MD-0060980
DECLARATIONS OF CONFORMITY,
Elo Backpack® with Intel

REVISION HISTORY

Rev	Description	Originator	Reviewer	Date
A	Initial release per CA-00001042	Grant Liu	Angela Huang	2/3/2026

Contents

MD-0060980.zip

空 运
By Air

NO.212600315573996

中国认可
检验
INSPECTION
CNAS IB0071

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

锂电池 一符合包装说明970第II部分

样品名称：	数字计算机盒(内置锂二氧化锰电池 CR2450 3V 600mAh)
Sample name:	Computer Box (Including Lithium Manganese Dioxide Battery CR2450 3V 600mAh)
委托单位：	苏州佳世达电子有限公司 QISDA ELECTRONICS (SUZHOU) CO., LTD
生产单位：	佳世达科技股份有限公司 Qisda Corporation

上海化工院检测有限公司
检验检测专用章

Witness Better Life
SICIT 上海化工院检测有限公司
SHANGHAI INSTITUTE OF CHEMICAL INDUSTRY TESTING CO.,LTD.

空 运
By Air

空 运
By Air

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

NO. 212600315573996

样品名称 Sample Name	中文 Chinese	数字计算机盒(内置锂二氧化锰电池 CR2450 3V 600mAh)
	英文 English	Computer Box (Including Lithium Manganese Dioxide Battery CR2450 3V 600mAh)
委托单位 Applicant		苏州佳世达电子有限公司 QISDA ELECTRONICS (SUZHOU) CO., LTD
生产单位 Manufacturer		佳世达科技股份有限公司 Qisda Corporation
检验方法、程序 Inspection method and procedure		国际航空运输协会《危险品规则》67版 IATA Dangerous Goods Regulations (DGR) 67th Edition
样品外观 Sample appearance		多种颜色塑胶及金属外壳 Multicolor Plastics cement and metal shell
包装件信息 Package information		锂电池总净重≤5kg。 Lithium batteries total net weight≤5kg.

序号 NO.	电池种类 Battery type	型号 Model	容量Capacity /锂含量Li content	放置方式 Placement	单颗重量kg Unit weight	数量 Quantity
1	不可充电锂金属单电芯电池 Primary Li-metal single cell battery	CR2450	600mAh / ≤0.3g	安装在设备内 Contained in equipment	0.0064	6

鉴定结论 IDENTIFICATION CONCLUSION

1. 危险性识别(Hazards identification)

锂金属电池。
Lithium metal battery.

2. 空运按照国际航空运输协会《危险品规则》办理的类项(Suggestion according to IATA DGR)

该物品满足包装说明970基本要求和第II部分的规定。
The article meets the requirements in General Requirements and section II of Packaging Instruction 970.

3. 包装要求(Packaging requirements)

按970第II部分包装说明的要求办理。
The article is packaged according to the Packaging Instruction of 970 section II.

检验日期: Inspection Date: 2025-12-16　签发日期: Issue Date: 2025-12-16　生效日期: Effective Date: 2026-01-01

上海化工院检测有限公司 检验检测专用章 (35)

