



中国认可
国际互认
检测
TESTING
CNAS L9497

检测报告

TEST REPORT

样品名称
Sample Name

180 级聚氨酯漆包铝圆线
polyurethane enamelled round aluminum wire,
class 180

型号规格
Type

QAL-2/180 0.45

委托单位
Client

广西亿恒电工器材有限公司
Guangxi Yiheng Electrical Equipment Co., Ltd

委托地址
Add

广西壮族自治区百色市隆林各族自治县
新洲镇工业区
Industrial Zone, Xinzhou Town, Longlin Autonomous
County, Baise City, Guangxi Zhuang Autonomous
Region

上海拜研检测技术服务有限公司
Shanghai BYT Testing Service Co., Ltd.

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报告编号: BY25E0029001D
查询密码: 147985

1. 样品信息、检测结论 Sample information and testing result

委托单位 Client	广西亿恒电工器材有限公司 Guangxi Yiheng Electrical Equipment Co., Ltd		
委托单位地址 Client Add	广西壮族自治区百色市隆林各族自治县新洲镇工业区 Industrial Zone, Xinzhou Town, Longlin Autonomous County, Baise City, Guangxi Zhuang Autonomous Region		
样品名称 Sample Name	180 级聚氨酯漆包铝圆线 polyurethane enamelled round aluminum wire, class 180	检测类别 Testing Category	委托检测 Consignment testing
型号规格 Specification	QAL-2/180 0.45	样品等级 Sample Grade	180
商标 Brand	—	样品数量 Sample Qty	1 卷 One roll
生产单位 Manufacture	广西亿恒电工器材有限公司 Guangxi Yiheng Electrical Equipment Co., Ltd	生产单位地址 Manufacture Add	广西壮族自治区百色市隆林各族自治县新洲镇工业区 Industrial Zone, Xinzhou Town, Longlin Autonomous County, Baise City, Guangxi Zhuang Autonomous Region
以上信息由委托单位提供, 并对其真实性负责 The above information shall be provided by the entrusting unit and shall be responsible for its authenticity.			
样品来源 Sample source	送样 Delivering	样品到达时间 Sample arriving date	2025-05-20
样品特性和状态 Sample Characteristic	漆包线, 外观完好 Enamelled wire, good appearance	检查封样者 Sample sealed by	熊宇洁 Yujie Xiong
样品编号 Sample No.	BY25E0029001	检测日期 Testing date	2025-05-24
检测项目 Testing item	外观, 尺寸, 电阻, 伸长率, 回弹性, 柔韧性和附着性 (圆棒卷绕和急拉断), 热冲击, 软化击穿, 耐刮, 耐溶剂, 击穿电压, 漆膜连续性, 直焊性。 Appearance, Dimensions, Electrical resistance, Elongation, Springiness, Flexibility and adherence (Mandrel winding test and Jerk test), Heat shock, Cut-through, Resistance to abrasion, Resistance to solvents, Breakdown voltage, Continuity of insulation, Solderability.		
检测依据 Testing basis	1、GB/T 4074.2-2024 Winding wires-Test methods-Part 2:Determination of dimensions; 尺寸测量; 2、GB/T 4074.3-2024 Winding wires-Test methods-Part 3:Mechanical properties; 机械性能; 3、GB/T 4074.4-2024 Winding wires-Test methods-Part 4:Chemical properties; 化学性能; 4、GB/T 4074.5-2024 Winding wires-Test methods-Part 5:Electrical properties; 电气性能; 5、GB/T 4074.6-2024 Winding wires-Test methods-Part 6:Thermal properties; 热性能		
检测结果 Testing result	根据委托方要求, 该样品按 GB/T 4074.2-2024、GB/T 4074.3-2024、GB/T 4074.4-2024、GB/T 4074.5-2024、GB/T 4074.6-2024 标准要求进行检测, 所检项目中“电阻、伸长率”结果符合 GB/T23312.1-2009 标准要求, 其它项目结果符合 GB/T6109.23-2008 标准要求。 According to the client's requirements, the sample was tested according to the requirements of GB/T 4074.2-2024、GB/T 4074.3-2024、GB/T 4074.4-2024、GB/T 4074.5-2024、GB/T 4074.6-2024, The test results of "resistance and elongation" conform to the requirements of GB/T 23312.1-2009, and the results of other items conform to the requirements of GB/T 6109.23-2008.		
备注 Remark	— 签发日期 Issued date: 2025-05-27		

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2. 检测结果 Test result(s)

序号 No.	项目 Test Item	技术要求 Request	结果 Result	判定 Judge	备注 Remark	
1	外观 Appearance	漆膜应光滑、连续、无斑纹、无气泡和杂质 The paint film shall be smooth and continuous, free from streaks, blisters and foreign material.	漆膜光滑、连续、无斑纹、无气泡和杂质 The paint film smooth and continuous, free from streaks, blisters and foreign material.	P	—	
2	尺寸(mm) Dimensions	导体直径 Conductor diameter	0.450±0.005	0.449	P	—
		外形尺寸 Overall dimension	≤0.513	0.500	P	—
		导体不圆度 Out-of-roundness of the conductor	≤0.005	0.001	P	—
		绝缘厚度 Insulation thickness	≥0.042	0.051	P	—
3	电阻(Ω/m) Electrical resistance	0.1699~0.1811	0.1715	P	试验条件: 20°C Test condition: 20°C	
4	伸长率 Elongation	断裂伸长率(%) Elongation at break	≥12	38.6	P	拉伸速率: 5mm/s Rate: 5mm/s
		抗张强度(N/mm²) Tensile strength	≥90	124.1	P	拉伸速率: 5mm/s Rate: 5mm/s
5	柔韧性和附着性 Flexibility and adherence	圆棒卷绕 Mandrel winding test	漆层应不开裂 The coating shall show no crack.	未开裂 No crack	P	圆棒直径: 0.5mm Mandrel diameter: 0.5mm
		急拉断 Jerk test	漆层应不开裂或失去附着性 The coating shall show no crack or loss of adhesion	未开裂, 未失去附着性 No crack or loss of adhesion	P	—

