



**测试报告**  
(SVHC)

No. GZ0902009755/CHEM

日期: 2012年 2 月 24 日

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深圳市世纪天创科技有限公司

西安市临潼书院东路1号中国航天七七一集成电路封装厂

以下测试之样品是由申请者所提供及确认: 管芯 (DICE)

SGS 工作编号 : GZ11594736EC

样品接收日期 : 年 2 月 18 日

测试周期 : 2012 年 2 月 18 日 - 2012 年 2 月 24 日

试验要求 : 基于欧洲化学品管理署于 2008 年 10 月 28 日公布的供审议的高关注物质清单(根据欧盟第 1907/2006 号 REACH 法规), 测试 15 种高关注物质的含量。

试验结果 : 见下一页。

总结 : 根据具体的测试范围和分析技术, 样品中 15 种高关注物质的含量都低于 0.1%。

Signed for and on behalf of  
SGS-CSTC Ltd.

Huang Fang, Sunny  
Sr. Engineer

备注: 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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测试结果:

样本 1 描述: “管芯 (DICE)” (全部混合)

描述	重量
	No.1
金属	0%
塑料/橡胶	0%
印刷线路板/元器件	100%
非金属、非塑料	0%
其它	0%

备注:

1. 样品是混合测试 (报告中列出的是重量百分比>0.1%的样品组分)
2. 附录 A 是根据欧盟 67/548/EEC 指令和第 1907/2006 (EC) 号法规, 关于物质分类的定义。

### 试验方法:

参照 US EPA 3050B: 1996, US EPA 3051A: 2007, US EPA 3052: 1996, US EPA 8270D: 2007, ISO 17353:2004-9, EN 14362-1: 2003, ZEK 01.2-08, EN 14372: 2004, EPA 3550C: 2007, EPA 3540C: 1996, EPA 3060A: 1996, ISO17075.2007, EN 14582: 2007 方法, 采用 ICP/MS、ICP/AES, UV-Vis, IC 和 GC/MS 进行分析。

备注:

1. 本报告所涉及的关于 15 种高关注物质的化学分析是基于根据欧洲化学品管理署于 2008 年 10 月 28 日公布的候选清单, 利用现有的分析技术所完成的。具体参考 [http://echa.europa.eu/consultations/authorisation/svhc/svhc\\_cons\\_en.asp](http://echa.europa.eu/consultations/authorisation/svhc/svhc_cons_en.asp). 这个清单目前正在处于评估阶段, 将来可能会有所改变。
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) 物质在物品中的总含量超过 1 吨/年/生产商或进口商; (b) 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, 这些信息至少包括物质的名称。
4. 如果样品中 SVHC 的测试结果超过检测限, 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。

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Guangzhou Testing Services Co., Ltd.

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**试验结果:**

物质名称	CAS No.	单位	浓度	RL	分类
蒽	120-12-7	%	N.D.	0.005	持续性, 生物累积性及毒性物质(PBT)
4,4'-二氨基二苯甲烷	101-77-9	%	N.D.	0.005	第二类致癌物
邻苯二甲酸二丁酯(DBP)	84-74-2	%	N.D.	0.005	第二类生殖毒性物质
邻苯二甲酸丁苄酯(BBP)	85-68-7	%	N.D.	0.005	第二类生殖毒性物质
邻苯二甲酸二(2-乙基己基)酯(DEHP)	117-81-7	%	N.D.	0.005	第二类生殖毒性物质
二甲苯麝香	81-15-2	%	N.D.	0.005	非常持久, 高度生物累积性物质
六溴环十二烷(HBCDD) 及其非对映异构体(α-HBCDD, β-HBCDD, γ-HBCDD)	25637-99-4 and 3194-55-6 (134237-51-7, 134237-50-6, 134237-52-8)	%	N.D.	0.005	持续性, 生物累积性及毒性物质(PBT)
短链氯化石蜡(C10-13)	85535-84-8	%	N.D.	0.01	持续性, 生物累积性及毒性物质(PBT)
氧化双三丁基锡**	56-35-9	%	N.D.	0.005	持续性, 生物累积性及毒性物质(PBT)
二氯化钴*	7646-79-9	%	N.D.	0.05	第二类致癌物
五氧化二砷*	1303-28-2	%	N.D.	0.05	第一类致癌物
三氧化二砷*	1327-53-3	%	N.D.	0.05	第一类致癌物
三乙基砷酸盐*	15606-95-8	%	N.D.	0.05	第一类致癌物
砷酸氢铅*	7784-40-9	%	N.D.	0.05	第一类致癌物; 第一类生殖毒性物质
重铬酸钠*	7789-12-0, 10588-01-9	%	N.D.	0.05	第二类致癌物; 第二类诱导有机体突变的物质; 第二类生殖毒性物质

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### 备注:

1. \* = 二氯化钴的结果由重金属元素和阴离子的测试结果换算得出。五氧化二砷、三氧化二砷、重铬酸钠、砷酸氢铅和三乙基砷酸盐的结果由重金属元素的测试结果换算得出。  
判断样品中是否含有以上金属化合物还需要进一步确认。
2. \*\* = 氧化双三丁基锡的结果由三丁基锡的测试结果换算得出。该结果为氧化双三丁基锡的筛选结果, 包括氧化双三丁基锡和其盐类。如果需确定氧化双三丁基锡的确切含量, 则需要进一步确认。
3. mg/kg = ppm; 0.1wt% = 1000 ppm
4. N.D=未检出 (低于 RL)
5. RL = 报告检测限