备注 Comment: /

批准 Approver: 王宗　审核 Checker: 董学胜　主检 Appraiser: 张新湘

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

NO. 212600315573996

序号 No.	检验结果及其他事项 Inspection results and other things
1	本鉴定书所述锂电池按照《危险品规则》(67版) 3.9.2.6.1(e)规定的质量管理体系进行制造。 本鉴定书所述锂电池不属于损坏或有缺陷的电池。 Lithium cells and batteries listed in this report were manufactured under the quality management program described in IATA DGR 67th 3.9.2.6.1(e). Lithium cells and batteries listed in this report are not damaged or defective cells or batteries.
2	本鉴定书所述锂电池已通过联合国《试验和标准手册》第III部分38.3小节相应测试要求。 包装件能够承受《危险品规则》所要求的堆码试验。 Lithium cells and batteries listed in this report are of the types proved to meet the requirements of each applicable test in the UN Manual of Tests and Criteria, Part III, sub-section 38.3. The package is capable of withstanding the stacking test required in DGR. UN38.3试验概要编号 The UN38.3 Test Summary No.(s) 812100000829367 详细信息请扫描右侧二维码。 Please scan the QR code on the right for more information.
3	设备装入由适当材料构造的坚固的刚性外包装内。 The equipment is packed in strong rigid outer packagings constructed of suitable material.
4	电池具有适当的防短路措施。 设备固定在外包装内以免移动，并配备防止发生意外启动的有效手段。 当同一外包装中含多台设备时，应对设备进行包装并防止与其他设备接触。 Cells and batteries are properly protected to prevent short circuits. The equipment is secured against movement within the outer packaging and is equipped with an effective means of preventing accidental activation. Where multiple pieces of equipment are packed in the same outer packaging, the equipment must be packed to prevent contact with other equipment.
5	—当使用航空货运单时，如果托运货物中有贴电池标记的包装件，那么必须在“货物性质和数量”栏注明“锂金属电池符合包装说明970第II部分”。 —如果在一份航空货运单内包含来自多个包装说明第II部分的锂电池包装件时，对于不同的锂电池类型和/或包装说明可以合并为一份声明，前提是声明中注明适用的锂电池类型和包装说明编号。 —Where a consignment includes packages bearing the battery mark, the words “lithium metal batteries in compliance with Section II of PI 970” must be included on the air waybill, when an air waybill is used. The information should be shown in the “Nature and Quantity of Goods” box of the air waybill. —Where packages of Section II lithium batteries from multiple packing instructions are included on one air waybill, the compliance statement for the different lithium battery types and/or packing instructions may be combined into a single statement provided that the statement identifies the applicable lithium battery type(s) and packing instruction numbers.
6	每个包装件必须按DGR图7.1.C所示做耐久清晰的电池标记。包装件必须具有足够的尺寸在其一个面上粘贴未被折叠的标记。注：63版DGR图7.1.C所示锂电池标记可继续使用至2026年12月31日。 本要求不适用于： —包装件仅含有安装在设备(包括线路板)内的钮扣电池；或 —托运货物不超过2个包装件，且每个包装件中安装在设备内的电池芯不超过4颗或电池组不超过2颗。 Each package must be durably and legibly marked with the battery mark shown in Figure 7.1.C in IATA DGR. The package must be of such a size that there is adequate space to affix the mark on one side of the package without the mark being folded. Note:The mark illustrated in Figure 7.1.C of the 63rd edition of DGR may continue to be used until 31 December 2026. This requirement does not apply to: —packages containing only button cell batteries installed in equipment (including circuit boards); or —consignments of two packages or less where each package contains no more than four cells or two batteries installed in equipment.
7	/

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

报告结束

空 运
By Air

危险品

仅限货机
CAO

NO.212500500479797

CNAS 中国认可 检验 INSPECTION CNAS IB0071

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

危险品

样品名称 ： 锂二氧化锰电池/钮扣电池/锂电池/原电池 CR2450 带线 DBV 3V 600mAh

Sample name: Lithium manganese dioxide battery CR2450 Wire DBV 3V 600mAh

委托单位 ： 广立登股份有限公司
Double Best Corporation Limited

生产单位 ： 宜昌力佳科技有限公司
YICHANG POWER GLORY TECHNOLOGY CO., LTD

上海化工院检测有限公司 检验检测专用章

Witness Better Life SICIT 上海化工院检测有限公司
SHANGHAI INSTITUTE OF CHEMICAL INDUSTRY TESTING CO.,LTD.

