

测试报告

No. SHAEC2003380806

日期: 2020年03月23日 第1页,共11页

上海友邦电气(集团)股份有限公司

上海市松江区佘山镇吉业路528号

以下测试之样品是由申请者所提供及确认: 接线端子

SGS工作编号: SP20-005516 - SH

型号: USK-2.5

客户参考信息: 见附页

样品接收日期: 2020年03月17日

测试周期: 2020年03月17日 - 2020年03月20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)、邻苯二甲酸丁苄酯(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。

通标标准技术服务(上海)有限公司
授权签名

胡敏

Dora Hu 胡敏

批准签署人



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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	SHA20-033808.009	棕色固体
SN2	SHA20-033808.010	银色金属
SN3	SHA20-033808.011	银色金属
SN4	SHA20-033808.012	银色金属

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	009
镉(Cd)	100	mg/kg	2	ND
铅(Pb)	1000	mg/kg	2	ND
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



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测试项目	限值	单位	MDL	009
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
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) DEHP, BBP, DBP 和 DIBP的限制不适用于玩具产品, 因为No.1907/2006附录XVII第51条已对玩具产品中的DEHP, BBP, DBP 和 DIBP含量进行了限制。

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和IEC 62321-7-1:2015, 采用ICP-OES, AAS和UV-Vis进行分析。

测试项目	限值	单位	MDL	010	011	012
镉 (Cd)	100	mg/kg	2	ND	ND	ND
铅 (Pb)	1000	mg/kg	2	ND	135	ND
汞 (Hg)	1000	mg/kg	2	ND	ND	ND
六价铬 (Cr(VI))▼	-	µg/cm ²	0.10	ND	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

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



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- (2) ▼ = a. 当六价铬的浓度高于 $0.13 \mu\text{g}/\text{cm}^2$ 时, 样品为阳性, 即含有六价铬;
b. 当六价铬的浓度为ND(低于 $0.10 \mu\text{g}/\text{cm}^2$)时, 样品为阴性, 即未检测到六价铬;
c. 当六价铬的浓度介于 $0.10 \mu\text{g}/\text{cm}^2$ 与 $0.13 \mu\text{g}/\text{cm}^2$ 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。除非另有说明, 此报告结果仅对测试的样品负责。本报告未经本公司书面许可, 不可部分复制。

检测报告仅用于客户科研、教学、内部质量控制、产品研发等目的, 仅供内部参考。



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附页

USK-2.5, USK-4, USK-6,USK-2.5N, USK-4N, USK-6N, USK-10, USK-16, USK-35, USK-2.5E, USK-50, USK-70, USK-95, USK-150, USK-240,USK-2.5JD,USK-4JD,USK-6JD,USK-10JD,USK-16JD,USK-35JD,USK-4/2-2, USK-4/2×2, USK-6S,USK-6T,USK-6SN, USK-2.5RD, USK-4RD, USK-4/2-2RD,USK-10RD, USK-2.5RDX, USK-4RDX, USK-10RDX, USK-4/2-2RDX, USK-10RDN,USK-2.5V/2-2/5.08, USK-4/2-2D, USK-2.5G, USK-4G, USK-6G, USK-10G, USK-16G,USK-35G,USK-2.5FG,USK-4FG,USK-10FG,USK-16FG,USK-35FG,USK-2.5EG,USK-4HG,USK-4/HFG, USK-2.5V/2-2/5.08G, USK-4/2-2RDG,USK-2.5RDG,UKJ-4/2×2FG,USK-6SNG,USK-6SG,



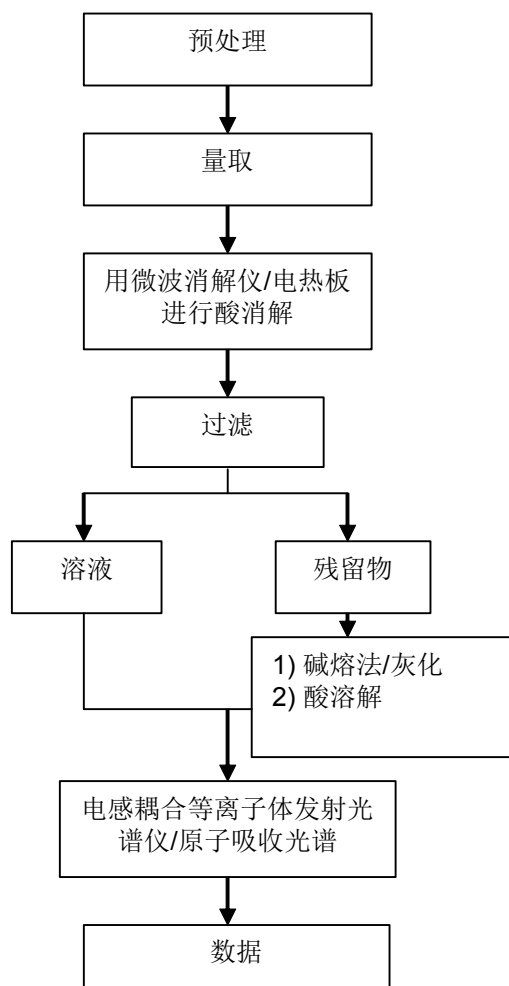
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元素(IEC62321) 测试流程图

