



检测报告

Test Report

报告编号 A2240454593101E
Report No. A2240454593101E

第1页 共 10 页
Page 1 of 10

报告抬头公司名称 常州恒创热管理系统股份有限公司
Company Name CHANGZHOU HENGCHUANG THERMALMANAGEMENT CO., LTD
shown on Report
地址 江苏省常州市武进区礼嘉镇建东路 20 号
Address NO. 20 JIANDONG ROAD, LIJIA TOWN, WUJIN DISTRICT, CHANGZHOU CITY, JIANGSU PROVINCE

以下测试之样品及样品信息由申请者提供并确认

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

样品名称	吹胀蒸发器
Sample Name	Rollbond evaporator
样品颜色	白色
Color	white
材料名称	环氧树脂
Material	环氧树脂
样品接收日期	2024.07.30
Sample Received Date	Jul. 30, 2024
样品检测日期	2024.07.30-2024.09.09
Testing Period	Jul. 30, 2024 to Sep. 9, 2024

测试内容 Test Conducted:

根据客户的申请要求，具体要求详见下一页。

As requested by the applicant. For details refer to next page(s).

批准

Approved By

郑晴涛

郑晴涛

技术经理 Technical Manager

2024.09.09

No. R677507004

华测检测认证集团股份有限公司

广东省深圳市宝安区新安街道兴东社区华测检测大楼

CTI Building, Xing Dong Community, Xin'an Sub-district, Bao'an District, Shenzhen City, Guangdong Province, P.R. China

检验检测专用章

Inspection & Testing Services

检测报告
Test Report

报告编号 A2240454593101E 第2页 共 10 页
Report No. A2240454593101E Page 2 of 10

检测结论 Test Conclusion
1) 所检项目的检测结果满足GB 4806.9-2023 食品安全国家标准 食品接触用金属材料及制品的限值要求。
The results of the test items shown on the report comply with the required limits of GB 4806.9-2023 National food safety standard Metal materials and products for food contact.
2) 所检项目的检测结果满足GB 4806.10-2016 食品安全国家标准 食品接触用涂料及涂层的限值要求。
The results of the test items shown on the report comply with the required limits of GB 4806.10-2016 National food safety standard Coating for food contact.
3) 所检项目的检测结果满足GB 9685-2016 食品安全国家标准 食品接触材料及制品用添加剂使用标准的限值要求。
The results of the test items shown on the report comply with the required limits of GB 9685-2016 National food safety standard The standard of additive using in food contact materials and their products.

测试摘要 Executive Summary:

测试要求 TEST REQUEST	测试结果 CONCLUSION
1) GB 4806.9-2023 食品安全国家标准 食品接触用金属材料及制品 National food safety standard Metal materials and products for food contact	
- 感官要求 Sensory Requirements	符合 PASS
- 元素迁移量 Elements migration	符合 PASS
2) GB 4806.10-2016 食品安全国家标准 食品接触用涂料及涂层 National food safety standard Coating for food contact	
- 感官要求 Sensory Requirements	符合 PASS
- 总迁移量 Overall migration	符合 PASS
- 高锰酸钾消耗量 Potassium permanganate wastage	符合 PASS
- 重金属(以 Pb 计) Heavy metal(as Pb)	符合 PASS
3) GB 9685-2016 食品安全国家标准 食品接触材料及制品用添加剂使用标准 National food safety standard The standard of additive using in food contact materials and their products	
- 重金属特定迁移量 Specific migration of heavy metal	符合 PASS

符合(不符合)表示检测结果满足(不满足)限值要求。
PASS (FAIL) means that the results shown on the report (do not) comply with the required limits.

