------------------|--------|--------|--------|------|---|-----------------------|----------------------|
| | | | | 厚度 Thick | 宽度 Width | 重量 Weight | 铜Cu% | 铅Pb% | 铁Fe% | 磷P% | 锌Zn% | 抗拉强度 (N/mm ²) Tensile Strength | 延伸率 (%) Elongation | 硬度值 (HV) Hardness |
| 1 | QD5550-DR | EH | 1 | 0.25 | 50 | 153.8 | 63.5~68 | ≤0.03 | ≤0.050 | ≤0.004 | 余量 | 490-590 | - | 160-180 |
| 2 | QD5550-DR | EH | 3 | 0.25 | 29 | 267.6 | 64.69 | 0.0051 | 0.0033 | 0.0017 | 余量 | 543 | 6 | 176 |
| | | | | 合计 (Total) | | | 421.4 | | | | | | | |

质量检验章
Quality inspection stamp
东莞市鼎荣金属材料有限公司
产品专用章

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品质主管: 范善益

审核人: 梅旭峰

检验人: 林和

Test Report

No. CANEC2222380701

Date: 26 Oct 2022

Page 1 of 4

Client Name : SHENZHEN HUALIANWEI ELECTRONICS TECHNOLOGY CO.,LTD

Client Address : 101, 201, PLANT 1, NO.307, GUANLAN GUIHUA ROAD, GUIXIANG COMMUNITY, GUANLAN SUB-DISTRICT, LONGHUA DISTRICT, SHENZHEN CITY, GUANGDONG PROVINCE, CHINA

Sample Name : C2680 Terminal

Model No. : C2680 terminal after plating

Client Ref. Info. : Used for USB series, HDMI series, RJ series, 1394 series, MICRO series, MINI series, DISPLAYPORT series, VGA series, DVI series, TYPE-C series, JACK series

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

SGS Job No. : CP22-057100 - GZ

Date of Sample Received : 20 Oct 2022

Testing Period : 20 Oct 2022 - 26 Oct 2022

Test Requested : Selected 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).

Result Summary :

| Test Requested | Conclusion |
|---|------------|
| EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium and Hexavalent chromium | PASS |

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

Dongyu Xie

Dongyu Xie
Approved Signatory

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Test Result(s) :

Test Part Description :

| Specimen No. | SGS Sample ID | Description |
|--------------|------------------|--------------------------|
| SN1 | CAN22-223807.001 | Silver-grey/brassy metal |

Remarks :

- (1) 1 mg/kg = 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 and Hexavalent chromium

Test Method : With reference to IEC 62321-4:2013+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015, analyzed by ICP-OES and UV-Vis .

| <u>Test Item(s)</u> | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>001</u> |
|-------------------------------|--------------|--------------------|------------|------------|
| Cadmium (Cd) | 100 | mg/kg | 2 | ND |
| Lead (Pb) | 1000 | mg/kg | 2 | 3 |
| Mercury (Hg) | 1000 | mg/kg | 2 | ND |
| Hexavalent Chromium (Cr(VI))▼ | - | µg/cm ² | 0.10 | 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 CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating
 c. The result between 0.10 µg/cm² and 0.13 µg/cm² 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.

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.



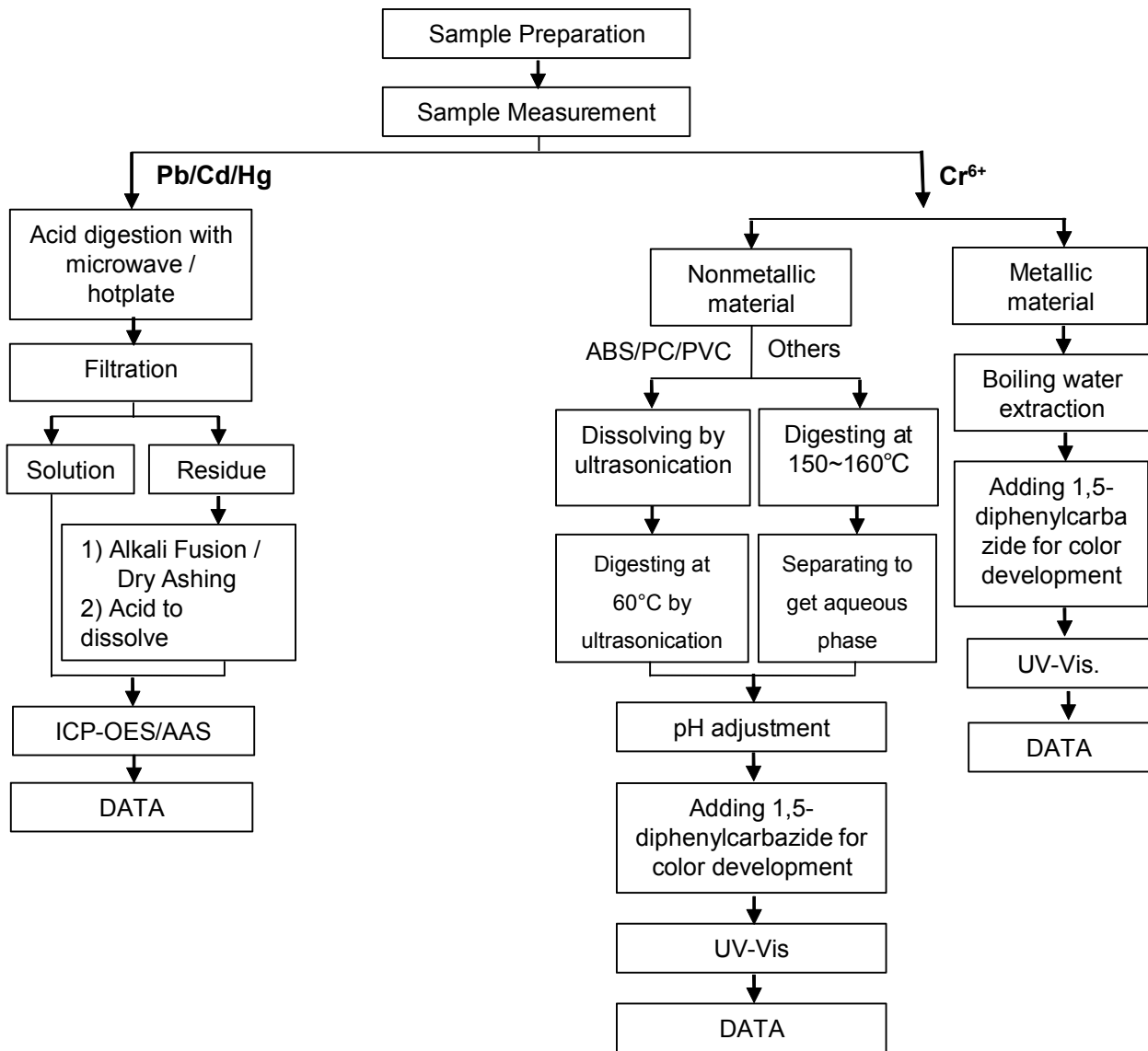
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Pb/Cd/Hg/Cr⁶⁺ Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ test method excluded).