空 运
By Air

空 运
By Air

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

NO. 212500500479797

样品名称 Sample Name	中文 Chinese	锂二氧化锰电池/钮扣电池/锂电池/原电池 CR2450 带线 DBV 3V 600mAh
	英文 English	Lithium manganese dioxide battery CR2450 Wire DBV 3V 600mAh
委托单位 Applicant		广立登股份有限公司 Double Best Corporation Limited
生产单位 Manufacturer		宜昌力佳科技有限公司 YICHANG POWER GLORY TECHNOLOGY CO., LTD
检验方法、程序 Inspection method and procedure		国际航空运输协会《危险品规则》66版 IATA Dangerous Goods Regulations (DGR) 66th Edition
样品外观 Sample appearance		黑色塑料薄膜外壳 Black Plastic film shell
包装件信息 Package information		锂电池总净重≤2.5kg。 Lithium batteries total net weight≤2.5kg.

序号 NO.	电池种类 Battery type	型号 Model	容量Capacity /锂含量Li content	放置方式 Placement	单颗重量kg Unit weight	数量 Quantity
1	不可充电锂金属单电芯电池 Primary Li-metal single cell battery	CR2450	600mAh / ≤0.3g	电池单独运输 Battery only	0.0064	192

鉴定结论 IDENTIFICATION CONCLUSION

1. 危险性识别(Hazards identification)

杂项。
Miscellaneous.

2. 空运按照国际航空运输协会《危险品规则》办理的类项(Suggestion according to IATA DGR)

Proper Shipping Name:Lithium metal batteries
Class or Division:9
UN Number:UN3090

3. 包装要求(Packaging requirements)

按包装说明968第IB部分要求办理。
The article is packaged according to the Packaging Instruction 968 section IB.

仅限货机
Cargo Aircraft Only

检验日期: Inspection Date: 2024-11-25　签发日期: Issue Date: 2024-11-25　生效日期: Effective Date: 2025-01-01

备注 Comment	/

批准 Approver: 王宝　审核 Checker: 董学胜　主检 Appraiser: 孙倩

运输危险性鉴定书

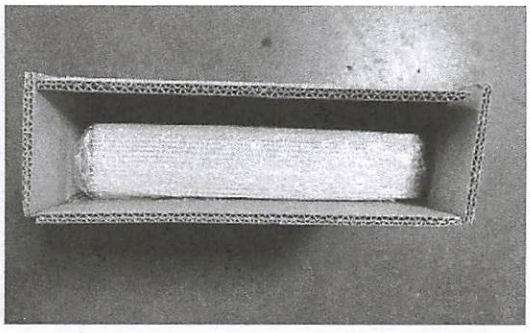
Hazard Classification and Identification Report for Transport of Goods