*****详细结果, 请见下页*****
***** For further details, please refer to the following page(s) *****

检测报告
Test Report

报告编号 A2240454593101E
Report No. A2240454593101E

第3页 共 10 页
Page 3 of 10

1) GB 4806.9-2023 食品安全国家标准 食品接触用金属材料及制品 National food safety standard
Metal materials and products for food contact

▼感官要求 Sensory Requirements

测试方法 Test Method: GB 4806.9-2023

测试项目 Test Item(s)	结果 Result	方法检出限 MDL	要求 Requirement	单位 Unit
	001			
感官 Sense	接触食品的表面清洁，无镀层，无焊接，无气孔、裂缝、毛刺 Food contact surface was clean, no plating, no welding parts, no pores, no cracks and no burrs	--	接触食品的表面应适度清洁，镀层不应开裂、剥落，焊接部分应光洁，无气孔、裂缝、毛刺 Food contact surface should be moderate clean, the plating should not crack or peeling, and welding parts should be smooth, no pores, cracks or burrs	--
浸泡液 Immersion solution	迁移试验所得浸泡液无异臭 The immersion solution that got from the migration test had no odor	--	迁移试验所得浸泡液不应有异臭 The immersion solution that got from the migration test should not have odor	--

检测报告
Test Report

报告编号 A2240454593101E
Report No. A2240454593101E

第4页 共 10 页
Page 4 of 10

▼元素迁移量 Elements migration

测试方法 Test Method: GB 31604.49-2023 第二篇 GB 31604.49-2023 Part two

食品模拟物 Food Simulant(s): 人造自来水 Artificial tap water;

检测条件 Test Condition: 20℃, 10d;

浸泡方式 Immersion Method: 全浸没法 Total immersion method; 面积/体积 Area-Volume Ratio(S/V): 6.0 dm²/L

测试项目 Test Item(s)	结果 Result			方法 检出 限 MDL	指标 Limit	单位 Unit
	001					
	第 1 次迁移 1 st migration	第 2 次迁移 2 nd migration	第 3 次迁移 3 rd migration			
铝 Aluminium (Al)	N.D.	N.D.	N.D.	0.1	≤1	mg/kg
砷 Arsenic (As)	N.D.	N.D.	N.D.	0.0006	≤0.002	mg/kg
镉 Cadmium (Cd)	N.D.	N.D.	N.D.	0.0003	≤0.002	mg/kg
钴 Cobalt (Co)	N.D.	N.D.	N.D.	0.001	≤0.02	mg/kg
铬 Chromium (Cr)	N.D.	N.D.	N.D.	0.03	≤0.25	mg/kg
铜 Copper (Cu)	N.D.	N.D.	N.D.	0.1	≤4	mg/kg
锰 Manganese (Mn)	N.D.	N.D.	N.D.	0.03	≤2.0	mg/kg
钼 Molybdenum (Mo)	N.D.	N.D.	N.D.	0.03	≤0.12	mg/kg
镍 Nickel (Ni)	N.D.	N.D.	N.D.	0.03	≤0.14	mg/kg
铅 Lead (Pb)	N.D.	N.D.	N.D.	0.001	≤0.01	mg/kg
锑 Antimony (Sb)	N.D.	N.D.	N.D.	0.005	≤0.04	mg/kg
锡 Tin (Sn)	N.D.	N.D.	N.D.	0.5	≤100	mg/kg
锌 Zinc (Zn)	N.D.	N.D.	N.D.	0.1	≤5	mg/kg

检测报告

Test Report

报告编号 A2240454593101E
Report No. A2240454593101E

第5页 共 10 页
Page 5 of 10

食品模拟物 Food Simulant(s): 5g/L 柠檬酸 5g/L Citric acid;

检测条件 Test Condition: 20℃, 10d;

浸泡方式 Immersion Method: 全浸没法 Total immersion method; 面积/体积 Area-Volume Ratio(S/V): 6.0 dm²/L