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Test Report

No. CANEC2222380713

Date: 26 Oct 2022

Page 1 of 6

Client Name : SHENZHEN HUALIANWEI ELECTRONICS TECHNOLOGY CO.,LTD

Client Address : 101, 201, PLANT 1, NO.307, GUANLAN GUIHUA ROAD, GUIXIANG COMMUNITY, GUANLAN SUB-DISTRICT, LONGHUA DISTRICT, SHENZHEN CITY, GUANGDONG PROVINCE, CHINA

Sample Name : PA9T black plastic

Model No. : PA9T plastic

Client Ref. Info. : Used for USB series, HDMI series, RJ series, 1394 series, MICRO series, MINI series, DISPLAYPORT series, VGA series, DVI series, TYPE-C series, JACK series

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

SGS Job No. : CP22-057100 - GZ

Date of Sample Received : 20 Oct 2022

Testing Period : 20 Oct 2022 - 26 Oct 2022

Test Requested : Selected 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).

Result Summary :

| Test Requested | Conclusion |
|--|------------|
| EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), 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

Dongyu Xie
Approved Signatory

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Test Report

No. CANEC2222380713

Date: 26 Oct 2022

Page 2 of 6

Test Result(s) :

Test Part Description :

| Specimen No. | SGS Sample ID | Description |
|--------------|------------------|---------------|
| SN1 | CAN22-223807.013 | Black plastic |

Remarks :

- (1) 1 mg/kg = 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 (PBBs), Polybrominated diphenyl ethers (PBDEs), 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+A1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

| <u>Test Item(s)</u> | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>013</u> |
|----------------------------|--------------|-------------|------------|------------|
| Cadmium (Cd) | 100 | mg/kg | 2 | ND |
| Lead (Pb) | 1000 | mg/kg | 2 | 5 |
| Mercury (Hg) | 1000 | mg/kg | 2 | ND |
| Hexavalent Chromium (CrVI) | 1000 | mg/kg | 8 | ND |
| Sum of PBBs | 1000 | mg/kg | - | ND |
| Monobromobiphenyl | - | mg/kg | 5 | ND |
| Dibromobiphenyl | - | mg/kg | 5 | ND |
| Tribromobiphenyl | - | mg/kg | 5 | ND |
| Tetrabromobiphenyl | - | mg/kg | 5 | ND |
| Pentabromobiphenyl | - | mg/kg | 5 | ND |
| Hexabromobiphenyl | - | mg/kg | 5 | ND |
| Heptabromobiphenyl | - | mg/kg | 5 | ND |
| Octabromobiphenyl | - | mg/kg | 5 | ND |
| Nonabromobiphenyl | - | mg/kg | 5 | ND |
| Decabromobiphenyl | - | mg/kg | 5 | ND |
| Sum of PBDEs | 1000 | mg/kg | - | ND |
| Monobromodiphenyl ether | - | mg/kg | 5 | ND |
| Dibromodiphenyl ether | - | mg/kg | 5 | ND |
| Tribromodiphenyl ether | - | mg/kg | 5 | ND |
| Tetrabromodiphenyl ether | - | mg/kg | 5 | ND |



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Test Report

No. CANEC2222380713

Date: 26 Oct 2022

Page 3 of 6

| <u>Test Item(s)</u> | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>013</u> |
|-------------------------------------|--------------|-------------|------------|------------|
| Pentabromodiphenyl ether | - | mg/kg | 5 | ND |
| Hexabromodiphenyl ether | - | mg/kg | 5 | ND |
| Heptabromodiphenyl ether | - | mg/kg | 5 | ND |
| Octabromodiphenyl ether | - | mg/kg | 5 | ND |
| Nonabromodiphenyl ether | - | mg/kg | 5 | ND |
| Decabromodiphenyl ether | - | mg/kg | 5 | ND |
| Dibutyl phthalate (DBP) | 1000 | mg/kg | 50 | ND |
| Butyl benzyl phthalate (BBP) | 1000 | mg/kg | 50 | ND |
| Bis (2-ethylhexyl) phthalate (DEHP) | 1000 | mg/kg | 50 | ND |
| Diisobutyl Phthalates (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.