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序号 No.	项目 Test Item	技术要求 Request	结果 Result	判定 Judge	备注 Remark
6	回弹性(°) Springiness	≤48	23	P	圆棒直径:25mm Mandrel diameter:25mm 试验负荷:8N Tension:8N
7	热冲击 Heat shock	漆层应不开裂 The coating shall show no crack.	未开裂 No crack	P	圆棒直径:1.0mm Mandrel diameter: 1.0mm 烘箱温度: 200℃ Oven temperature: 200℃ 放置时间: 30min Hold time: 30min
8	软化击穿 Cut-through	在 230℃下 2min 内 应不击穿 No failure shall occur within 2min at 230℃	未击穿 No failure occurred	P	加热温度: 230℃ Heating temperature: 230℃ 试验时间: 2min Test time: 2min
9	耐刮(N) Resistance to abrasion	最小值: 4.90 Minimum value:4.90 平均值: 5.80 Average value:5.80	最小值: 12.12 Minimum value:12.12 平均值: 13.31 Average value:13.31	P	—
10	耐溶剂 Resistance to solvents	漆层不应被硬度为“H”的 铅笔刮破 The coating shall not be scratched by a pencil with hardness "H".	未刮破 No scratch	P	铅笔硬度: "H" Hardness: "H" 溶剂温度: 60℃ Solvent temperature: 60℃ 浸入时间: 30min Immersion time: 30min
11	击穿电压(kV) Breakdown voltage	≥4.4	6.8、6.5、7.4、7.0、 6.4	P	升压速率: 500V/s Rate: 500V/s
12	漆膜连续性 Continuity of insulation	每 30m 的针孔数应≤5 个 The number of pinholes per 30m shall not exceed 5.	0	P	试验电压: 1500V Test voltage:1500V
13	直焊性 Solderability	焊锡应均匀, 应无残漆 The solder should be uniform and free of residual paint.	焊锡均匀, 无残漆 Solder evenly without residual paint.	P	锡焊槽温度: 390℃ Temperature: 390℃ 浸入时间: 5s Immersion time: 5s

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3.主要检测设备 Testing equipment

序号 No.	设备名称 Device name	设备型号 Equipment model	校准有效期至 Next Calibration date
1	千分尺 Micrometer	Y-QT-081	2025-12-04
2	超低电阻测试仪 Ultra low resistance tester	Y-JX-016	2026-10-09
3	智能伸长率-抗拉强度试验仪 Intelligent elongation-tensile strength tester	Y-JX-013	2026-06-23
4	回弹角试验仪 Springiness tester	Y-JX-003	2025-10-12
5	漆包线卷绕试验机 Mandrel winding tester	Y-JX-005	2025-10-12
6	急拉断试验仪 Jerk tester	Y-JX-004	2025-10-12
7	高温试验箱 Oven	Y-GW-007	2026-01-04
8	智能软化击穿试验仪 Cut-through tester	Y-DX-018	2026-06-23
9	智能单项刮漆试验仪 Resistance to abrasion tester	Y-JX-008	2025-10-12
10	耐溶剂试验仪 Solvent-resistant tester	Y-LH-001	2025-10-12
11	溶剂恒温器 Solvent thermostat	Y-LH-005	2025-10-12
12	自动电压试验仪 Breakdown voltage tester	Y-DX-003	2025-10-12
13	自动高压漆膜连续性试验仪 Continuity of insulation tester	Y-DX-001	2025-10-12
14	直焊性试验仪 Solderability tester	Y-LH-004	2025-10-12
15	放大镜 Magnifier	Y-QT-007	免校 No calibration required

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4. 样品照片 Photo(s) of the sample(s)



备注 Note:

*****报告正文结束*****
*****End of report*****

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注意事项

Notice Items

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The results of this report are only responsible for the tested samples. The report without CMA mark, test data and results are only for the internal use of customers, and have no proof role for the society.
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8. 除非客户要求,本报告检测结果及符合性判定不考虑测量结果的不确定度。
Unless required by the customer, the test results and conformance determination in this report will not consider the uncertainty of the measurement results.
9. “单项判定”符号含义:“P”表示“合格或通过”,“F”表示“不合格或不通过”,“N”或“—”表示“不适用”;“/”表示未检测。
The individual judgement symbol meaning: "P" "qualified or through," said "F" said "not qualified or not through", "N" or "-" means "not applicable"; "/" indicates that the device is not detected.
10. 检测地点:上海市浦东新区云水路3518号1幢。
Testing Place: Building 1, No 3518 Yunshui Road, Pudong New Area, Shanghai.
11. 报告查询,请登录网站www.bytt.com.cn。
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