测试项目 Test Item(s)	结果 Result			方法 检出 限 MDL	指标 Limit	单位 Unit
	001					
	第 1 次迁移 1 st migration	第 2 次迁移 2 nd migration	第 3 次迁移 3 rd migration			
铝 Aluminium (Al)	N.D.	N.D.	N.D.	0.1	≤1	mg/kg
砷 Arsenic (As)	N.D.	N.D.	N.D.	0.0006	≤0.002	mg/kg
镉 Cadmium (Cd)	N.D.	N.D.	N.D.	0.0003	≤0.002	mg/kg
钴 Cobalt (Co)	N.D.	N.D.	N.D.	0.001	≤0.02	mg/kg
铬 Chromium (Cr)	N.D.	N.D.	N.D.	0.03	≤0.25	mg/kg
铜 Copper (Cu)	N.D.	N.D.	N.D.	0.1	≤4	mg/kg
锰 Manganese (Mn)	N.D.	N.D.	N.D.	0.03	≤2.0	mg/kg
钼 Molybdenum (Mo)	N.D.	N.D.	N.D.	0.03	≤0.12	mg/kg
镍 Nickel (Ni)	N.D.	N.D.	N.D.	0.03	≤0.14	mg/kg
铅 Lead (Pb)	N.D.	N.D.	N.D.	0.001	≤0.01	mg/kg
锑 Antimony (Sb)	N.D.	N.D.	N.D.	0.005	≤0.04	mg/kg
锡 Tin (Sn)	N.D.	N.D.	N.D.	0.5	≤100	mg/kg
锌 Zinc (Zn)	N.D.	N.D.	N.D.	0.1	≤5	mg/kg

2) GB 4806.10-2016 食品安全国家标准 食品接触用涂料及涂层 National food safety standard Coating for food contact

▼ 感官要求 Sensory Requirements

测试方法 Test Method: GB 4806.10-2016

测试项目 Test Item(s)	结果 Result	方法检出限 MDL	要求 Requirement	单位 Unit
	002			
感官 Sense	表面平整、色泽均匀、无气孔； 浸泡后，无龟裂、不起泡、不脱落 Surface smooth and uniform, no stomata; after immersing, no crack, no foaming, no shedding phenomenon	--	表面平整，色泽均匀，无气孔； 浸泡后，应无龟裂，不起泡，不脱落 Surface smooth and uniform, no stomata; after immersing, no crack, no foaming, no shedding phenomenon	--
浸泡液 Immersion solution	迁移试验所得浸泡液无着色、浑浊、沉淀、异臭等感官性的劣变 The immersion solution that got from the migration test had no sensory deterioration such as color, turbidity, sedimentation or odor	--	迁移试验所得浸泡液不应有着色，浑浊，沉淀，异臭等感官性的劣变 The immersion solution that got from the migration test should not have sensory deterioration such as color, turbidity, sedimentation or odor	--

检测报告
Test Report

报告编号 A2240454593101E
Report No. A2240454593101E

第6页 共 10 页
Page 6 of 10

▼ 总迁移量 Overall migration

测试方法 Test Method: GB 31604.8-2021

食品模拟物 Food Simulant(s): 4%乙酸 4% acetic acid;
检测条件 Test Condition: 20℃, 10d;
浸泡方式 Immersion Method: 全浸没法 Total immersion method; 迁移次数 Migration times: 3; 面积/体积 Area-Volume Ratio(S/V): 6.0 dm²/L

测试项目 Test Item(s)	结果 Result	方法检出限 MDL	指标 Limit	单位 Unit
	002			
总迁移量 Overall migration	N.D.	3.0	≤10	mg/dm²

食品模拟物 Food Simulant(s): 50%乙醇 50% ethanol;
检测条件 Test Condition: 20℃, 10d;
浸泡方式 Immersion Method: 全浸没法 Total immersion method; 迁移次数 Migration times: 3; 面积/体积 Area-Volume Ratio(S/V): 6.0 dm²/L