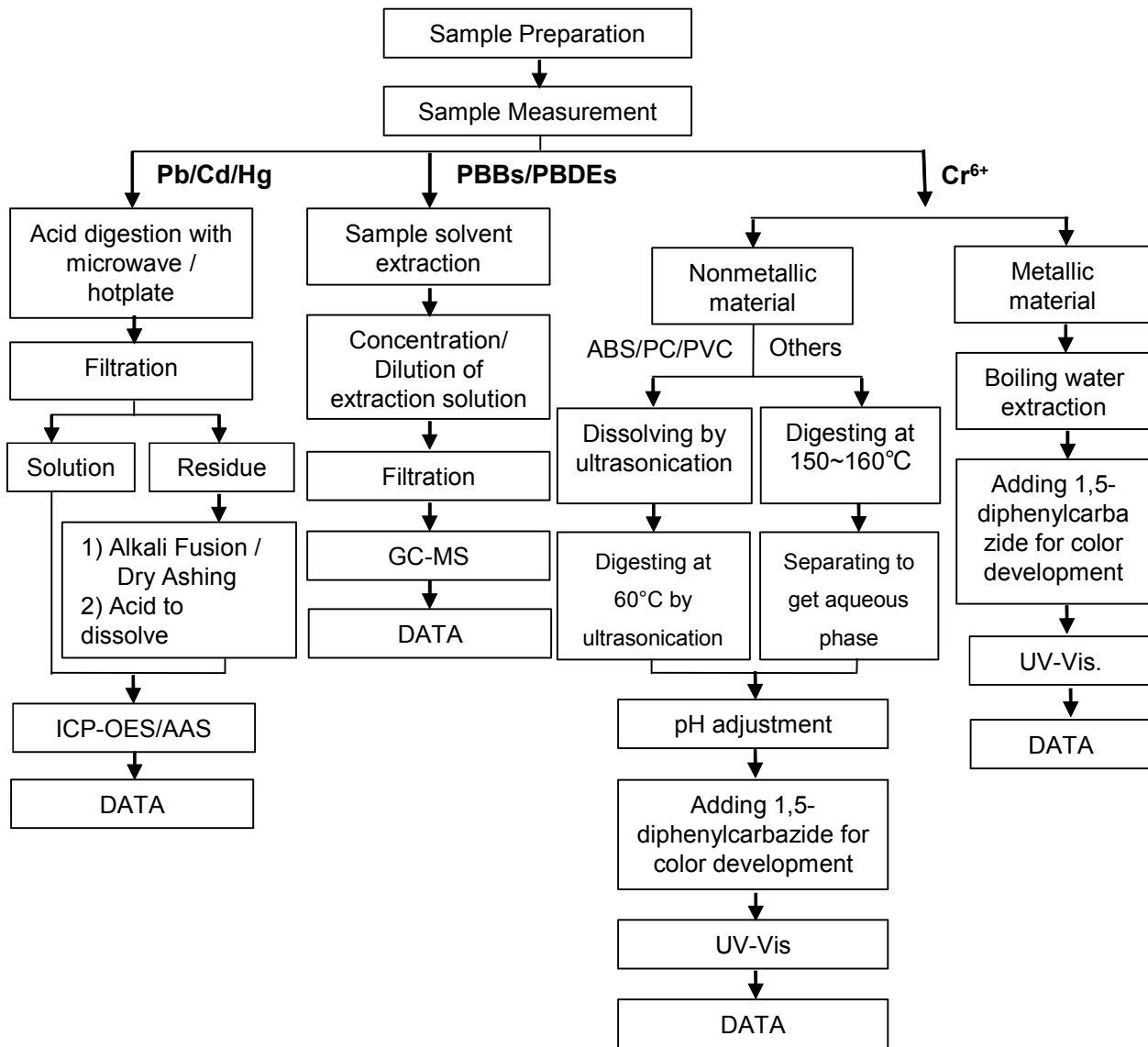
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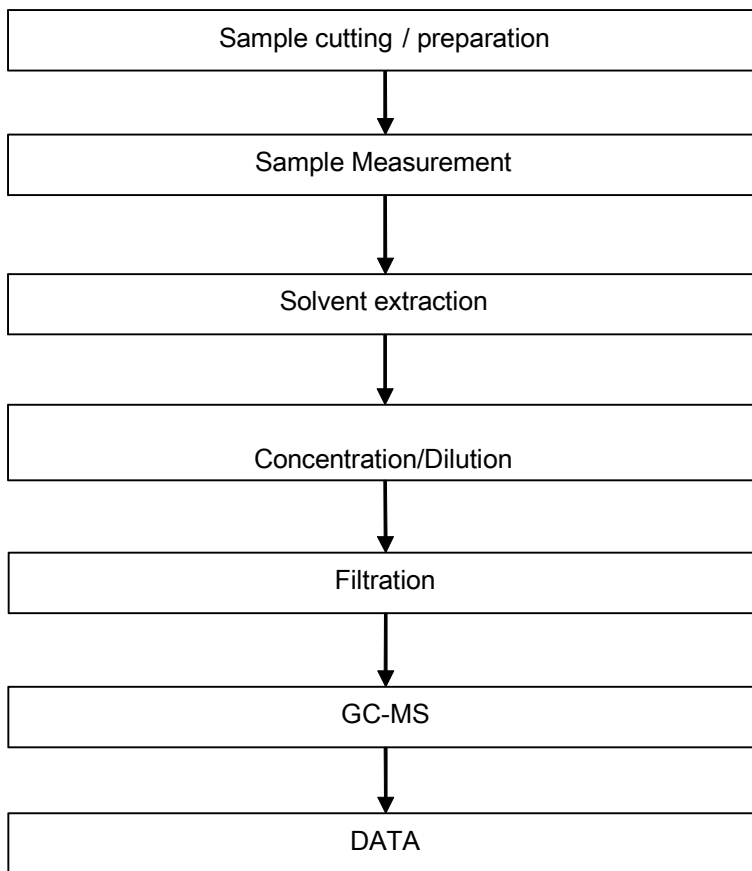
Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded).



