

TEST REPORT

LAB NO. : (6607)337-0736

DATE

December 7, 2007

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APPLICANT

: BOURNS (XIAMEN) LTD

4/5 F, Guangyao Building Torch Hi-Tech, Industrial

Development Zone Xiamen

申请人公司名称

: 柏恩氏(厦门)电子有限公司

厦门火炬高技术产业开发区光耀楼 4/5 楼

CONTACT PERSON

联系人名称

: Jessica Wu

DATE OF SUBMISSION

: December 3, 2007

样品收取日期

: 2007年12月3日

TEST PERIOD

: December 3, 2007 to December 7, 2007

所需工作周期

: 2007年12月3日至2007年12月7日

NO. OF WORKING DAY(S)

所需工作目

: 5

SAMPLE DESCRIPTION

样品描述

: Resettable fuse (golden / black) Model No.: SMDF family

Manufacturer: BXL

SUMMARY OF TEST RESULTS

测试结果摘要

TEST REQUESTED	PASS	FAIL	REMARK
测试项目	通过	不通过	备注
Restriction of Hazardous Substances Directive (RoHS), 2002/95/EC 有关欧洲针对电子产品的指令(电子电器禁用某些有害物质指令),2002/95/EC	X		

REMARK

If there are questions or concerns on this report, please contact the following persons:

若有任何疑问或咨询,可通过下述联络方式与我们联络

General enquiry and invoicing

顾晶/ 刘婷婷 小姐 Ms. Michelle Gu/ Sedy Liu

其他问题

(021) 64893130*2008/2012

Michelle.gu@cn.bureauveritas.com/ Sedy.liu@cn.bureauveritas.com

Technical enquiry

李远明/ 云大陆 先生 Mr. Steven Li/ Darryl Yun

技术问题

(021) 64893130*2256/ 1060 Steven.li@cn.bureauveritas.com/Darryl.yun@cn.bureauveritas.com

BUREAU VERITAS

CONSUMER PRODUCTS SERVICES DIVISION (SHANGHAI) 法国国际检验局 - 上海申美商品检测有限公司

PREPARED BY:

Emma

李远明 Steven Li

制定:

化学实验室经理 CHEMICAL LABORATORY MANAGER

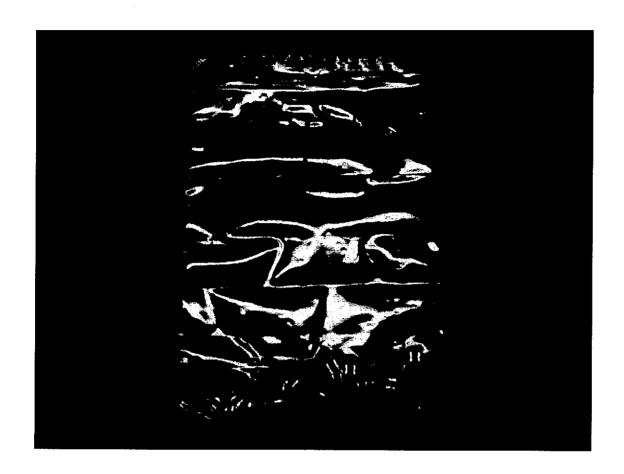
RW/2007



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Photo of the Submitted Sample





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TEST RESULT 测试结果

Restriction of Hazardous Substances Directive (RoHS), 2002/95/EC 有关欧洲针对电子产品的指令(电子电器禁用某些有害物质指令), 2002/95/EC

Compounds 化合物	Tested item (ppm) 测试项目(ppm) 1	RoHS' Limits (ppm) RoHS'建议最高界限
Lead (Pb)		(ppm)
铅(Pb)	ND	1000
Mercury (Hg)		
汞(Hg)	ND	1000
Cadmium (Cd)		
镉(Cd)	ND	100
Chromium VI (Cr VI)		
六价铬(Cr (VI))	ND	1000
Polybrominated Biphenyls (PBBs)	:	1000
多溴联苯(PBBs)	' •	
Bromobiphenyls		
一溴联苯	ND	
Dibromobiphenyls		\
二溴联苯	ND	
Tribromobiphenyls		\
三溴联苯	ND	
	110	
Tetrabromobiphenyls 四溴联苯	ND	┦ \
		\
entabromobiphenyls	ND	┤ \
5.溴联苯	ND	
lexabromobiphenyls		-
7溴联苯	ND	\
leptabromobiphenyls		-
二溴联苯	ND	
ctabromobiphenyls		_ \
溴 联苯	ND	\
onabromobiphenyls		4
. 溴联苯	ND	
ecabromobiphenyl		-
·溴联苯	ND	\
am of PBBs		\ <u>\</u>
溴联苯总和	ND	1000



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TEST RESULT 测试结果

Restriction of Hazardous Substances Directive (RoHS), 2002/95/EC 有关欧洲针对电子产品的指令(电子电器禁用某些有害物质指令), 2002/95/EC

Compounds 化合物	Tested item (ppm) 测试项目(ppm)	RoHS' Limits (ppm)
Polybrominated Diphenyl Ether	s (PBDEs) :	RoHS'建议最高界限 (ppm)
多溴联苯醚(PBDEs):		
Bromodiphenyl ethers 一溴联苯醚	ND	
Dibromodiphenyl ethers 二溴联苯醚	ND	
Tribromodiphenyl ethers 三溴联苯醚	ND	
Tetrabromodiphenyl ethers 四溴联苯醚	ND	
Pentabromodiphenyl ethers 五溴联苯醚	ND	
Hexabromodiphenyl ethers 六溴联苯醚	ND	
Heptabromodiphenyl ethers 七溴联苯醚	ND	
Octabromodiphenyl ethers 八溴联苯醚	ND	
Nonabromodiphenyl ethers 九溴联苯醚	ND	
Decabromodiphenyl ether 十溴联苯醚	ND	
Sum of PBDEs 多溴联苯醚总和	ND	1000