测试项目 Test Item(s)	结果 Result	方法检出限 MDL	指标 Limit	单位 Unit
	002			
总迁移量 Overall migration	N.D.	3.0	≤10	mg/dm²

食品模拟物 Food Simulant(s): 95%乙醇（植物油替代物）95% ethanol(Vegetable oil substitute);
检测条件 Test Condition: 20℃, 10d**;
浸泡方式 Immersion Method: 全浸没法 Total immersion method; 迁移次数 Migration times: 3; 面积/体积 Area-Volume Ratio(S/V): 6.0 dm²/L; 校正因子 Reduction Factor: 1

测试项目 Test Item(s)	结果 Result	方法检出限 MDL	指标 Limit	单位 Unit
	002			
总迁移量 Overall migration	N.D.	3.0	≤10	mg/dm²

食品模拟物 Food Simulant(s): 异辛烷（植物油替代物）Iso-octane(Vegetable oil substitute);
检测条件 Test Condition: 20℃, 1d**;
浸泡方式 Immersion Method: 全浸没法 Total immersion method; 迁移次数 Migration times: 3; 面积/体积 Area-Volume Ratio(S/V): 6.0 dm²/L; 校正因子 Reduction Factor: 1

测试项目 Test Item(s)	结果 Result	方法检出限 MDL	指标 Limit	单位 Unit
	002			
总迁移量 Overall migration	N.D.	3.0	≤10	mg/dm²

检测报告
Test Report

报告编号 A2240454593101E 第7页 共 10 页
Report No. A2240454593101E Page 7 of 10

高锰酸钾消耗量 Potassium permanganate wastage
测试方法 Test Method: GB 31604.2-2016

食品模拟物 Food Simulant(s): 水 Water;
检测条件 Test Condition: 60℃, 2h;
浸泡方式 Immersion Method: 全浸没法 Total immersion method; 迁移次数 Migration times: 1; 面积/体积
Area-Volume Ratio(S/V): 6.0 dm²/L

Table with 5 columns: Test Item(s), Result, MDL, Limit, Unit. Row 1: 高锰酸钾消耗量 Potassium permanganate wastage, 1.4, 1.0, ≤10, mg/kg.

重金属(以 Pb 计)Heavy metal(as Pb)
测试方法 Test Method: GB 31604.9-2016 第一法 GB 31604.9-2016 The first method

食品模拟物 Food Simulant(s): 4%乙酸 4% acetic acid;
检测条件 Test Condition: 60℃, 2h;
浸泡方式 Immersion Method: 全浸没法 Total immersion method; 迁移次数 Migration times: 1; 面积/体积
Area-Volume Ratio(S/V): 6.0 dm²/L

Table with 5 columns: Test Item(s), Result, MDL, Limit, Unit. Row 1: 铅 Lead (Pb), <1, --, ≤1, mg/kg.

3) GB 9685-2016 食品安全国家标准 食品接触材料及制品用添加剂使用标准 National food safety standard The standard of additive using in food contact materials and their products

重金属特定迁移量 Specific migration of heavy metal
测试方法 Test Method: GB 31604.49-2023 第二篇 GB 31604.49-2023 Part two

食品模拟物 Food Simulant(s): 4%乙酸 4% acetic acid;
检测条件 Test Condition: 5℃, 10d;
浸泡方式 Immersion Method: 全浸没法 Total immersion method; 迁移次数 Migration times: 3; 面积/体积
Area-Volume Ratio(S/V): 6.0 dm²/L

Table with 5 columns: Test Item(s), Result, MDL, Limit, Unit. Rows include Barium (Ba), Cobalt (Co), Copper (Cu), Iron (Fe), Lithium (Li), Manganese (Mn), and Zinc (Zn).