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Phthalates Testing Flow Chart



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Test Report

No. CANEC2218227001

Date: 30 Aug 2022

Page 1 of 8

Client Name : SHENZHEN CITY TONGHUA INDUSTRY CO.,LTD

Client Address : TONGHUA MANSIN TONGLE XINBU VILLANG TOWN SHENZHEN CITY CHINA

Sample Name : Nickel(Ni)

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

SGS Job No. : CP22-047169 - SZ
 Date of Sample Received : 25 Aug 2022
 Testing Period : 25 Aug 2022 - 30 Aug 2022
 Test Requested : Selected 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).

Result Summary :

| Test Requested | Conclusion |
|--|-------------|
| EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) | PASS |
| Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives | See Results |

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

Dongyu Xie

Dongyu Xie
 Approved Signatory

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Test Report

No. CANEC2218227001

Date: 30 Aug 2022

Page 2 of 8

Test Result(s) :

Test Part Description :

| Specimen No. | SGS Sample ID | Description |
|--------------|------------------|--------------------------|
| SN1 | CAN22-182270.001 | Silver-gray plated metal |

Remarks :

- (1) 1 mg/kg = 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 (PBBs), Polybrominated diphenyl ethers (PBDEs), 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+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

| <u>Test Item(s)</u> | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>001</u> |
|-------------------------------|--------------|--------------------|------------|------------|
| Cadmium (Cd) | 100 | mg/kg | 2 | ND |
| Lead (Pb) | 1000 | mg/kg | 2 | 49 |
| Mercury (Hg) | 1000 | mg/kg | 2 | ND |
| Hexavalent Chromium (Cr(VI))▼ | - | µg/cm ² | 0.10 | ND |
| Sum of PBBs | 1000 | mg/kg | - | ND |
| Monobromobiphenyl | - | mg/kg | 5 | ND |
| Dibromobiphenyl | - | mg/kg | 5 | ND |
| Tribromobiphenyl | - | mg/kg | 5 | ND |
| Tetrabromobiphenyl | - | mg/kg | 5 | ND |
| Pentabromobiphenyl | - | mg/kg | 5 | ND |
| Hexabromobiphenyl | - | mg/kg | 5 | ND |
| Heptabromobiphenyl | - | mg/kg | 5 | ND |
| Octabromobiphenyl | - | mg/kg | 5 | ND |
| Nonabromobiphenyl | - | mg/kg | 5 | ND |
| Decabromobiphenyl | - | mg/kg | 5 | ND |
| Sum of PBDEs | 1000 | mg/kg | - | ND |
| Monobromodiphenyl ether | - | mg/kg | 5 | ND |
| Dibromodiphenyl ether | - | mg/kg | 5 | ND |
| Tribromodiphenyl ether | - | mg/kg | 5 | ND |
| Tetrabromodiphenyl ether | - | mg/kg | 5 | ND |



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Test Report

No. CANEC2218227001

Date: 30 Aug 2022

Page 3 of 8

| <u>Test Item(s)</u> | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>001</u> |
|-------------------------------------|--------------|-------------|------------|------------|
| Pentabromodiphenyl ether | - | mg/kg | 5 | ND |
| Hexabromodiphenyl ether | - | mg/kg | 5 | ND |
| Heptabromodiphenyl ether | - | mg/kg | 5 | ND |
| Octabromodiphenyl ether | - | mg/kg | 5 | ND |
| Nonabromodiphenyl ether | - | mg/kg | 5 | ND |
| Decabromodiphenyl ether | - | mg/kg | 5 | ND |
| Dibutyl phthalate (DBP) | 1000 | mg/kg | 50 | ND |
| Butyl benzyl phthalate (BBP) | 1000 | mg/kg | 50 | ND |
| Bis (2-ethylhexyl) phthalate (DEHP) | 1000 | mg/kg | 50 | ND |
| Diisobutyl Phthalates (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 CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating
 c. The result between 0.10 µg/cm² and 0.13 µg/cm² 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.

Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives

Test Method : With reference to CEN/TS15968:2010, analysis was performed by LC-MS or LC-MS/MS.

| <u>Test Item(s)</u> | <u>CAS NO.</u> | <u>Unit</u> | <u>MDL</u> | <u>001</u> |
|---|----------------|-------------|------------|------------|
| Perfluorooctanoic acid (PFOA) and its salts+ | 335-67-1 | mg/kg | 0.010 | ND |
| Perfluorooctane sulfonates (PFOS) ^ | 1763-23-1 | mg/kg | 0.010 | ND |
| Perfluorooctane Sulfonamide (PFOSA) | 754-91-6 | mg/kg | 0.010 | ND |
| N-methylperfluoro-1-octanesulfonamide(MeFOSA) | 31506-32-8 | mg/kg | 0.010 | ND |
| N-ethylperfluoro-1-octanesulfonamide (EtFOSA) | 4151-50-2 | mg/kg | 0.010 | ND |
| 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol(MeFOSE) | 24448-09-7 | mg/kg | 0.010 | ND |
| 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol(EtFOSE) | 1691-99-2 | mg/kg | 0.010 | ND |
| Perfluorooctane sulfonates (PFOS) and its derivatives | - | mg/kg | - | ND |

Notes :



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- (1) + PFOA and its salts including PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) and APFO (CAS No.: 3825-26-1);
- (2) ^ PFOS including PFOS-K (CAS No.: 2795-39-3), PFOS-Li (CAS No.: 29457-72-5), PFOS-NH₄ (CAS No.: 29081-56-9), PFOS-NH(OH)₂ (CAS No.: 70225-14-8), PFOS-N(C₂H₅)₄ (CAS No.: 56773-42-3), PFOS-DDA (CAS No.: 251099-16-8) and POSF (CAS No.: 307-35-7)

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.



