

测试报告

No. CANEC1709282404

日期: 2017年06月13日 第1页,共10页

舜全电气器材(东莞)有限公司

中国广东省东莞市虎门镇白沙四村工业区白沙大路北7号

以下测试之样品是由申请者所提供及确认: 压敏电阻

SGS工作编号: CP17-027563 - SZ

型号: CNR-14D471K

样品接收日期: 2017年05月22日

测试周期: 2017年05月22日 - 2017年06月13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

结论: 基于所送样品进行的测试, 镉、铅、汞、六价铬、多溴联苯(PBBs)、多溴二苯醚(PBDEs)、邻苯二甲酸酯(如邻苯二甲酸二丁酯(DBP)、邻苯二甲酸丁苯酯(BBP)、邻苯二甲酸二(2-乙基己基)酯(DEHP)和邻苯二甲酸二异丁酯(DIBP))的测试结果符合欧盟RoHS指令2011/65/EU附录II的修正指令(EU) 2015/863的限值要求。

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授权签名

史丽兰

Violet, Shi 史丽兰
批准签署人

备注: 本报告是编号为CANEC1709282403报告的中文版本。



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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	CAN17-092824.001	带黑色印字的蓝色物料
SN2	CAN17-092824.002	银色金属引脚
SN3	CAN17-092824.011	带银色表层的灰色物料

备注:

- (1) 1 mg/kg = 1 ppm = 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:
- (1)参考IEC 62321-5:2013, 用ICP-OES测定镉的含量。
 - (2)参考IEC 62321-5:2013, 用ICP-OES测定铅的含量。
 - (3)参考IEC 62321-4:2013, 用ICP-OES测定汞的含量。
 - (4)参考IEC 62321-7-2:2017, 用UV-Vis分析六价铬含量和/或者参考IEC 62321-5:2013, 用ICP-OES测试总铬含量。
 - (5) 参考IEC 62321-6:2015, 用GC-MS测定PBBs(多溴联苯)和PBDEs(多溴二苯醚) 的含量
 - (6) 参考IEC 62321-8 :2017 , 用GC-MS测定邻苯二甲酸酯的含量。

测试项目	限值	单位	MDL	001	011
镉 (Cd)	100	mg/kg	2	ND	ND
铅 (Pb)	1,000	mg/kg	2	ND	29
汞 (Hg)	1,000	mg/kg	2	ND	ND
六价铬(Cr(VI))	1,000	mg/kg	8	ND	ND
多溴联苯之和(PBBs)	1,000	mg/kg	-	ND	ND
一溴联苯	-	mg/kg	5	ND	ND
二溴联苯	-	mg/kg	5	ND	ND
三溴联苯	-	mg/kg	5	ND	ND
四溴联苯	-	mg/kg	5	ND	ND
五溴联苯	-	mg/kg	5	ND	ND
六溴联苯	-	mg/kg	5	ND	ND
七溴联苯	-	mg/kg	5	ND	ND
八溴联苯	-	mg/kg	5	ND	ND
九溴联苯	-	mg/kg	5	ND	ND



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测试项目	限值	单位	MDL	001	011
十溴联苯	-	mg/kg	5	ND	ND
多溴二苯醚之和(PBDEs)	1,000	mg/kg	-	ND	ND
一溴二苯醚	-	mg/kg	5	ND	ND
二溴二苯醚	-	mg/kg	5	ND	ND
三溴二苯醚	-	mg/kg	5	ND	ND
四溴二苯醚	-	mg/kg	5	ND	ND
五溴二苯醚	-	mg/kg	5	ND	ND
六溴二苯醚	-	mg/kg	5	ND	ND
七溴二苯醚	-	mg/kg	5	ND	ND
八溴二苯醚	-	mg/kg	5	ND	ND
九溴二苯醚	-	mg/kg	5	ND	ND
十溴二苯醚	-	mg/kg	5	ND	ND
邻苯二甲酸二丁酯 (DBP)	1000	mg/kg	50	ND	ND
邻苯二甲酸丁苄酯(BBP)	1000	mg/kg	50	ND	ND
邻苯二甲酸二(2-乙基己基)酯(DEHP)	1000	mg/kg	50	ND	ND
邻苯二甲酸二异丁酯(DIBP)	1000	mg/kg	50	ND	ND