检测报告
Test Report

报告编号 A2240454593101E
Report No. A2240454593101E

第8页 共 10 页
Page 8 of 10

备注 Remark:

- MDL = 方法检出限 Method Detection Limit
- N.D. = 未检出 (小于方法检出限) Not Detected (<MDL)
- mg/kg = ppm = 百万分之一 parts per million
- “浸泡液”项目的结果依据此报告中所有浸泡液浸泡测试的情况进行判定。
The result(s) of the test item “Immersion solution” is(are) based on the condition(s) of all immersion solution used during immersion test(s) in this report.
- ** = 项目条件参照 GB/T 23296.1-2009 选择 With reference to GB/T 23296.1-2009 for selection of test condition

样品/部位描述 Sample/Part Description

序号	CTI 样品 ID	描述
No.	CTI Sample ID	Description
1	001	有白色涂层的金属 Metal with white coating
2	002	有白色涂层的金属 Metal with white coating

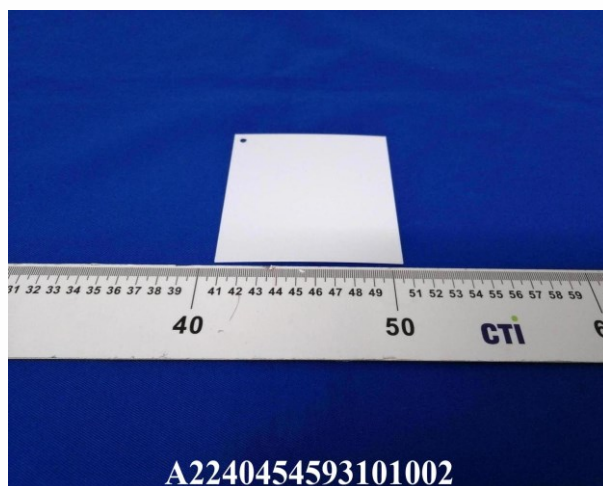
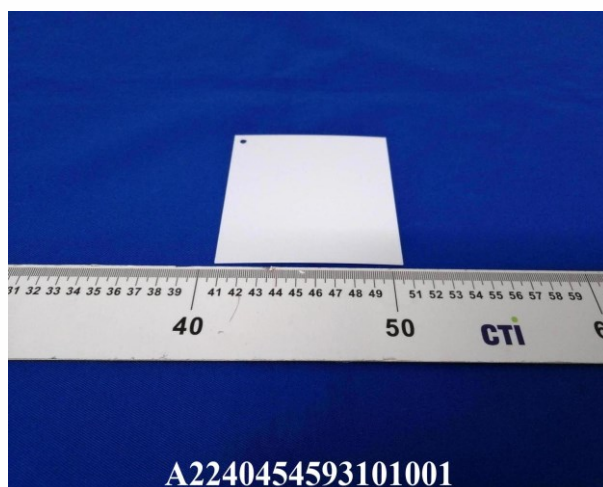
检测报告 Test Report

报告编号 A2240454593101E
Report No. A2240454593101E

第9页 共 10 页
Page 9 of 10

样品图片

Photo(s) of the sample(s)



检测报告 Test Report

报告编号 A2240454593101E
Report No. A2240454593101E

第10页 共 10 页
Page 10 of 10

声明 Statement:

1. 检测报告无批准人签字、“专用章”及报告骑缝章无效;
This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. 报告抬头公司名称及地址、样品及样品信息由申请者提供, 申请者应对其真实性负责, CTI 未核实其真实性;
The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. 本报告检测结果仅对受测样品负责;
The result(s) shown in this report refer(s) only to the sample(s) tested;
4. 除非另有说明, 报告参照 ILAC-G8:09/2019 / CNAS-GL015:2022 使用简单接受 (w=0) 二元判定规则进行符合性判定;
Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
5. 未经 CTI 书面同意, 不得部分复制本报告;
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6. 如检测报告中的英文内容与中文内容有差异, 以中文为准。
In case of any discrepancy between the English version and Chinese version of the testing reports (if generated), the Chinese version shall prevail.

*** 报告结束 ***
*** End of Report ***