

测试报告

No. SHAEC2118361424

日期: 2021年09月10日 第1页,共11页

苏州固得电子股份有限公司
中国江苏苏州市通安开发区通锡路31号

以下测试之样品是由申请者所提供及确认: ASMA SKY 无卤产品

SGS工作编号: SP21-026971 - SUZ
型号: ASMA SKY
客户参考信息: ASMA MSMA ASMB ASMC MSMC SMA SMB SMC SKY 无卤产品
主要成分: 铜,锡,环氧
样品接收日期: 2021年08月26日
测试周期: 2021年08月26日 - 2021年09月09日
测试要求: 根据客户要求测试
测试方法: 请参见下一页
测试结果: 请参见下一页

通标标准技术服务(上海)有限公司
授权签名

Carol Luo 罗萍
批准签署人

scan to see the report



SHAEC2118361424



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测试结果:

测试样品描述:

| 样品编号 | SGS样品ID | 描述 |
|------|------------------|-----------------|
| SN1 | SHA21-183614.028 | 黑色本体带银色引脚 (混测*) |

备注:

- (1) 1 mg/kg = 0.0001%
- (2) MDL = 方法检测限
- (3) ND = 未检出 (< MDL)
- (4) "-" = 未规定

RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863

测试方法: 参考IEC 62321-4:2013+AMD1:2017, IEC 62321-5:2013, IEC 62321-7-2:2017, IEC 62321-6:2015和IEC 62321-8:2017, 采用ICP-OES, UV-Vis和GC-MS进行分析。

| 测试项目 | 限值 | 单位 | MDL | 028 |
|----------------|------|-------|-----|--------|
| 镉(Cd) | 100 | mg/kg | 2 | ND |
| 铅(Pb) | 1000 | mg/kg | 2 | 11235▲ |
| 汞(Hg) | 1000 | mg/kg | 2 | ND |
| 六价铬 (Cr(VI)) | 1000 | mg/kg | 8 | ND |
| 多溴联苯之和(PBBs) | 1000 | mg/kg | - | ND |
| 一溴联苯 | - | mg/kg | 5 | ND |
| 二溴联苯 | - | mg/kg | 5 | ND |
| 三溴联苯 | - | mg/kg | 5 | ND |
| 四溴联苯 | - | mg/kg | 5 | ND |
| 五溴联苯 | - | mg/kg | 5 | ND |
| 六溴联苯 | - | mg/kg | 5 | ND |
| 七溴联苯 | - | mg/kg | 5 | ND |
| 八溴联苯 | - | mg/kg | 5 | ND |
| 九溴联苯 | - | mg/kg | 5 | ND |
| 十溴联苯 | - | mg/kg | 5 | ND |
| 多溴二苯醚之和(PBDEs) | 1000 | mg/kg | - | ND |
| 一溴二苯醚 | - | mg/kg | 5 | ND |
| 二溴二苯醚 | - | mg/kg | 5 | ND |
| 三溴二苯醚 | - | mg/kg | 5 | ND |
| 四溴二苯醚 | - | mg/kg | 5 | ND |



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| 测试项目 | 限值 | 单位 | MDL | 028 |
|-----------------------|------|-------|-----|-----|
| 五溴二苯醚 | - | mg/kg | 5 | ND |
| 六溴二苯醚 | - | mg/kg | 5 | ND |
| 七溴二苯醚 | - | mg/kg | 5 | ND |
| 八溴二苯醚 | - | mg/kg | 5 | ND |
| 九溴二苯醚 | - | mg/kg | 5 | ND |
| 十溴二苯醚 | - | mg/kg | 5 | ND |
| 邻苯二甲酸二丁酯 (DBP) | 1000 | mg/kg | 50 | ND |
| 邻苯二甲酸丁苄酯(BBP) | 1000 | mg/kg | 50 | ND |
| 邻苯二甲酸二(2-乙基己基)酯(DEHP) | 1000 | mg/kg | 50 | ND |
| 邻苯二甲酸二异丁酯(DIBP) | 1000 | mg/kg | 50 | ND |

备注:

(1) 最大允许极限值引用自RoHS指令(EU) 2015/863。

IEC 62321系列等同于 EN 62321系列

https://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25

(2) 2021年7月22号开始, DEHP, BBP, DBP 和 DIBP的限制适用于医疗器械, 包括体外医疗器械, 监控仪表, 包括工业监测和控制仪器。

(3) ▲根据客户提供的声明, 编号028中的铅(Pb)被欧盟RoHS指令2011/65/EU豁免, 相应豁免条文(请以英文原文为准) [ANNEX III 7(a)]: 高熔点型焊料中的铅(如铅含量等于或大于85%的铅基合金焊料)。

卤素

测试方法: 参照EN 14582: 2016方法 测定, 采用 IC进行分析。

| 测试项目 | 单位 | MDL | 028 |
|--------|-------|-----|-----|
| 氟 (F) | mg/kg | 50 | ND |
| 氯 (Cl) | mg/kg | 50 | ND |
| 溴 (Br) | mg/kg | 50 | ND |
| 碘 (I) | mg/kg | 50 | ND |