备注:

(1)最大允许限值引用自RoHS指令(EU) 2015/863。IEC 62321系列等同于 EN 62321系列
列http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101:::FSP_ORG_ID,FSP_LANG_ID:1258637,25

(2)检测的铬(Cr)含量是“ND”，则六价铬(Cr(VI))含量也是“ND”，不需要进行六价铬(Cr(VI))的确认性测试。

(3)若铬(Cr)含量超过六价铬(Cr(VI))方法检出限，需要进行六价铬(Cr(VI))的确认性测试。

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

测试方法:

(1)参考IEC 62321-5:2013, 用ICP-OES测定镉的含量。

(2)参考IEC 62321-5:2013, 用ICP-OES测定铅的含量。

(3)参考IEC 62321-4:2013, 用ICP-OES测定汞的含量。

(4)参考IEC 62321-7-1:2015, 用紫外-可见分光光度计比色法测定六价铬的含量

测试项目	限值	单位	MDL	002
镉 (Cd)	100	mg/kg	2	ND
铅 (Pb)	1,000	mg/kg	2	ND
汞 (Hg)	1,000	mg/kg	2	ND
六价铬(Cr(VI))▼	-	µg/cm ²	0.10	ND

备注:

(1) 最大允许限值引用自RoHS指令(EU) 2015/863。

IEC 62321系列等同于 EN 62321系列



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

- (2) ▼=a. 当六价铬的浓度高于0.13 µg/cm²时, 样品为阳性, 即含有六价铬;
 b. 当六价铬的浓度为ND(低于0.10 µg/cm²)时, 样品为阴性, 即未检测到六价铬;
 c. 当六价铬的浓度介于0.10 µg/cm²与0.13 µg/cm²之间时, 无法直接判定是否检测到六价铬, 因不同个体的样品表面差异可能会影响测定结果;
 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。

卤素

测试方法: 参考EN 14582:2016, 用 IC分析。

测试项目	单位	MDL	001	011
氟 (F)	mg/kg	50	262	ND
氯 (Cl)	mg/kg	50	465	ND
溴 (Br)	mg/kg	50	ND	ND
碘 (I)	mg/kg	50	ND	ND

全氟辛酸(PFOA)和全氟辛烷磺酸(PFOS)

测试方法: 参考CEN/TS15968:2010方法, 用 LC-MS分析。

测试项目	CAS NO.	单位	MDL	001
全氟辛酸(PFOA)	335-67-1	mg/kg	10	ND
全氟辛烷磺酸及其衍生物 (PFOS)^	-	mg/kg	10	ND

测试项目	CAS NO.	单位	MDL	011
全氟辛酸(PFOA)	335-67-1	mg/kg	10	ND
全氟辛烷磺酸及其衍生物 (PFOS)^	-	mg/kg	10	ND

备注:

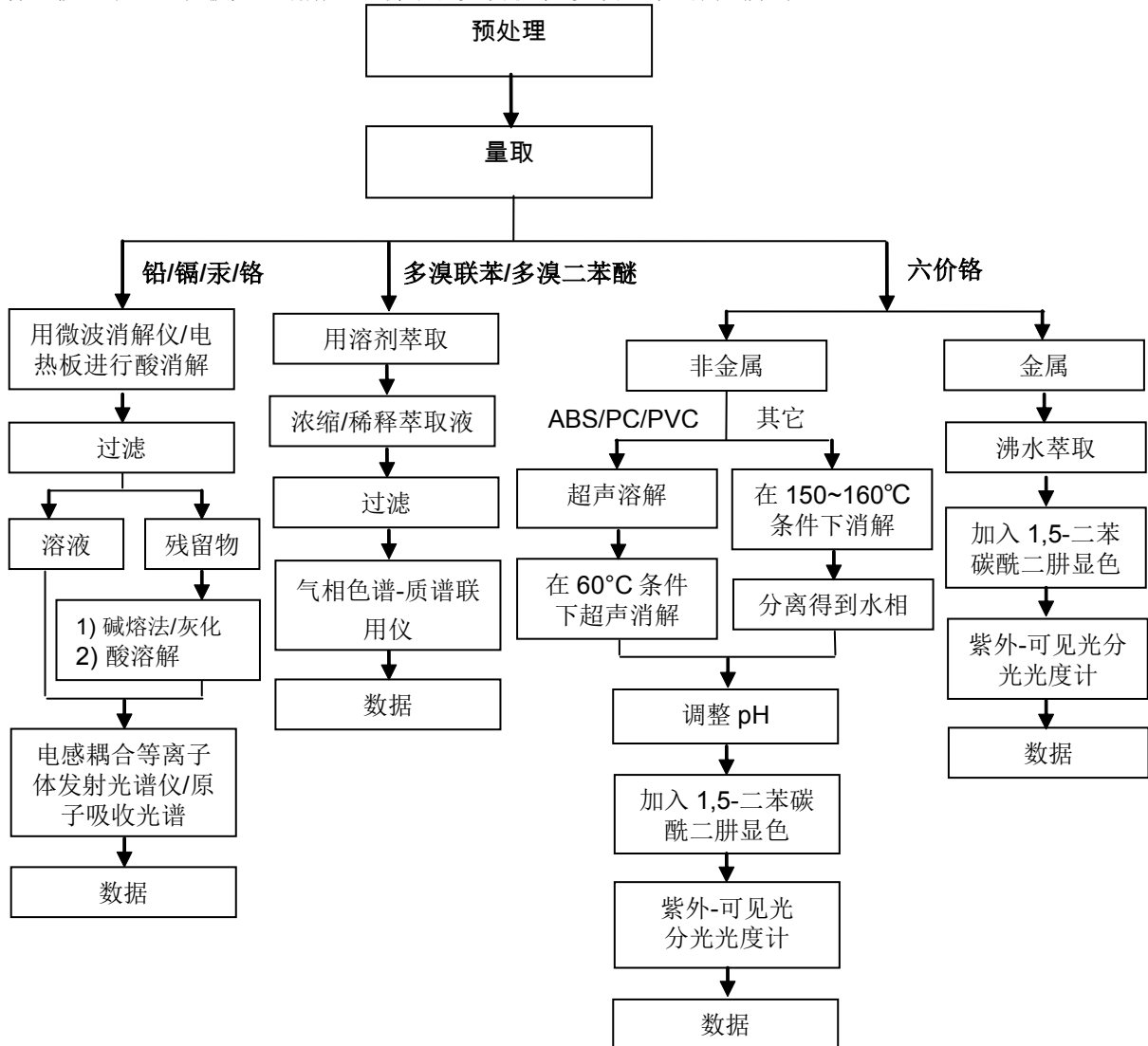
- (1) ^全氟辛烷磺酸(PFOS)及其衍生物包含全氟辛烷磺酸(PFOS)、全氟辛基磺酰胺(PFOSA)、2-(N-乙基全氟辛基磺酰胺)乙醇(EtFOSE)、N-甲基全氟辛烷磺酰胺(MeFOSA)、N-乙基全氟辛烷磺酰胺(EtFOSA)和2-(N-甲基全氟辛基磺酰胺)乙醇(MeFOSE)。



