Test Report issued under the responsibility of:

Report No.: 4789188677-2





## 1.2m 跌落测试报告

### 1.2m DROP TEST REPORT

样品信息: 可充式锂离子电池包装件, 电池型号 6.445-058.0, 18V, 3000mAh, 54Wh SAMPLE Package for Rechargeable Li-ion battery, battery Model 6.445-058.0,

INFORMATION: 18V, 3000mAh, 54Wh

申请单位: 东莞创机电业制品有限公司

APPLICANT: Techtronic Industries (Dongguan) Co. Ltd.

检测类别: 商业委托检测

TYPE OF TEST: Commercial Inspection and Testing Services

苏州UL美华认证有限公司广州分公司 UL-CCIC Company Limited Guangzhou Branch

Test Summary 测试总览					
样品名称	可充式锂离子电池包装件				
Name of samples	Package for Rechargeable Li-ion battery				
型号规格	电池型号 6.445-058.0, 18V, 3000mAh, 54Wh				
Type/ Model	battery Model 6.445-058.0, 18V, 3000mAh, 54Wh				
申请单位	东莞创机电业制品有限公司				
Applicant	Techtronic Industries (Dongguan) Co. Ltd.				
申请单位地址	广东省东莞市厚街镇湖景大道2号				
Applicant address	No.2 Hujing Road, Houjie Town, Dongguan City, Guangdong Province				
电池制造商	东莞创机电业制品有限公司				
Battery Manufacturer	Techtronic Industries (Dongguan) Co. Ltd.				
电池制造商地址	广东省东莞市厚街镇湖景大道2号				
Battery Manufacturer address	No.2 Hujing Road, Houjie Town, Dongguan City, Guangdong Province				
设备制造商	N/A				
Equipment Manufacturer					
设备制造商地址	N/A				
Equipment Manufacturer address					
样品数量	1 package				
Quantity of sample					
样品标识序号	2695651				
Sample identification					
测试标准	联合国《关于危险品货物运输的建议书》规章范本第20修订版3.3章188条款				
Testing standard	United Nations: Recommendations on the Transport of Dangerous Goods - Model Regulations, Twentieth revised edition, 2017(ST/SG/AC.10/1/Rev.20), Chapter 3.3, Provisions 188				
接样日期 Received date	2019-11-18				
完成日期 Completion date	2019-11-19				
备注 Remark:	•				
N/A					

Test Package Information 测试包装件信息					
包装件重量 Package Weight	4.99 kg				
电池净重 Battery net weight	4.02 kg				
电池数量 Battery Number	6 pcs				
设备数量 Equipment Number	N/A				
包装件尺寸 Package size	296mm*150mm*145mm				
包装件运输方式 Type of transport	单独运输PI965				
外包装材料 The material of outer packaging					
☑ 瓦楞纸箱Corrugated carton					
□ 木板箱wood carton					
□ 其他other:					
能完全装入样品的内包装方式 The manner of inner packaging that can be completely enclose the samples					
□ 泡沫材料Foam material					
□ 吸塑盘Plastic disc					
☑ 纸板隔板Paper divider					
□ 塑料气泡与珍珠棉Plastic bubble and pearl cotton					
□ 单一封口塑料袋Single sealing plastic bags					
□ 塑料气垫Plastic air cushion					
☑ 独立小包装Independent packaging					
☐ 其他other:					

## Test Conclusion 测试结论

由东莞创机电业制品有限公司送检的可充式锂离子电池, 电池型号 6.445-058.0, 18V, 3000mAh, 54Wh之包装件1.2米跌落测试依据《关于危险品货物运输的建议书》规章范本第20修订版进行检测。

当采用准确度方法判定规则时,被测样品符合规范的要求。

试验结果符合《关于危险品货物运输的建议书》规章范本第20修订版相关要求。

The 1.2m drop test of Package for Rechargeable Li-ion battery, battery Model 6.445-058.0, 18V, 3000mAh, 54Wh submitted by Techtronic Industries (Dongguan) Co. Ltd. is tested according to the 20th Revised Edition of the Recommendations on the Transport of Dangerous Goods, Model Regulations (ST/SG/AC.10/1/Rev.20).

