

No. SHAEC1810063539

日期: 2018年08月16日 第1页,共10页

杭州至卓通讯科技有限公司 杭州余杭区良渚街道后杨路1号

以下测试之样品是由申请者所提供及确认:FC光纤活动连接器

SGS工作编号: SP18-014941 - SH

型号: FC/UPC0.9、FC/UPC2.0、FC/APC3.0

成分: 锌合金、PVC 样品接收日期: 2018年05月15日

测试周期: 2018年05月15日 - 2018年08月07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	SHA18-100635.005	白色固体
SN2	SHA18-100635.007	银色金属
SN3	SHA18-100635.014	银色金属
SN4	SHA18-100635.019	银色金属
SN5	SHA18-100635.023	银色金属
SN6	SHA18-100635.046	黑色固体

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>	<u>单位</u>	<u>MDL</u>	<u>005</u>	<u>046</u>
镉(Cd)	100	mg/kg	2	ND	ND
铅(Pb)	1000	mg/kg	2	ND	ND
汞(Hg)	1000	mg/kg	2	ND	ND
六价铬 (Cr(VI))	1000	mg/kg	8	ND	ND
多溴联苯之和(PBBs)	1000	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
十溴联苯	-	mg/kg	5	ND	ND



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测试项目	<u>限值</u>	<u>单位</u>	<u>MDL</u>	<u>005</u>	<u>046</u>	
多溴二苯醚之和(PBDEs)	1000	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) 最大允许极限值引用自RoHS指令(EU) 2015/863。

IEC 62321系列等同于 EN 62321系列

http://www.cenelec.eu/dyn/www/f?p=104:30:1742232870351101::::FSP ORG ID,FSP LANG ID:125863

- (2) 2015年6月4号发表在欧盟官方杂志(官方公报)上的RoHS指令(EU) 2015/863附录II限值中还包括邻苯 二甲酸酯BBP,DBP,DEHP和DIBP。新的指令限制了电子电器产品的每一个均一材质中邻苯二甲酸酯含 量不得超过0.1%。
- (3) 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。
- (4) DEHP, BBP, DBP 和 DIBP的限制不适用于2019年7月22日前投放市场的电缆及电子电气产品中用于维 修、重复利用、功能更新及容量提升的备用配件以及2021年7月22日前投放市场的医疗器械,包括体外医 疗器械, 监控仪表, 包括工业监测和控制仪器。
- (5) DEHP、BBP 和 DBP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 和 DBP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。



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<u>测试项目</u>	<u>限值</u>	<u>单位</u>	<u>MDL</u>	<u>007</u>	<u>014</u>	<u>019</u>
镉 (Cd)	100	mg/kg	2	3	ND	ND
铅(Pb)	1000	mg/kg	2	25	ND	11
汞 (Hg)	1000	mg/kg	2	ND	ND	ND
六价铬(Cr(VI))▼	-	μg/cm²	0.10	ND	ND	ND
<u>测试项目</u>	<u>限值</u>	<u>单位</u>	<u>MDL</u>	<u>023</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))▼	-	µg/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

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 $0.10 \, \mu g/cm^2$ 与 $0.13 \, \mu g/cm^2$ 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。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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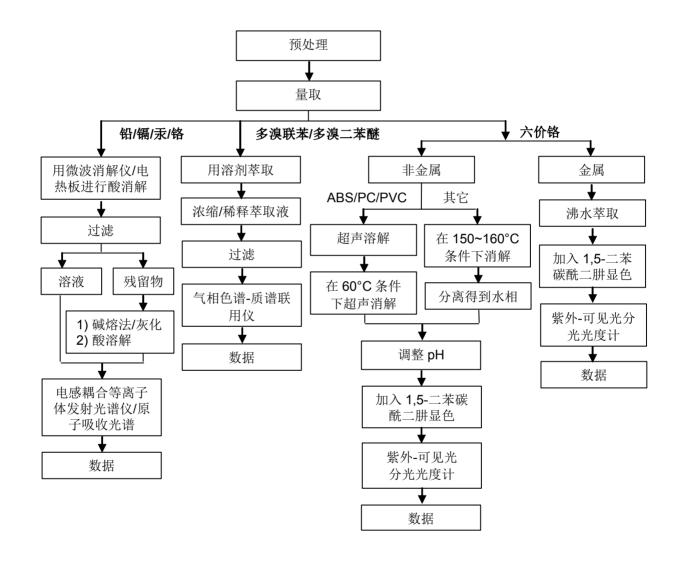
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附件

Pb/Cd/Hq/Cr⁶⁺/PBBs/PBDEs 测试流程图

- 1) 分析人员: 金叶/徐刚/杨小龙/宋珂静
- 2) 项目负责人:施青/马永存/徐亮/王晓艳
- 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)。





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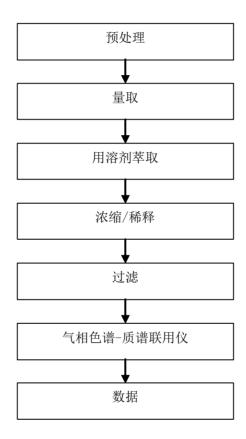
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附件

Phthalates 测试流程图

1) 分析人员: 高仰景 2) 项目负责人: 黄婷





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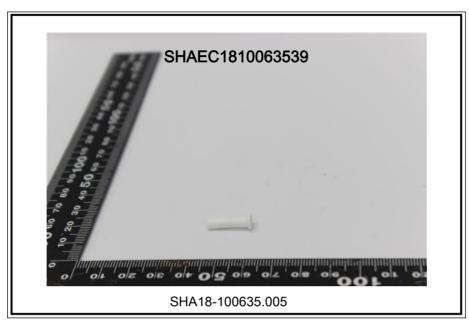
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样品照片:







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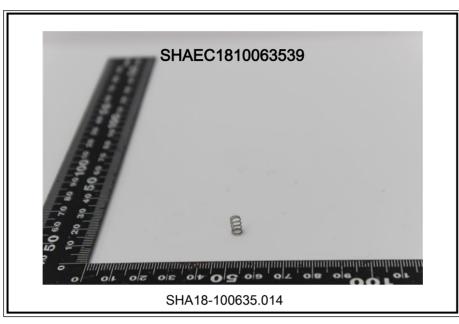
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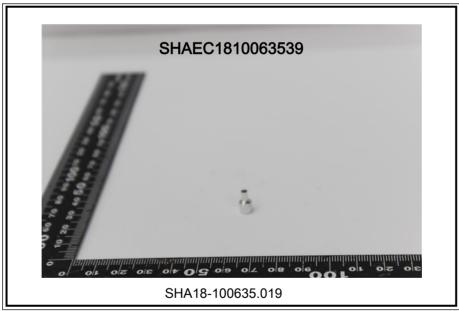
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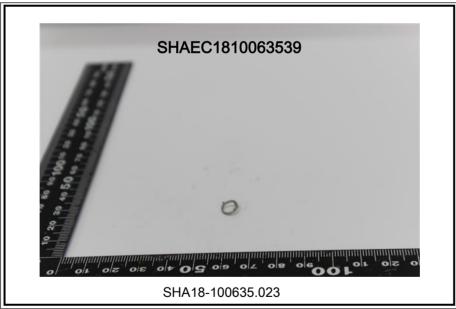
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