全氟辛烷磺酸及其衍生物(PFOS)和全氟辛酸(PFOA)及其盐

测试方法: 参考 CEN/TS 15968: 2010方法, 采用HPLC-MS进行分析。

| 测试项目 | CAS NO. | 单位 | MDL | 028 |
|------------------|-----------|-------|-----|-----|
| 全氟辛烷磺酸 (PFOS) ^ | 1763-23-1 | mg/kg | 10 | ND |
| 全氟辛酸 (PFOA) 及其盐+ | - | mg/kg | 10 | ND |



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备注:

- (1) ^ 全氟辛烷磺酸 (PFOS) 包含 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) 和 POSF (CAS No.: 307-35-7)
- (2) PFOA 及其盐+是指其酸/盐, 包括全氟辛酸 (CAS No.: 335-67-1), 全氟辛酸钠 (CAS No.: 335-95-5), 全氟辛酸钾 (CAS No.: 2395-00-8), 全氟辛酸银 (CAS No.: 335-93-3), 全氟辛酰氟 (CAS No.: 335-66-0) 和 全氟辛酸铵 (CAS No.: 3825-26-1)。

*样品基于申请人要求为混合测试。报告中的混合测试结果不代表其中个别单一材质的含量, 该测试数据仅供参考。

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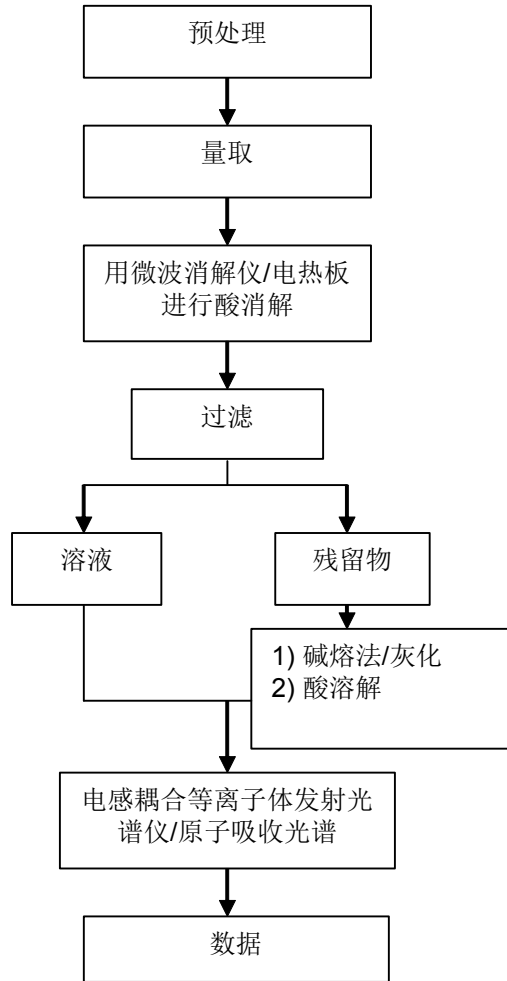
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元素(IEC62321) 测试流程图

