



测试报告
(SVHC)

No. GZ1106076615/CHEM

日期: 2011 年 6 月 20 日

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华普微电子有限公司
深圳市南山区华侨城东部工业区 B3 栋 4 楼东

以下测试之样品是由申请者所提供及确认:
射频模组

SGS 工作编号	: SZ13151241
SGS 内部编号	: 8.8
测试样品信息	: 型号: RFM01
客户参考信息	: RFM02, RFM12, RFM12B, RFM12BP, HM-T, HM-R, HM-TR, RFM22X, RFM23X, RFM31X, RFM42X, RFM43X, RFM50, RFM60, RFM70, RFM80, RFM83, RFM84, HM-TRP, HP04S
样品接收日期	: 2011 年 6 月 15 日
测试周期	: 2011 年 6 月 15 日 - 2011 年 6 月 20 日

测试要求: 根据客户要求,

(i) 基于欧洲化学品管理署截止 2010 年 12 月 15 日公布的供授权审议的高关注物质候选清单(根据欧盟第 1907/2006 号 REACH 法规), 对 46 种高关注物质进行筛分测试。

(ii) 基于欧洲化学品管理署于 2011 年 2 月 21 日公布的接受公众咨询的潜在高关注物质清单, 对 7 种咨询中的高关注物质进行筛分测试。

测试结果: 请参见下一页

总结:

根据具体的测试范围和分析技术, 样品中测试的高关注物质浓度都 \leq 0.1%。	通过
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通标标准技术服务有限公司
授权签名

David Zhou 周颂盈
批准签署人

根据客户申请, SGS 出具了此中文报告; 英文版本可根据客户要求提供。(The Chinese test report is issued according to the applicant's request. The English version is available from SGS if further needed.)

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 Guangzhou Environmental Chemical Laboratory | 中国·广州·经济技术开发区科学城科珠路198号 | 邮编: 510663 | (86-20) 82155555 | (86-20) 82075125 | e: sgs.china@sgs.com

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备注:

- (1). 本报告所涉及的关于特定高关注物质的化学分析是根据欧洲化学品管理署发布的下列文件, 利用现有的分析技术完成的。 http://echa.europa.eu/chem_data/authorisation_process/candidate_list_table_en.asp
这些文件清单由欧洲化学品管理署评估, 将来可能会有变化。
- (2). 根据欧盟第 1907/2006 (EC) 号法规, 如果满足以下两个条件, 如果物质符合第 57 条中的标准并根据第 59 条第一款被确定, 物品的任何欧洲制造商或进口商应根据第 7 条第 4 款向欧盟化学品管理署进行通报: (a) 候选清单中的物质在物品中的总含量超过 1 吨/年/生产商或进口商; (b) 候选清单中的物质在物品中的总含量以质量分数计超过 0.1% 的浓度。
- (3). 欧盟第 1907/2006 (EC) 号法规第 33 条规定, 含有满足第 57 条中的标准并根据第 59 条第一款被确定且质量分数大于 0.1% 的物质的物品的所有供应商应向物品接受者提供其可获取的充足信息, 以使物品使用安全, 这些信息至少包括含有的候选清单中物质的名称。
- (4). 如果样品中 SVHC 的测试结果超过报告限, 建议客户进一步定量分析检测含有 SVHC 的组分并且得到 SVHC 物质的准确浓度。

测试样品:

样品部件外观描述:

样品编号	描述
001	“射频模组”

测试方法:

SGS 内部方法- GZTC CHEM-TOP-092-01, GZTC CHEM-TOP-092-02, 采用 ICP-OES、GC-MS、比色法/HPLC 和 UV-VIS 分析。

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Guangzhou Chemical Laboratory

138 Kazhu Road, Sointech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663 | (86-20) 82155555 | (86-20) 82075125 | www.cn.sgs.com
中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 | (86-20) 82155555 | (86-20) 82075125 | e: sgs.china@sgs.com

测试结果: (候选清单中的高关注物质)