附件

RoHS 测试流程图

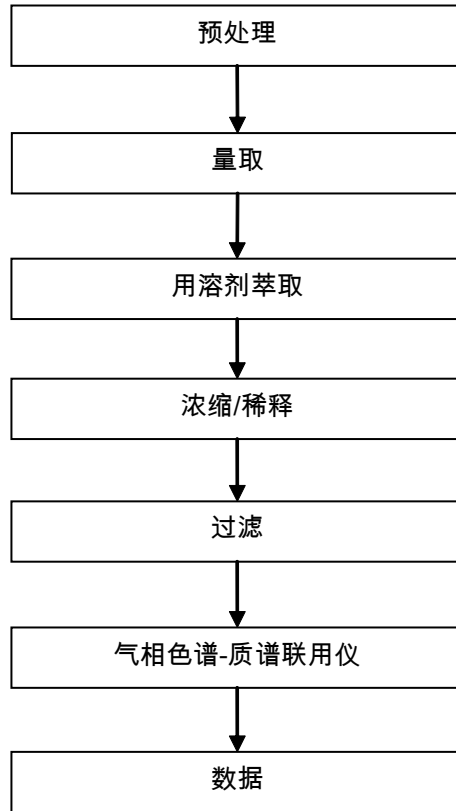
- 1) 分析人员: 张梓路 / 胡香云
- 2) 项目负责人: 汪丹 / 刘琼
- 3) 样品按照下述流程被完全消解 (六价铬和多溴联苯/多溴二苯醚测试除外)。