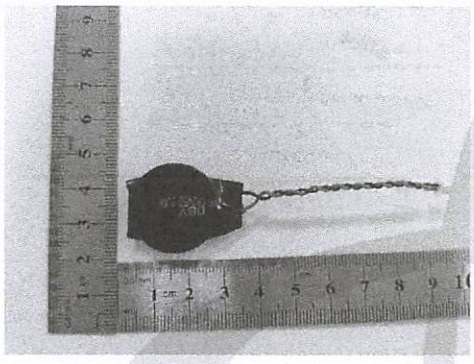
NO. 212500500479797

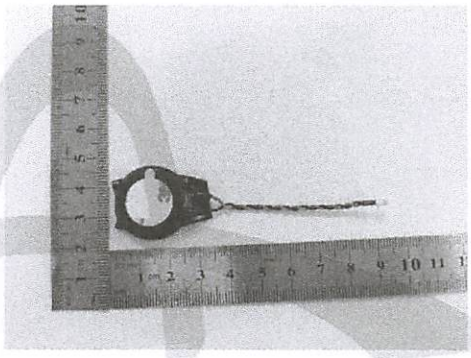
序号 No.	检验结果及其他事项 Inspection results and other things
1	本鉴定书所述锂电池按照《危险品规则》(66版) 3.9.2.6.1(e)规定的质量管理体系进行制造。 本鉴定书所述锂电池不属于损坏或有缺陷的电池。 本鉴定书所述锂电池不进行以回收或处置为目的的航空运输，不属于废弃锂电池。 Lithium cells and batteries listed in this report were manufactured under the quality management program described in IATA DGR 66th 3.9.2.6.1(e). Lithium cells and batteries listed in this report are not damaged or defective cells or batteries. Lithium cells and batteries listed in this report are not waste lithium cells or batteries, and they will not be shipped for recycling or disposal.
2	本鉴定书所述锂电池已通过联合国《试验和标准手册》第III部分38.3小节相应测试要求。 包装件能够承受1.2m跌落试验。包装件能够承受《危险品规则》所要求的堆码试验。 Lithium cells and batteries listed in this report are of the types proved to meet the requirements of each applicable test in the UN Manual of Tests and Criteria, Part III, sub-section 38.3. The package has passed the 1.2m drop test. The package has passed the stacking test required in DGR. UN38.3试验概要编号 The UN38.3 Test Summary No.(s) 812100000829367 详细信息请扫描右侧二维码。 Please scan the QR code on the right for more information.
3	锂电池完全封装在内包装内，位于坚固的刚性外包装中。 电池具有适当的防短路措施。 Lithium cells and batteries are packed in inner packagings that completely enclose the cell or battery and placed in a strong rigid outer packaging. Cells and batteries are properly protected to prevent short circuits.
4	按DGR IB部分托运的电池必须根据第8部分规定在托运人申报单中描述；并且当使用航空货运单时，货运单必须包含8.2.1和8.2.2中相关适用要求。 Cells or batteries shipped under the provisions of Section IB in IATA DGR must be described on a Shipper's Declaration as set out in Section 8, and the air waybill, when used, must contain the applicable information required by 8.2.1 and 8.2.2.
5	除使用9类锂电池或钠离子电池危险性标签(DGR图7.3.X)外，每个包装件必须按DGR图7.1.C所示做耐久清晰的电池标记。注：63版DGR图7.1.C所示锂电池标记可继续使用至2026年12月31日。 每个包装件必须按DGR7.1.4.1(a)和(b)要求标记，此外当7.1.4.1(c)有要求时还必须标明包装件净重。 每个包装件必须贴有“仅限货机”标签(DGR图7.4.B)。 Each package must be durably and legibly marked with the battery mark shown in Figure 7.1.C in IATA DGR in addition to the Class 9-Lithium Battery or Sodium Ion battery hazard label (Figure 7.3.X in IATA DGR). Note:The mark illustrated in Figure 7.1.C of the 63rd edition of DGR may continue to be used until 31 December 2026. Each package must be marked in accordance with the requirements of 7.1.4.1(a) and (b) in IATA DGR and in addition the net weight when required by 7.1.4.1(c) must be marked on the package. Each package must be labelled with the "Cargo Aircraft Only" label(Figure 7.4.B in IATA DGR).
6	锂电池不得与第1类爆炸品(1.4S项除外)，2.1项易燃气体，第3类易燃液体，4.1项易燃固体或5.1项氧化性物质等危险品包装在同一外包装或集合包装内。 Lithium cells and batteries must not be packed in the same outer packaging or overpack with dangerous goods classified in Class 1 (explosives) other than Division 1.4S, Division 2.1 (flammable gases), Class 3 (flammable liquids), Division 4.1 (flammable solids) or Division 5.1 (oxidizers).
7	/