Tested Item	Conclusion
测试项目	结论
1) Resettable fuse (golden / black electronic component)	PASS 通过



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Note / 注释:

Detection limits for regulated substances and limit of RoHS (in ppm) reference to 2002/95/EC

gameta Substantes 又限初则	nces and limit of RoHS (in ppm) Detection limit 检测限	RoHS' Limit (ppm) RoHS'建议最高界限
Pb 铅	2	
Hg 汞	2	1000
Cd 镉		1000
Cr VI 六价铬	2	100
PBBs 多溴联苯	2	1000
	5 (each)	1000 (sum)
Bromobiphenyls	1	1000 (Sulli)
Dibromobiphenyls		
Tribromobiphenyls		
Tetrabromobiphenyls Pentabromobiphenyls		
Hexabromobiphenyis		
Heptabromobiphenyis		
Octabromobiphenyls	1	
Nonabromobiphenyls	1	
Decabromobiphenyl		
PBDEs 多溴联苯醚	5/- 13	
Bromodiphenyl ethers	5 (each)	1000 (sum)
Dibromodiphenyl ethers	J	· · ·
Tribromodiphenyl ethers		
Tetrabromodiphenyl ethers		
Pentabromodiphenyl ethers		•
lexabromodiphenyl ethers		
leptabromodiphenyl ethers	İ	
ctabromodiphenyl ethers	1	
ionabromodiphenyl ethers	ŀ	
Decabromodiphenyl ether		
pm = mg/kg <= less	than	ND = not detact.

ppm = 百万分之一

 \leq = less than <=少干

ND = not detected ND=不被检出

Negative = 例性 Positive = 阳性

Test Method / 测试方法:

Wet Chemistry Tests - Reference to IEC 62321/54/CDV, "Procedures for the Determination of Levels of Regulated Substances in Electrotechnical Products": 湿化学方法 - 参照 IEC 62321/54/CDV: 测定电工产品中常规物质等级的程序版本

- Lead (Pb) and Cadmium (Cd): The sample is comminuted and digested with acid mixtures Pb/ Cd contents are determined with ICP-AES technique. (Chapter 11, 12 & 13) 铅和镉: 先将样品粉碎,然后用混酸消解。铅/镉的含量由等离子发射光谱仪测定(第 11, 12 和 13 章)。
- ii. Mercury (Hg): The sample is comminuted and digested with acid mixtures. Hg content is determined with ICP-AES, ICP-汞: 先将样品粉碎, 然后用混酸消解。汞含量由离子发射光谱仪, 或者原子吸收分光光度计-氢化物发生装置测定。
- iii. Chromium (VI) (Cr VI) 六价铬:
 - A. Metal: Qualitative method for the presence of hexavalent chromium on metal surface on "Test for the presence of Hexavalent Chromium (CrVI) in colorless and colored chromated coating on metals". The presence of hexavalent chromium is indicated by the formation of a red-violet color. The method is applied in turn to 1) untreated surface; 2) surface finely abraded to remove any reduced chromate surface but not remove the whole chromate layer, 3) surface vigorously abraded to exposure deeper layers. The sample is further verified by boiling water extraction method if the spot test result is uncertain. (Chapter 8)

金属:金属表面六价铬存在的定性方法"在无色和有色铬镀层金属表面六价铬(Cr VI)存在的测试"。测试 颜色呈红一紫色,则表明六价铬的存在。该方法适用于1)未磨损过的表面;2)轻微磨损过的表面,以去除 可能被还原的铬表面,但不去除整个铬镀层; 3)用力磨损的表面,以暴露深层基材。如果点测试结果不确定, 则用沸水煮萃取方法进一步确认。(第8章)

- Plastics & Electronics: The sample is comminuted and digested with alkaline mixtures. Chromium VI content is determined with UV-VIS spectroscopic technique. (Chapter 9) 塑料和电子器件: 先将样品粉碎, 然后用混碱消解。六价铬含量由紫外可见分光光度计测定。(第9章)
- iv. PBBs and PBDEs: The sample extracted by appropriate selvent is used for extraction and quantified GC-MS. (Chapter 7) 多溴联苯和多溴联苯醚: 将样品用合适溶液进行提取,再由气相色谱-质谱联用仪测定。(第7章)

Remark / 备注:

- For Chromium VI of a metal composite sample by wet chemistry, each individual metal component was tested. 湿化学方法测试合成金属样品的六价铬时,每一个金属部分均被测试。
- Positive means the presence of hexavalent chromium on the tested areas. It is regarded as in conflict with RoHS requirements. According to the IEC 62321, the principle of this method was evaluated and supported by two studies organized by IEC TC111 WG3. The studies were focused on detecting the presence of Cr(VI) in metallic samples. 阳性表示测试表面存在六价铬,则被认为与 RoHS 要求有冲突。根据 IEC62321,该测试方法的原理被 IEC TC111 WG3 所组织的两次研究所评估和支持。该研究主要致力于金属样品六价铬 Cr(VI)存在性的检测。
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