物质名称	CAS No.	EC No.	浓度 (%)	RL (%)
			001	
2,4-二硝基甲苯	121-14-2	204-450-0	N.D.	0.050
乙二醇乙醚	110-80-5	203-804-1	N.D.	0.050
乙二醇单甲醚	109-86-4	203-713-7	N.D.	0.050
4,4'-二氨基二苯甲烷(MDA)	101-77-9	202-974-4	N.D.	0.050
2,4,6-三硝基-5-叔丁基间二甲苯(二甲苯麝香)	81-15-2	201-329-4	N.D.	0.050
丙烯酰胺	79-06-01	201-173-7	N.D.	0.050
C10-13 氯代烃(短链氯化石蜡)	85535-84-8	287-476-5	N.D.	0.050
硅酸铝, 耐火陶瓷纤维*	650-017-00-8 (Index no.)	-	N.D.	0.005
重铬酸铵*	7789-09-5	232-143-1	N.D.	0.005
蒽	120-12-7	204-371-1	N.D.	0.050
蒽油*	90640-80-5	292-602-7	N.D.	0.050
蒽油, 蒽糊*	90640-81-6	292-603-2	N.D.	0.050
蒽油, 蒽糊, 蒽馏分*	91995-15-2	295-275-9	N.D.	0.050
蒽油, 蒽糊, 轻油*	91995-17-4	295-278-5	N.D.	0.050
蒽油, 含蒽量少*	90640-82-7	292-604-8	N.D.	0.050
邻苯二甲酸丁苄酯(BBP)	85-68-7	201-622-7	N.D.	0.050
邻苯二甲酸二(2-乙基己基)酯(DEHP)	117-81-7	204-211-0	N.D.	0.050
氧化双三丁基锡(TBTO)	56-35-9	200-268-0	N.D.	0.050
硼酸*	10043-35-3 11113-50-1	233-139-2 234-343-4	N.D.	0.005
铬酸, 铬酸及重铬酸低聚物, 重铬酸*	7738-94-5 - 13530-68-2	231-801-5 - 236-881-5	N.D.	0.005
三氧化铬*	1333-82-0	215-607-8	N.D.	0.005

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物质名称	CAS No.	EC No.	浓度 (%)	RL (%)
			001	
二氯化钴*	7646-79-9	231-589-4	N.D.	0.005
碳酸钴*	513-79-1	208-169-4	N.D.	0.005
乙酸钴*	71-48-7	200-755-8	N.D.	0.005
硝酸钴*	10141-05-6	233-402-1	N.D.	0.005
硫酸钴*	10124-43-3	233-334-2	N.D.	0.005
五氧化二砷*	1303-28-2	215-116-9	N.D.	0.005
三氧化二砷*	1327-53-3	215-481-4	N.D.	0.005
邻苯二甲酸二丁酯(DBP)	84-74-2	201-557-4	N.D.	0.050
邻苯二甲酸二异丁酯	84-69-5	201-553-2	N.D.	0.050
无水四硼酸钠*	1303-96-4 1330-43-4 12179-04-3	215-540-4	N.D.	0.005
六溴环十二烷(HBCDD) 及其非对映异构体(α -HBCDD, β -HBCDD, γ -HBCDD) Δ	25637-99-4 3194-55-6	247-148-4 221-695-9	N.D.	0.050
铬酸铅*	7758-97-6	231-846-0	N.D.	0.005
钼铬红(C.I.颜料红 104)*	12656-85-8	235-759-9	N.D.	0.005
砷酸氢铅*	7784-40-9	232-064-2	N.D.	0.005
铅铬黄(C.I.颜料黄 34)*	1344-37-2	215-693-7	N.D.	0.005
沥青, 煤焦油, 高温*	65996-93-2	266-028-2	N.D.	0.050
铬酸钾*	7789-00-6	232-140-5	N.D.	0.005
重铬酸钾*	7778-50-9	231-906-6	N.D.	0.005
铬酸钠*	7775-11-3	231-889-5	N.D.	0.005
重铬酸钠*	7789-12-0 10588-01-9	234-190-3	N.D.	0.005
水合硼酸钠*	12267-73-1	235-541-3	N.D.	0.005
三氯乙烯	79-01-6	201-167-4	N.D.	0.050
三乙基砷酸酯*	15606-95-8	427-700-2	N.D.	0.005
磷酸三(2-氯乙基)酯	115-96-8	204-118-5	N.D.	0.050
氧化锆硅酸铝, 耐火陶瓷纤维*	650-017-00-8 (Index no.)	-	N.D.	0.005

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测试结果: (咨询清单中的高关注物质)

