

测试报告

No. TSNEC1700934212

日期: 2017年06月06日 第1页,共5页

本钢板材股份有限公司冷轧薄板厂 中国辽宁省本溪市平山区钢铁路

以下测试之样品是由申请者所提供及确认:热镀纯锌板(无铬钝化+涂油)

SGS工作编号: TP17-004017 - TJ

样品接收日期: 2017年05月24日

测试周期: 2017年05月24日 - 2017年06月06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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Reabeca Zhou周艳

批准签署人

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:

#### 测试样品描述:

样品编号 SGS样品ID 描述

TSN17-009342.006 银灰色金属板 SN1

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: (1) 参考IEC 62321-5:2013,用ICP-OES测定镉的含量

(2) 参考IEC 62321-5:2013,用ICP-OES测定铅的含量

(3) 参考IEC 62321-4:2013,用ICP-OES测定汞的含量

(4) 参考IEC 62321-7-1:2015, 用紫外-可见分光光度计比色法测定六价铬的含量

(5) 参考IEC 62321-6:2015, 用GC-MS测定PBBs(多溴联苯)和PBDEs(多溴二苯醚) 的含量

(6) 参考IEC 62321-8:2017,用GC-MS测定邻苯二甲酸酯的含量

测试项目	<u>限值</u>	<u>单位</u>	<u>MDL</u>	<u>006</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
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



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测试项目	限值	<u>单位</u>	<u>MDL</u>	<u>006</u>
二溴二苯醚	-	mg/kg	5	ND
三溴二苯醚	-	mg/kg	5	ND
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

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 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) 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%。
- (4) 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。
- (5) 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。
- (6) 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。



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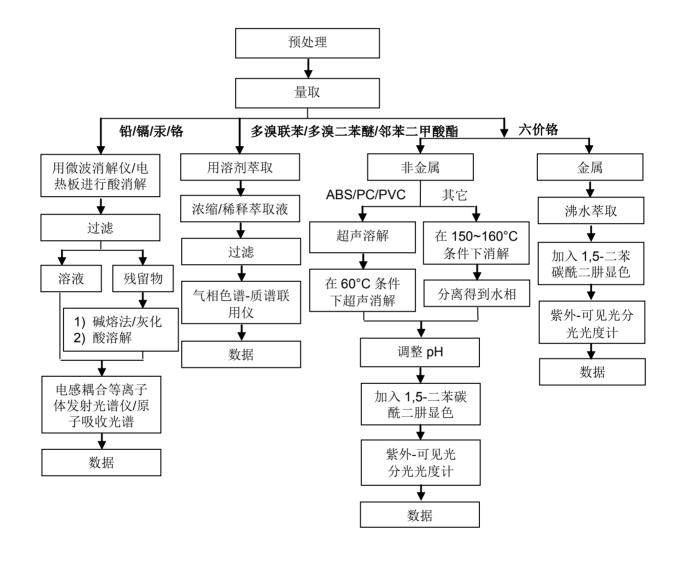
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附件

# Pb/Cd/Hg/Cr<sup>6+</sup>/PBBs/PBDEs/Phthalates 测试流程图

- 1) 分析人员: 张盼/刘占文/王海颖/陈希涵
- 2) 项目负责人: 王富强/朱敏
- 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/邻苯二甲酸酯测试除外)。





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样品照片:



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