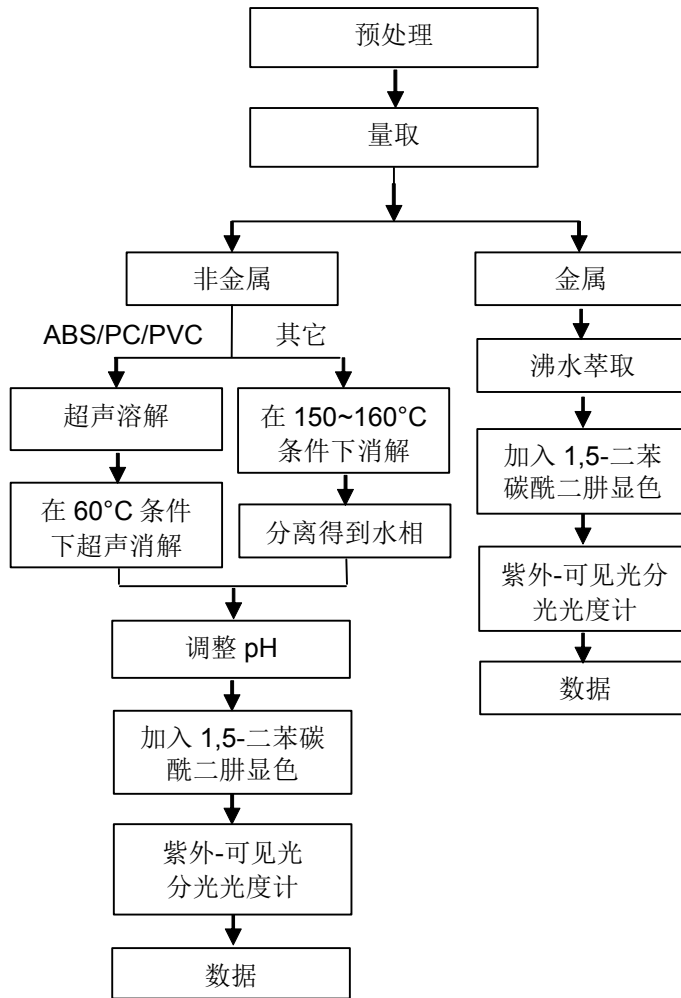
1)样品按照下述流程被完全消解



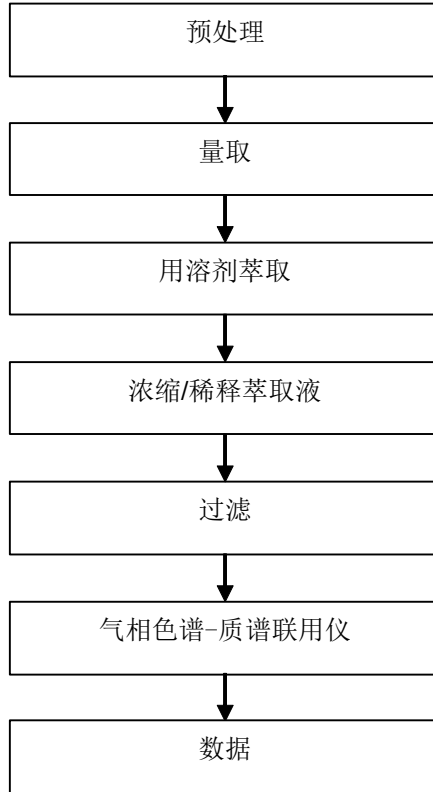
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六价铬测试流程图



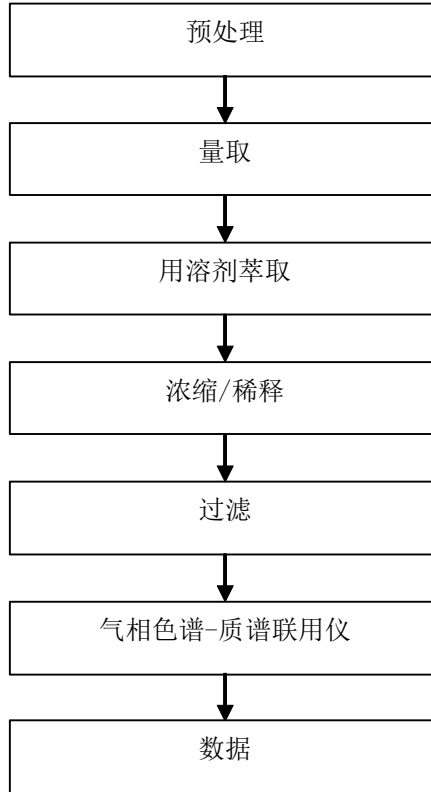
PBBs/PBDEs 测试流程图



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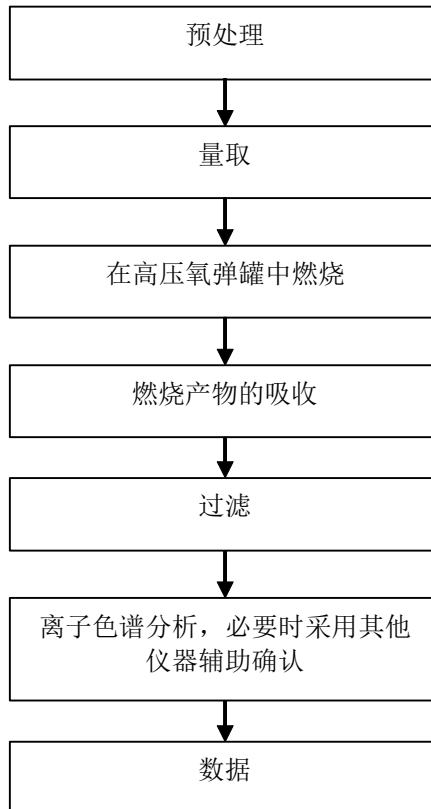
Phthalates 测试流程图



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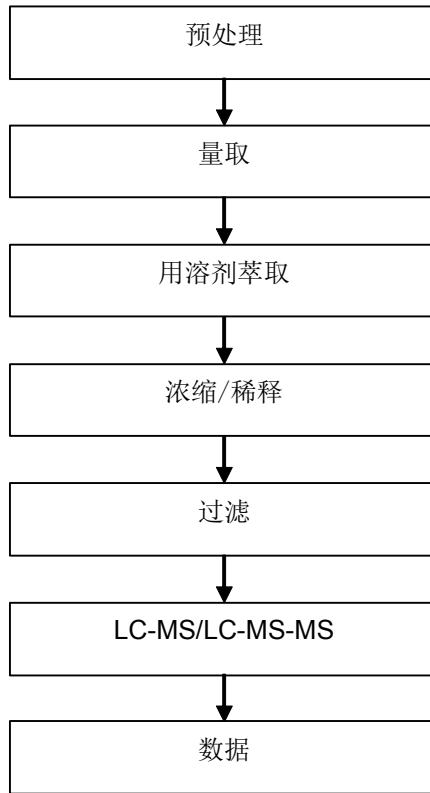
Halogen(氧弹法)测试流程图



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PFASs/ PFOS/PFOA 测试流程图



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