1)样品按照下述流程被完全消解



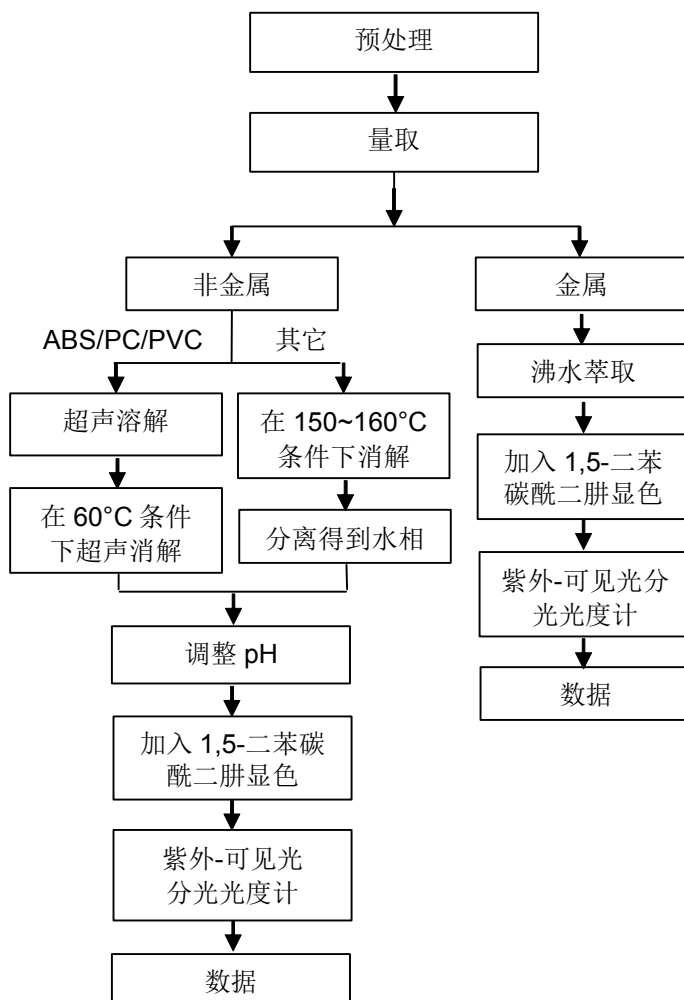
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六价铬测试流程图

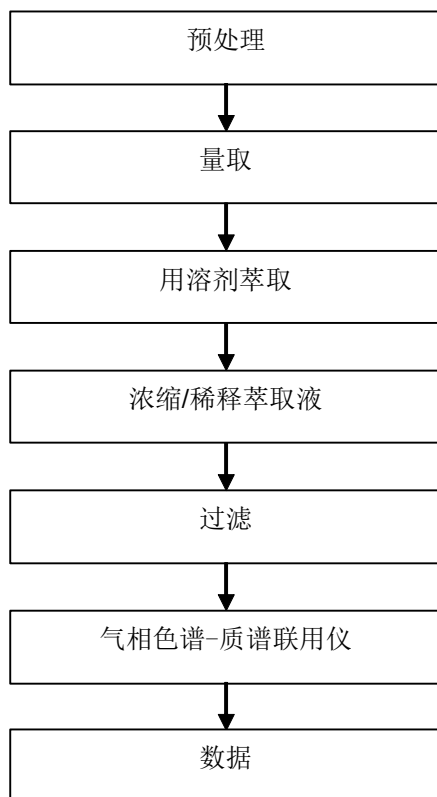


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PBBs/PBDEs 测试流程图

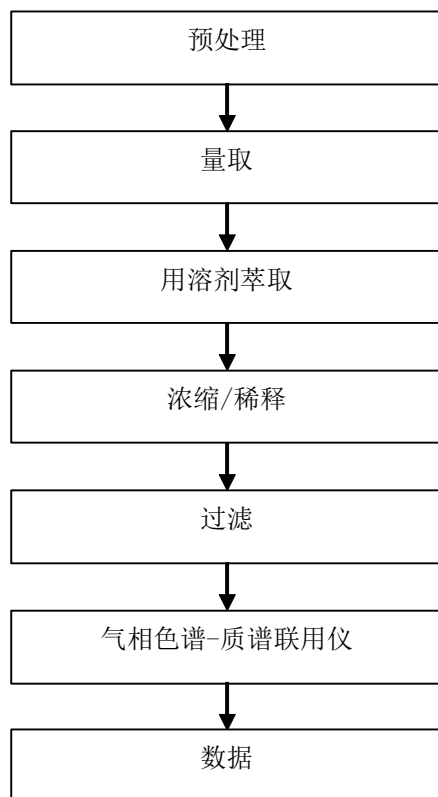


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Phthalates 测试流程图



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样品照片:



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