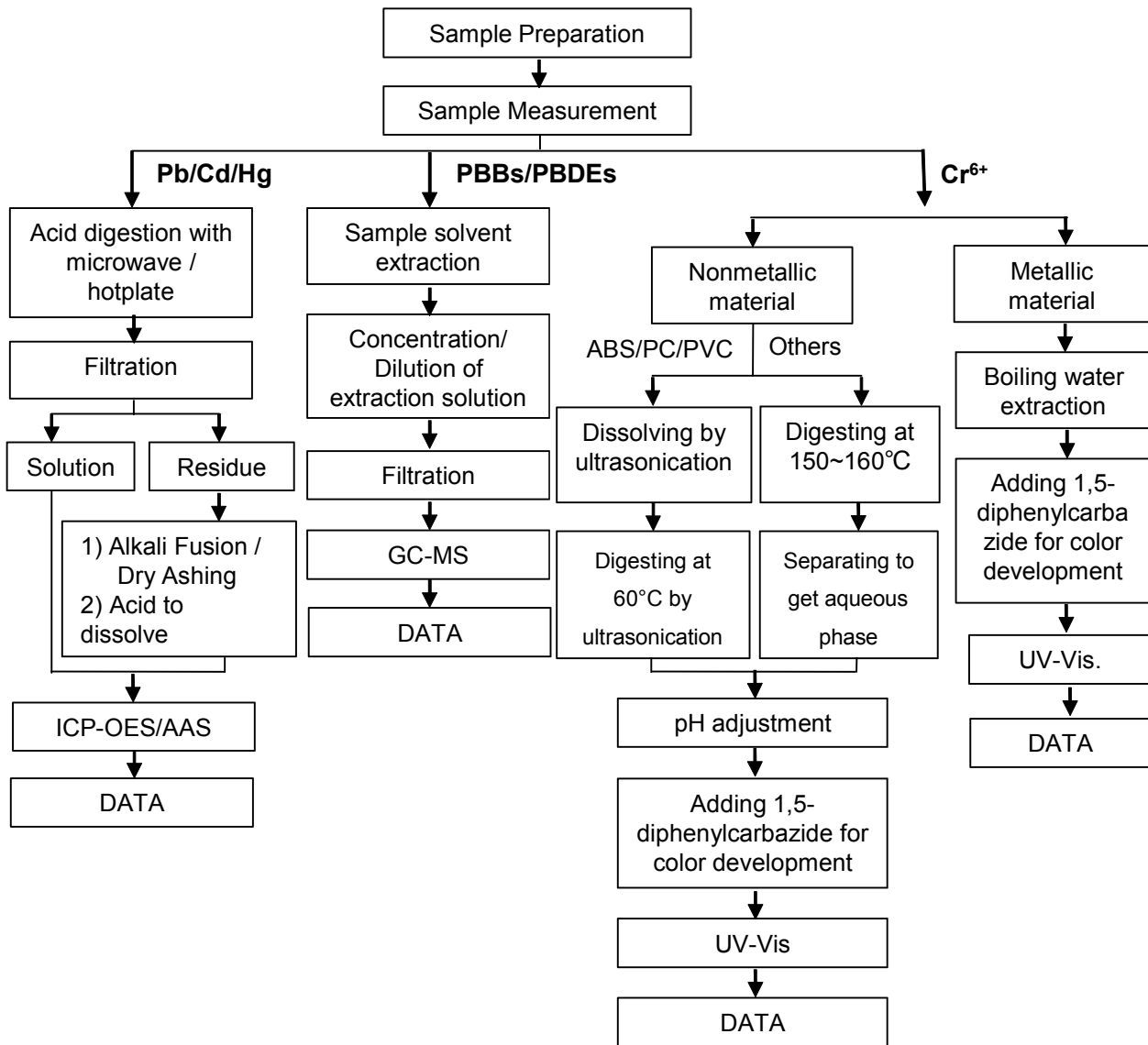
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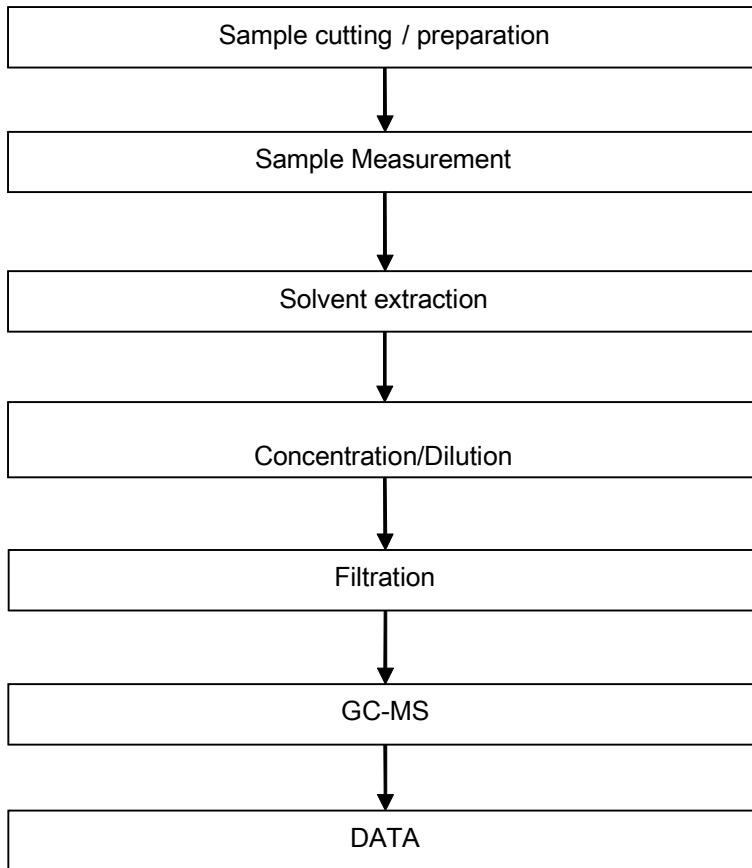
Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded).