备注: 本报告中的二氯化钴,五氧化二砷, 三氧化二砷,砷酸氢铅和重铬酸钠的测试结果引用自报告 GZ0812164380/CHEM。

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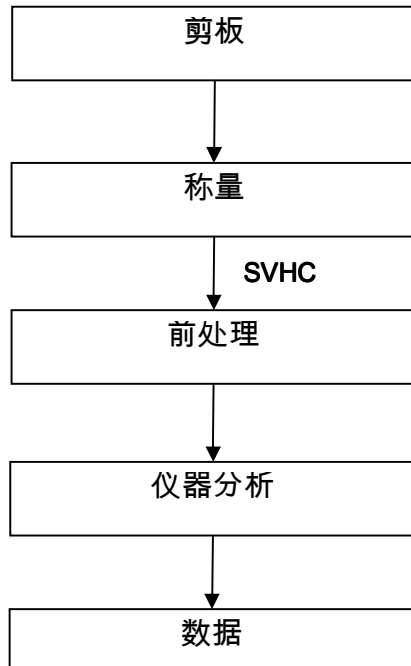


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附件

- 1) 分析人员: 许锋华/房宜敏
- 2) 项目负责人: 余奕东/赵瑞娜

### 测试流程图

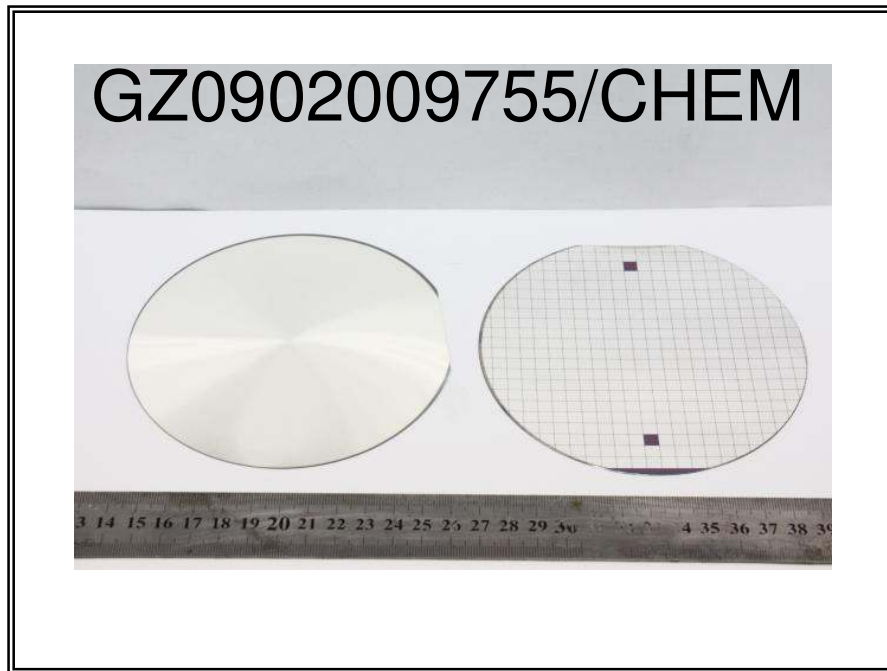


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样品照片:



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附录 A

分类	67/548/EEC 指令和第 1907/2006/EC 法规中的定义
第一类致癌物	已经为人类熟知对人有致癌作用。有充分证据可以建立癌症的发展和人与该类物质接触之间的因果联系。
第二类致癌物	物质如果对人具有致癌作用, 则被认为是该类物质。有足够的证据可以充分假定人与该类物质直接接触可以致癌。 基于: - 适当长期的动物实验 - 其它相关信息。
第一类诱导有机体突变的物质	已经为人类熟知可以致基因突变的物质。有充分证据可以建立长期基因损害和人与该类物质接触之间的因果联系。
第二类诱导有机体突变的物质	物质如果对人具有致基因突变作用, 则被认为是该类物质。有足够的证据可以充分假定人与该类物质直接接触可以致基因损害。 基于: - 适当长期的动物实验 - 其它相关信息
第一类生殖毒性物质	已经为人类熟知可以降低人的生殖能力。有充分证据可以建立人生殖能力降低和人与该类物质接触之间的因果联系。 已经为人类熟知对人体有毒。有充分证据可以建立人体暴露于物质与不断发展的毒副作用之间的联系。
第二类生殖毒性物质	物质如果有减弱人的生殖能力的作用, 则被认为是该类物质。有足够的证据可以充分假定人与该类物质直接接触可以减弱人的生殖能力, 基于: - 动物实验研究明确的证明在没有毒性时可以降低生殖能力, 或者在相同给药水平时, 与其它毒性同时表现出, 但是不是其它毒性的二级非特定结果; - 其它相关信息 如果物质对人类有长期的毒性, 则被认为是该类物质。有足够的证据可以充分假定人暴露与该类物质会引起长期毒性。一般基于: - 适当的动物实验研究表明具有生殖毒性, 或者在相同给药水平时, 不是其它毒性的二级非具体毒性结果 - 其它相关信息。
持续性, 生物累积性及毒性物质; 非常持久, 高度生物累积性物质	持续性, 生物累积性及毒性物质和非常持久, 高度生物累积性物质将会给化学品安全管理带来很大的挑战。对这些物质来说, 没法建立充分可靠的对环境安全的浓度。

\*\*\* 报告完 \*\*\*

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