物质名称	CAS No.	EC No.	浓度 (%)	RL (%)
			001	
1,2,3-三氯丙烷	96-18-4	202-486-1	N.D.	0.050
1,2-苯二酸-二(C6-8 支链)烷基酯(富 C7)	71888-89-6	276-158-1	N.D.	0.050
1,2-苯二酸-二(C7-11 支链与直链)烷基(醇)酯	68515-42-4	271-084-6	N.D.	0.050
1-甲基-2-吡咯烷酮	872-50-4	212-828-1	N.D.	0.050
乙二醇乙醚醋酸酯	111-15-9	203-839-2	N.D.	0.050
联氨	7803-57-8 302-01-2	206-114-9	N.D.	0.050
铬酸镧*	7789-06-2	232-142-6	N.D.	0.005

注释:

- RL = 报告极限值, 所有 RL 是基于均一材质的测试。
N.D. = 未检出(<RL), N.D.针对 SVHC 物质。
- Δ 六溴环十二烷(HBCDD) 的非对映异构体 α-HBCDD、β-HBCDD、γ-HBCDD 的 CAS NO 分别为 134237-50-6、134237-51-7、134237-52-8。
- * 测试结果是由选定的元素或标记物的结果并基于最坏的情况计算得出。详细信息请参见 SGS REACH 网站:
www.reach.sgs.com/substance-of-very-high-concern-analysis-information-page.htm

硼酸、无水四硼酸钠和水合硼酸钠的结果由 ICP-OES 测试的水提取的硼元素、钠元素结果换算得出。

RL = 0.005% 是针对元素 (例如钴、砷、铅、钠、铬、铬(VI)、硅、铝、镉、硼、钾和镧), 除了钼的 RL=0.0005%。

- 本报告中的测试结果和照片引用自报告 GZ1106076614/CHEM。

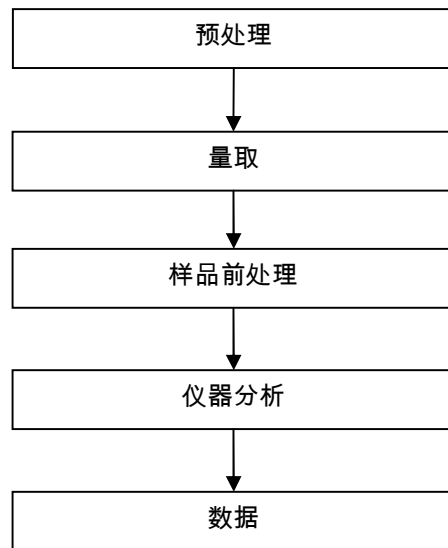
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附件

SVHC 测试流程图

- 1) 分析人员: 汪丹/赵瑞娜
- 2) 项目负责人: 余奕东/杨伟兴



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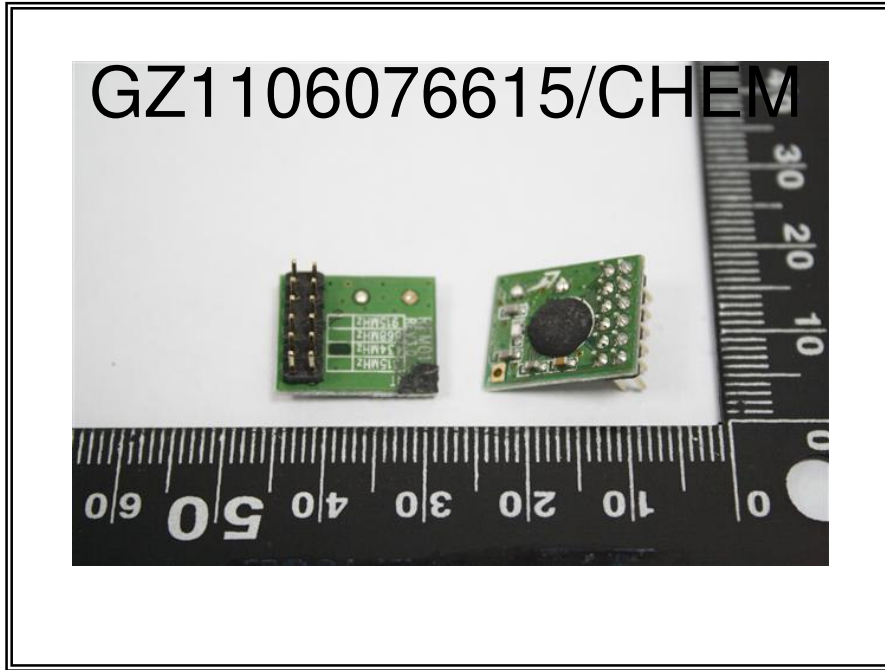
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样品照片:



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