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Phthalates Testing Flow Chart

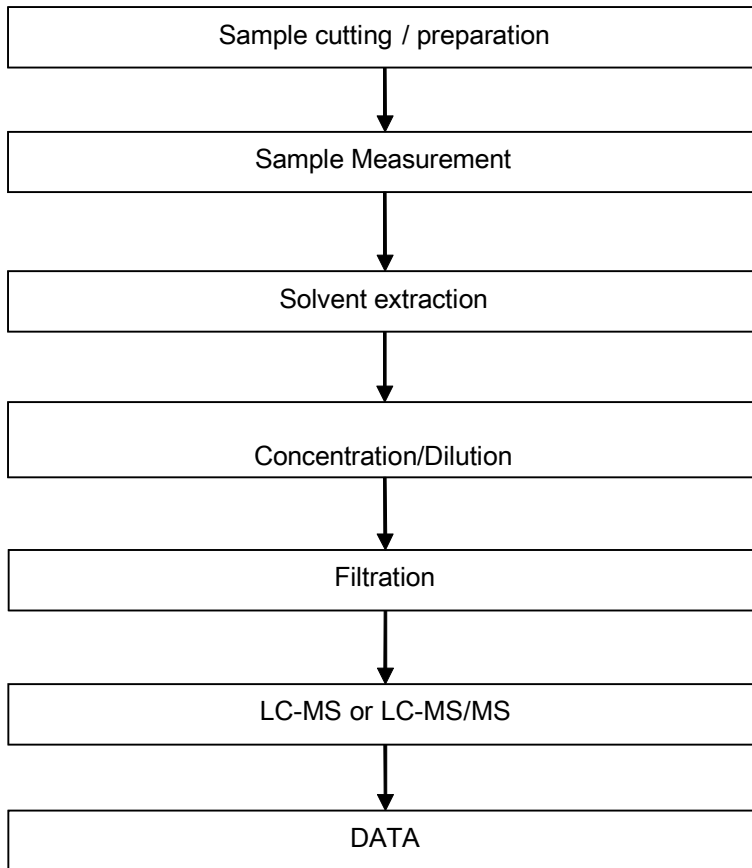


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PFOA / PFOS Testing Flow Chart



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Test Report

No. CANEC2218227003

Date: 30 Aug 2022

Page 1 of 8

Client Name : SHENZHEN CITY TONGHUA INDUSTRY CO.,LTD

Client Address : TONGHUA MANSIN TONGLE XINBU VILLANG TOWN SHENZHEN CITY CHINA

Sample Name : Bright Tin(SN)

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

SGS Job No. : CP22-047169 - SZ
 Date of Sample Received : 25 Aug 2022
 Testing Period : 25 Aug 2022 - 30 Aug 2022
 Test Requested : Selected 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).

Result Summary :

| Test Requested | Conclusion |
|--|-------------|
| EU RoHS Directive (EU) 2015/863 amending Annex II to Directive 2011/65/EU- Lead, Mercury, Cadmium, Hexavalent chromium, Polybrominated biphenyls (PBBs), Polybrominated diphenyl ethers (PBDEs), Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP) and Diisobutyl phthalate (DIBP) | PASS |
| Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives | See Results |

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

Dongyu Xie

Dongyu Xie
 Approved Signatory

scan to see the report



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Test Report

No. CANEC2218227003

Date: 30 Aug 2022

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Test Result(s) :

Test Part Description :

| Specimen No. | SGS Sample ID | Description |
|--------------|------------------|--------------------------|
| SN1 | CAN22-182270.003 | Silver-gray plated metal |

Remarks :

- (1) 1 mg/kg = 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 (PBBs), Polybrominated diphenyl ethers (PBDEs), 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+A1:2017, IEC 62321-5:2013, IEC 62321-7-1:2015 , IEC 62321-6:2015 and IEC 62321-8:2017, analyzed by ICP-OES , UV-Vis and GC-MS .

| Test Item(s) | Limit | Unit | MDL | 003 |
|-------------------------------|-------|--------------------|------|-----|
| Cadmium (Cd) | 100 | mg/kg | 2 | ND |
| Lead (Pb) | 1000 | mg/kg | 2 | 44 |
| Mercury (Hg) | 1000 | mg/kg | 2 | ND |
| Hexavalent Chromium (Cr(VI))▼ | - | µg/cm ² | 0.10 | ND |
| Sum of PBBs | 1000 | mg/kg | - | ND |
| Monobromobiphenyl | - | mg/kg | 5 | ND |
| Dibromobiphenyl | - | mg/kg | 5 | ND |
| Tribromobiphenyl | - | mg/kg | 5 | ND |
| Tetrabromobiphenyl | - | mg/kg | 5 | ND |
| Pentabromobiphenyl | - | mg/kg | 5 | ND |
| Hexabromobiphenyl | - | mg/kg | 5 | ND |
| Heptabromobiphenyl | - | mg/kg | 5 | ND |
| Octabromobiphenyl | - | mg/kg | 5 | ND |
| Nonabromobiphenyl | - | mg/kg | 5 | ND |
| Decabromobiphenyl | - | mg/kg | 5 | ND |
| Sum of PBDEs | 1000 | mg/kg | - | ND |
| Monobromodiphenyl ether | - | mg/kg | 5 | ND |
| Dibromodiphenyl ether | - | mg/kg | 5 | ND |
| Tribromodiphenyl ether | - | mg/kg | 5 | ND |
| Tetrabromodiphenyl ether | - | mg/kg | 5 | ND |