附件

Phthalates 测试流程图

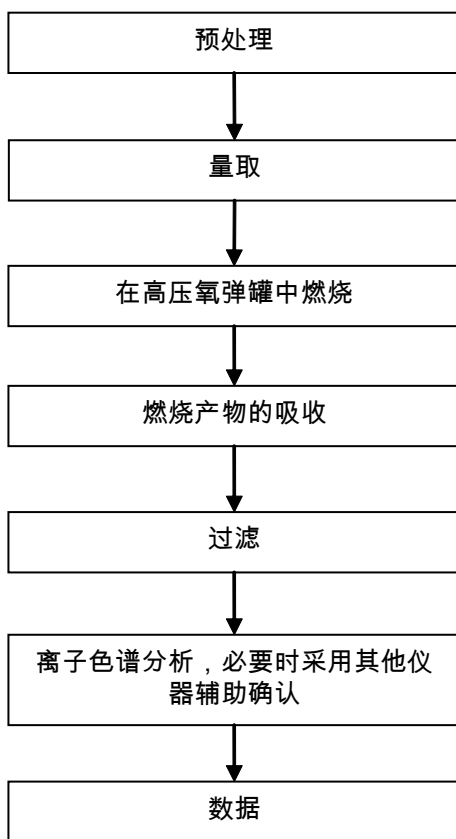
- 1) 分析人员: 胡香云
- 2) 项目负责人: 刘琼



附件

Halogen 测试流程图

- 1) 分析人员: 肖戈
- 2) 项目负责人: 汪丹



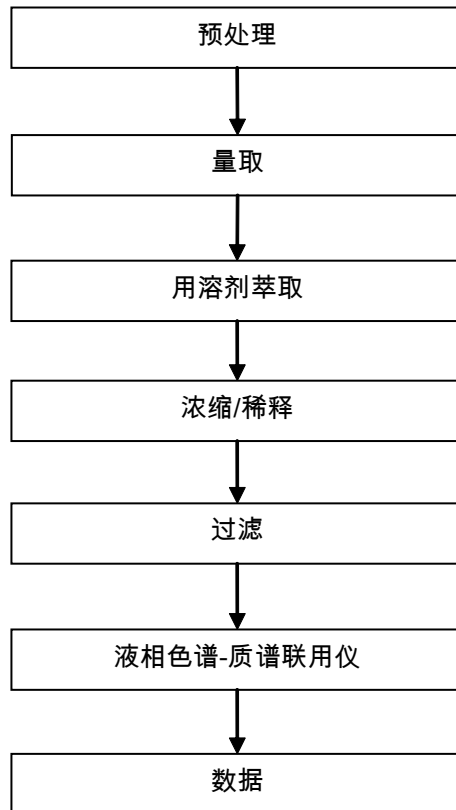
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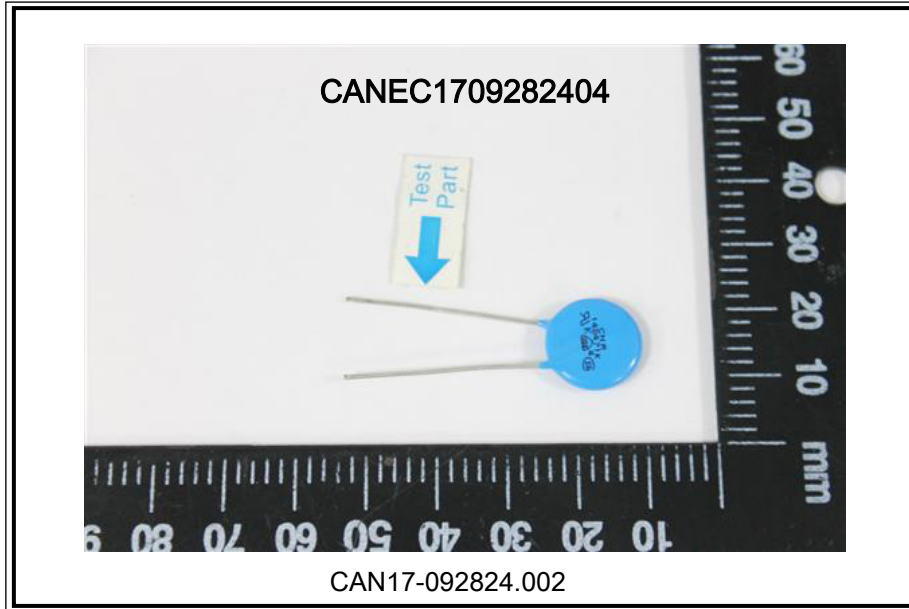
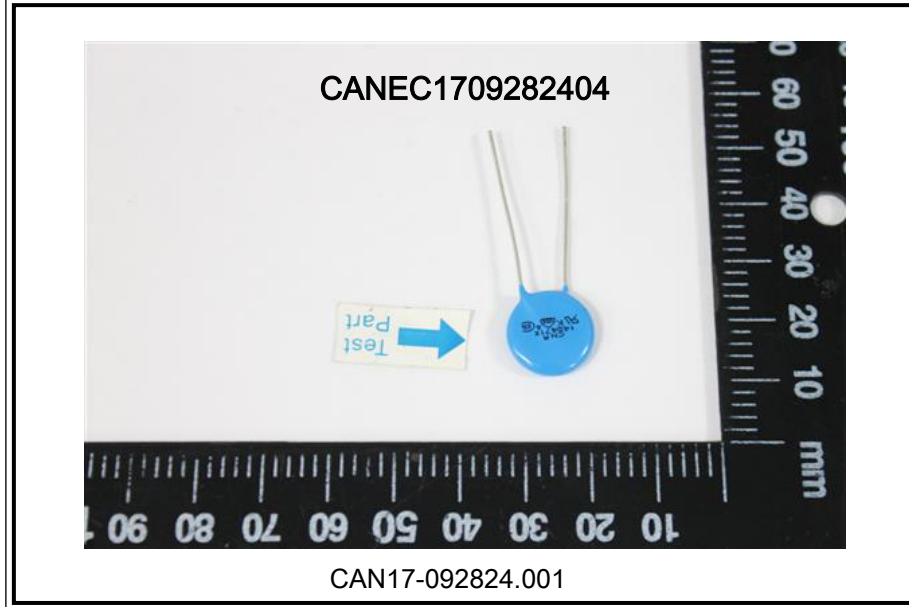
附件

PFOA / PFOS 测试流程图

- 1) 分析人员 : 王志红
- 2) 项目负责人 : 刘琼



样品照片:





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*** 报告完 ***



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