

测试报告 No. SHAEC2003380822 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:联接件

SGS工作编号: SP20-005516 - SH

型号: UFBS3-5 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

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 结论:

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。

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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	SHA20-033808.028	银色金属部分
SN2	SHA20-033808.029	红色固体部分

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	<u>限值</u>	单位	<u>MDL</u>	<u>029</u>
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
二溴二苯醚	-	mg/kg	5	ND
三溴二苯醚	-	mg/kg	5	ND



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<u>测试项目</u>	<u>限值</u>	<u>单位</u>	<u>MDL</u>	<u>029</u>
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:12586 37.25

- (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和UV-Vis进行分析。

<u>测试项目</u>	<u>限值</u>	<u>单位</u>	<u>MDL</u>	<u>028</u>
镉 (Cd)	100	mg/kg	2	ND
铅(Pb)	1000	mg/kg	2	1041▲
汞 (Hg)	1000	mg/kg	2	ND
六价铬(Cr(VI))▼	_	ua/cm²	0.10	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

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(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;



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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。

(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 6(c)|:铜合金中的铅含量不得超过4%。

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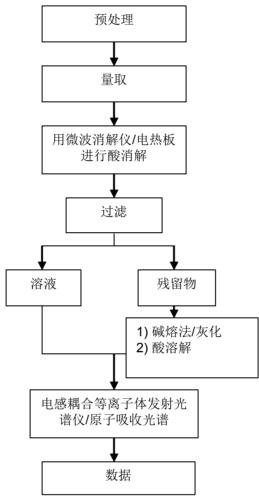
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附件

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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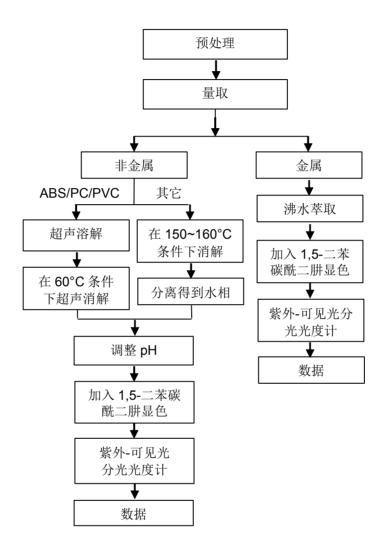


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附件

六价铬测试流程图





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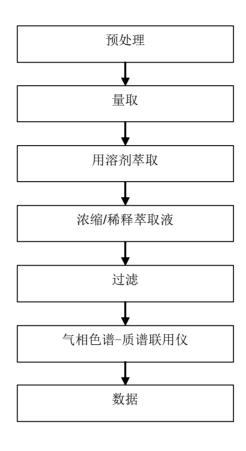


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附件

PBBs/PBDEs 测试流程图





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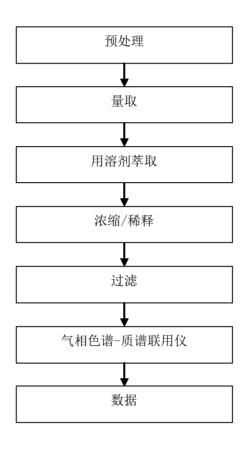


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Phthalates 测试流程图





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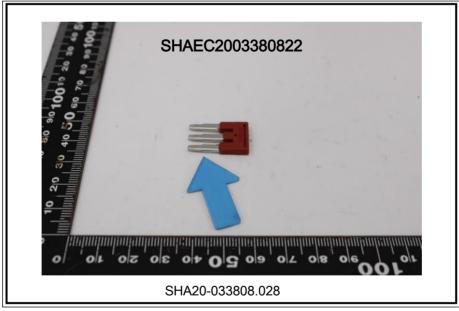


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样品照片:







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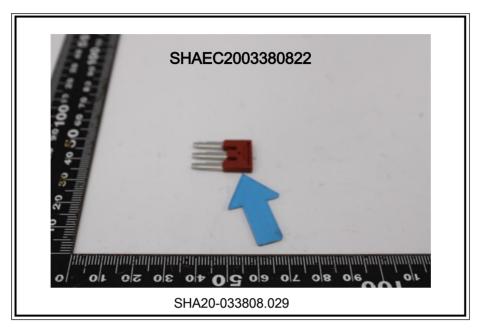
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