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Test Report

No. CANEC2218227003

Date: 30 Aug 2022

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| <u>Test Item(s)</u> | <u>Limit</u> | <u>Unit</u> | <u>MDL</u> | <u>003</u> |
|-------------------------------------|--------------|-------------|------------|------------|
| Pentabromodiphenyl ether | - | mg/kg | 5 | ND |
| Hexabromodiphenyl ether | - | mg/kg | 5 | ND |
| Heptabromodiphenyl ether | - | mg/kg | 5 | ND |
| Octabromodiphenyl ether | - | mg/kg | 5 | ND |
| Nonabromodiphenyl ether | - | mg/kg | 5 | ND |
| Decabromodiphenyl ether | - | mg/kg | 5 | ND |
| Dibutyl phthalate (DBP) | 1000 | mg/kg | 50 | ND |
| Butyl benzyl phthalate (BBP) | 1000 | mg/kg | 50 | ND |
| Bis (2-ethylhexyl) phthalate (DEHP) | 1000 | mg/kg | 50 | ND |
| Diisobutyl Phthalates (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 CrVI if the CrVI concentration is greater than 0.13 µg/cm². The sample coating is considered to contain CrVI
 b. The sample is negative for CrVI if CrVI is ND (concentration less than 0.10 µg/cm²). The coating is considered a non-CrVI based coating
 c. The result between 0.10 µg/cm² and 0.13 µg/cm² 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.

Perfluorooctanoic acid (PFOA) and its salts & Perfluorooctane sulfonates (PFOS) and its derivatives

Test Method : With reference to CEN/TS15968:2010, analysis was performed by LC-MS or LC-MS/MS.

| <u>Test Item(s)</u> | <u>CAS NO.</u> | <u>Unit</u> | <u>MDL</u> | <u>003</u> |
|---|----------------|-------------|------------|------------|
| Perfluorooctanoic acid (PFOA) and its salts+ | 335-67-1 | mg/kg | 0.010 | ND |
| Perfluorooctane sulfonates (PFOS) ^ | 1763-23-1 | mg/kg | 0.010 | ND |
| Perfluorooctane Sulfonamide (PFOSA) | 754-91-6 | mg/kg | 0.010 | ND |
| N-methylperfluoro-1-octanesulfonamide(MeFOSA) | 31506-32-8 | mg/kg | 0.010 | ND |
| N-ethylperfluoro-1-octanesulfonamide (EtFOSA) | 4151-50-2 | mg/kg | 0.010 | ND |
| 2-(N-methylperfluoro-1-octanesulfonamido)-ethanol(MeFOSE) | 24448-09-7 | mg/kg | 0.010 | ND |
| 2-(N-ethylperfluoro-1-octanesulfonamido)-ethanol(EtFOSE) | 1691-99-2 | mg/kg | 0.010 | ND |
| Perfluorooctane sulfonates (PFOS) and its derivatives | - | mg/kg | - | ND |

Notes :



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- (1) + PFOA and its salts including PFOA-Na (CAS No.: 335-95-5), PFOA-K (CAS No.: 2395-00-8), PFOA-Ag (CAS No.: 335-93-3), PFOA-F (CAS No.: 335-66-0) and APFO (CAS No.: 3825-26-1);
- (2) ^ PFOS including PFOS-K (CAS No.: 2795-39-3), PFOS-Li (CAS No.: 29457-72-5), PFOS-NH₄ (CAS No.: 29081-56-9), PFOS-NH(OH)₂ (CAS No.: 70225-14-8), PFOS-N(C₂H₅)₄ (CAS No.: 56773-42-3), PFOS-DDA (CAS No.: 251099-16-8) and POSF (CAS No.: 307-35-7)

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.