The sample received complies with Specification when Accuracy Method decision rule is applied.

The test results comply with the relevant requirements of ST/SG/AC.10/1/Rev.20.

Date of issue / 签发日期: 2019-11-26

Report No.: 4789188677-2

Approved by: Simon Chen

批准: 陈世明

Title: Senior Project Engineer

职衔: 高级项目工程师

Reviewed by: Simon Chen

审核: 陈世明

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职衔: 高级项目工程师

Tested by: Ade Su 检测: 苏祥德

Title: Engineer 职衔: 工程师

前,禅

TRF-电池-011-V2.1 Date Issued: 2019-11-01

ST/SG/AC.10/1/Rev.20					
Clause 章节	Requirements 标准要求		Result 测试结果	Verdict 判定	
	1.2m Drop test / 1.2米跌落测试				
	Test method / 测试方法				
	The package of batteries is dropped from 1.2m / 电池包装件从1.2米跌落				
	Drop orientation/跌落方向:				
	Where more than one orientation is possible for the orientation most likely to result in failure of th must be used. / 如在一次跌落试验中可能有一种须选择最易使包装损坏的跌落方向。	likely to result in failure of the packing E一次跌落试验中可能有一种以上的方向,		Р	
	Drop orientation for a package which is in the shape of a box. / 箱状包装的跌落方向:		subjected to five drops in different orientation. 此包装为箱状,并 经受五个方向的跌 落。		
	First drop: flat on the bottom / 第一次: 以箱底平				
	Second drop: flat on the top / 第二次: 以箱顶平				
	Third drop: flat on the long side / 第三次:以一七				
6.1.5.3	Fourth drop: flat on the short side / 第四次:以一				
0.1.0.0	Fifth drop: on a corner / 第五次:以一个角跌落			'	
	Drop Target / 跌落目标:	The drop target is a steel floor. 跌落目 标为钢质地板。			
be (a) 整 (b) infl 缺陷 (c) and 性, (d) ent	The target must be a non-resilient horizontal surface and must be / 跌落目标须为坚硬、无弹性的水平表面且须:				
	(a) Integral and massive enough to be immovab 整、厚重以固定不动;				
	(b) Flat with a surface kept free from local defecting influencing the test results / 表面平坦, 无影响设 缺陷;				
	(c) Rigid enough to be non-deformable under test conditions and not liable to become damaged by the tests / 具有足够的刚性,在试验条件下不会变形并不会被试验所损坏;				
	(d) Sufficiently large to ensure that the test pack entirely upon the surface / 具有足够大的规格以作全跌落在表面上.				
3.3.1	Requirements / 要求				
188	Each package is capable of withstanding a 1.2m drop test in any orientation without damage to cells or batteries contained therein, without shifting of the contents so as to allow battery to battery (or cell to cell) contact and without release of contents. 每个包件须能承受任何方向1.2m的跌落试验而容器内物品没有破损,没有造成内容物移位,没有出现内装物从内贮器或内容器中漏出。		No damage to batteries; No battery to battery contact; No release of contents from the package. 电池无损坏; 无 电池与电池接触; 无内容物从包装漏出。	Р	

# Photos of samples 样品照片

Package/包装箱









### Photos of samples

样品照片

Battery/电池







## 注意事项

#### **Important**

1. 未经本试验室书面同意,不得复制或部分地复制本报告。

Nobody is allowed to photocopy or partly photocopy this test report without written permission of UL.

2. 本报告无批准人、审核人及检测人签名无效。

The test report is invalid without the signatures of Approver, Reviewer and Tester.

3. 本报告涂改无效。

The test report is invalid if altered.

- 4. 对检验报告若有异议,应于收到报告之日起十五天内向检验单位提出。 Objections to the test report must be submitted to UL within 15 days.
- 5. 本报告中以点号代替小数点。

Throughout this report a point is used as the decimal separator.

6. 本报告仅对送检样品负责。

The test report is valid for the tested samples only.

- 7. 本报告并未授权许可申请单位使用UL任何UL的名称、商标、标识等。
  The test report does not grant applicant the use of UL name, trademark or label.
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- 9. 检测数据和结果不具备社会证明性作用。

The test data and results do not have social proof function.

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