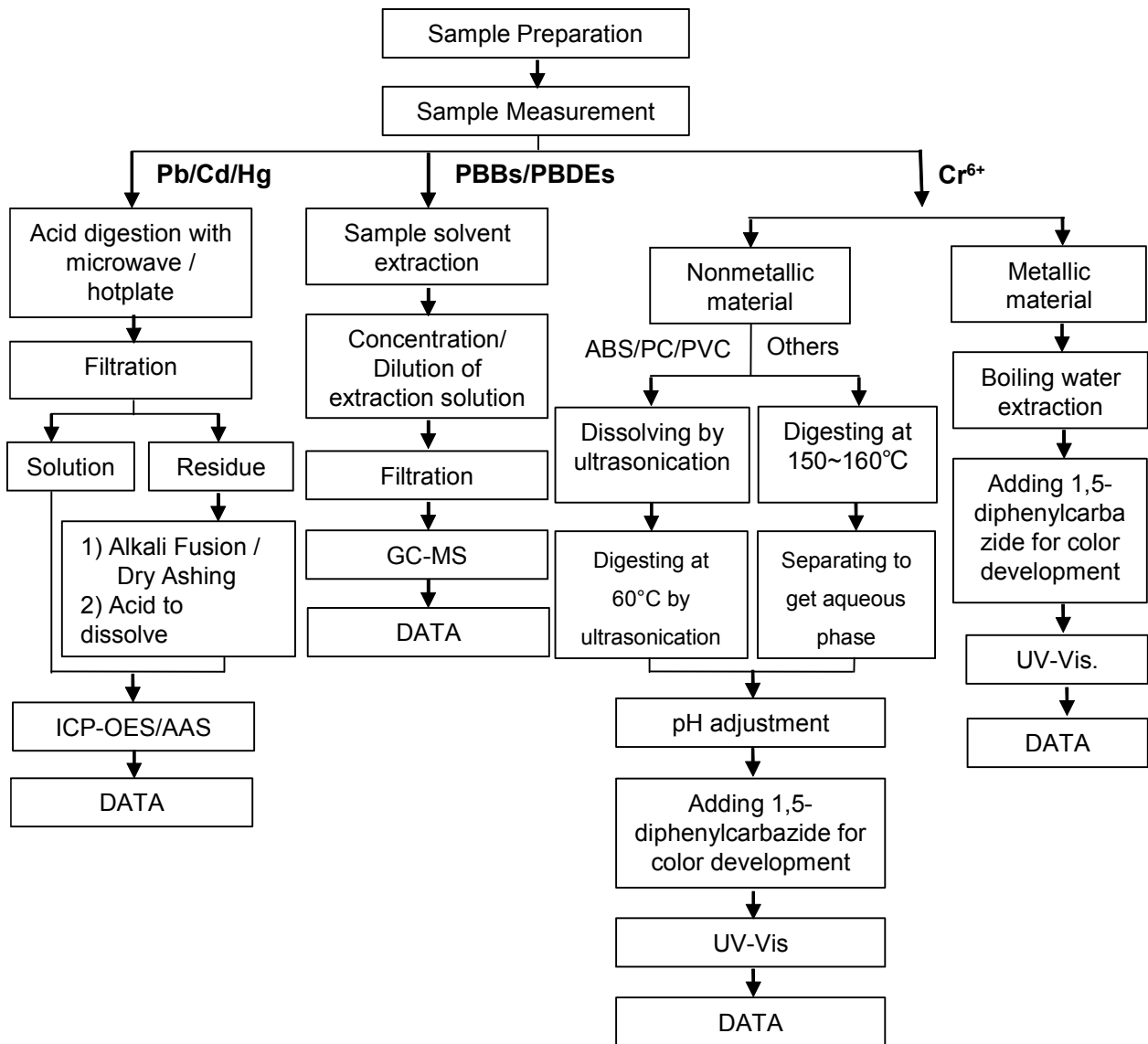
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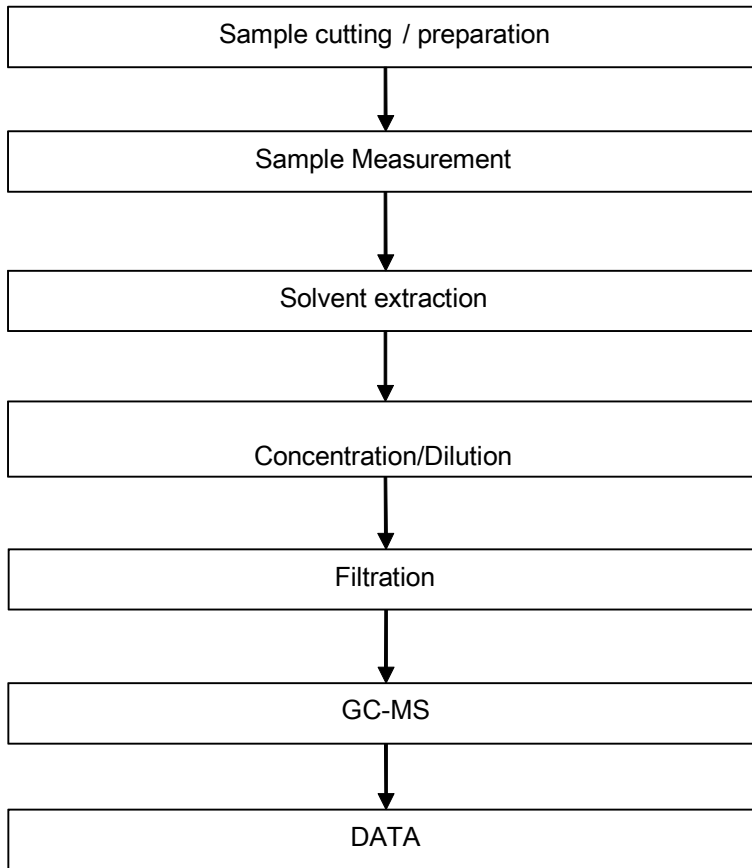
Pb/Cd/Hg/Cr⁶⁺/PBBs/PBDEs Testing Flow Chart

1) These samples were dissolved totally by pre-conditioning method according to below flow chart. (Cr⁶⁺ and PBBs/PBDEs test method excluded).



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Phthalates Testing Flow Chart

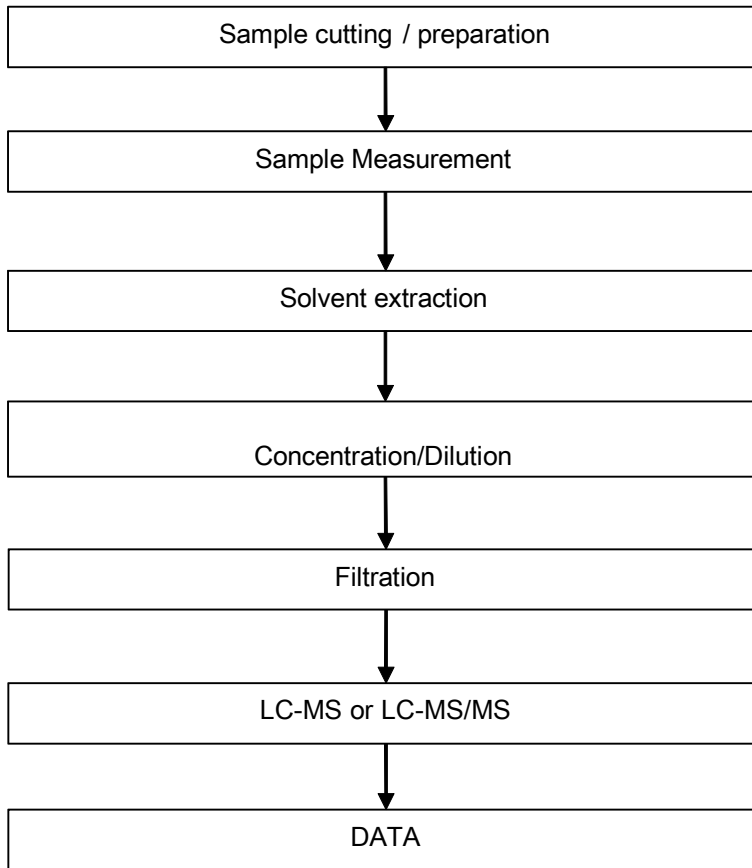


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PFOA / PFOS Testing Flow Chart



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