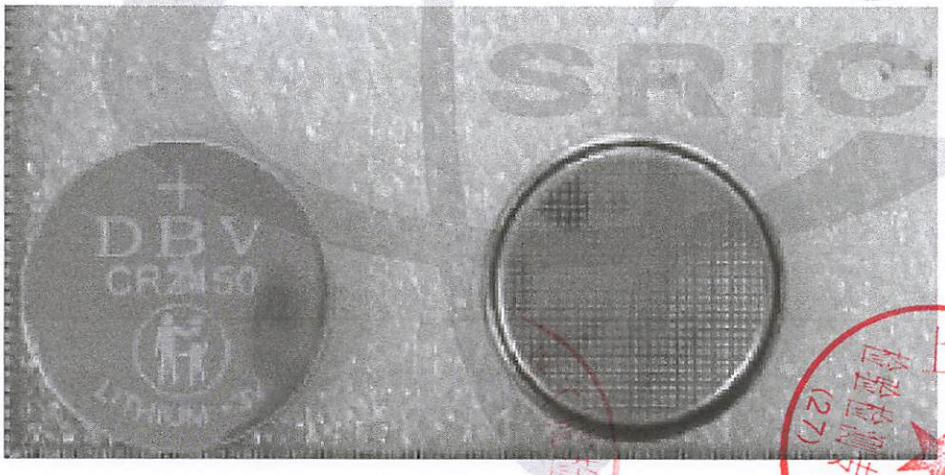
运输危险性鉴定书

Hazard Classification and Identification Report
for Transport of Goods









报告结束

海 运
By Sea

NO.212600315273497

中国认可
检验
INSPECTION
CNAS IB0071

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

锂电池类物品

样品名称 ： 数字计算机盒(内置锂二氧化锰电池 CR2450 3V 600mAh)

Sample name: Computer Box (Including Lithium Manganese Dioxide Battery CR2450 3V 600mAh)

委托单位 ： 苏州佳世达电子有限公司
QISDA ELECTRONICS (SUZHOU) CO., LTD

生产单位 ： 佳世达科技股份有限公司
Qisda Corporation

上海化工院检测有限公司
检验检测专用章

Witness Better Life
SICIT 上海化工院检测有限公司
SHANGHAI INSTITUTE OF CHEMICAL INDUSTRY TESTING CO.,LTD.

海 运
By Sea

海 运
By Sea

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

NO. 212600315273497

样品名称 Sample Name	中文 Chinese	数字计算机盒(内置锂二氧化锰电池 CR2450 3V 600mAh)
	英文 English	Computer Box (Including Lithium Manganese Dioxide Battery CR2450 3V 600mAh)
委托单位 Applicant		苏州佳世达电子有限公司 QISDA ELECTRONICS (SUZHOU) CO., LTD
生产单位 Manufacturer		佳世达科技股份有限公司 Qisda Corporation
检验方法、程序 Inspection method and procedure		国际海事组织《国际海运危险货物规则》(2024版) IMO International Maritime Dangerous Goods Code (2024 Edition)
样品外观 Sample appearance		多种颜色塑胶及金属外壳 Multicolor Plastics cement and metal shell
包装件信息 Package information		/

序号 NO.	电池种类 Battery type	型号 Model	容量Capacity /锂含量Li content	放置方式 Placement
1	不可充电锂金属单电芯电池 Primary Li-metal single cell battery	CR2450	600mAh / ≤0.3g	安装在设备内 Contained in equipment

鉴定结论 IDENTIFICATION CONCLUSION

1. 危险性识别(Hazards identification)

锂金属电池。

Lithium metal battery.

2. 海运按照国际海事组织《国际海运危险货物规则》办理的类项(Suggestion according to IMO IMDG Code)

根据特殊规定188，该物品不受IMO IMDG Code其他条款限制。

The article is not subject to other provisions of IMO IMDG Code according to special provision 188.

3. 包装要求(Packaging requirements)

无。

None.

检验日期: Inspection Date: 2025-12-16 签发日期: Issue Date: 2025-12-16 生效日期: Effective Date: 2026-01-01

备注 Comment: /

批准 Approver: 王宗 审核 Checker: 董学胜 主检 Appraiser: 张新明

运输危险性鉴定书

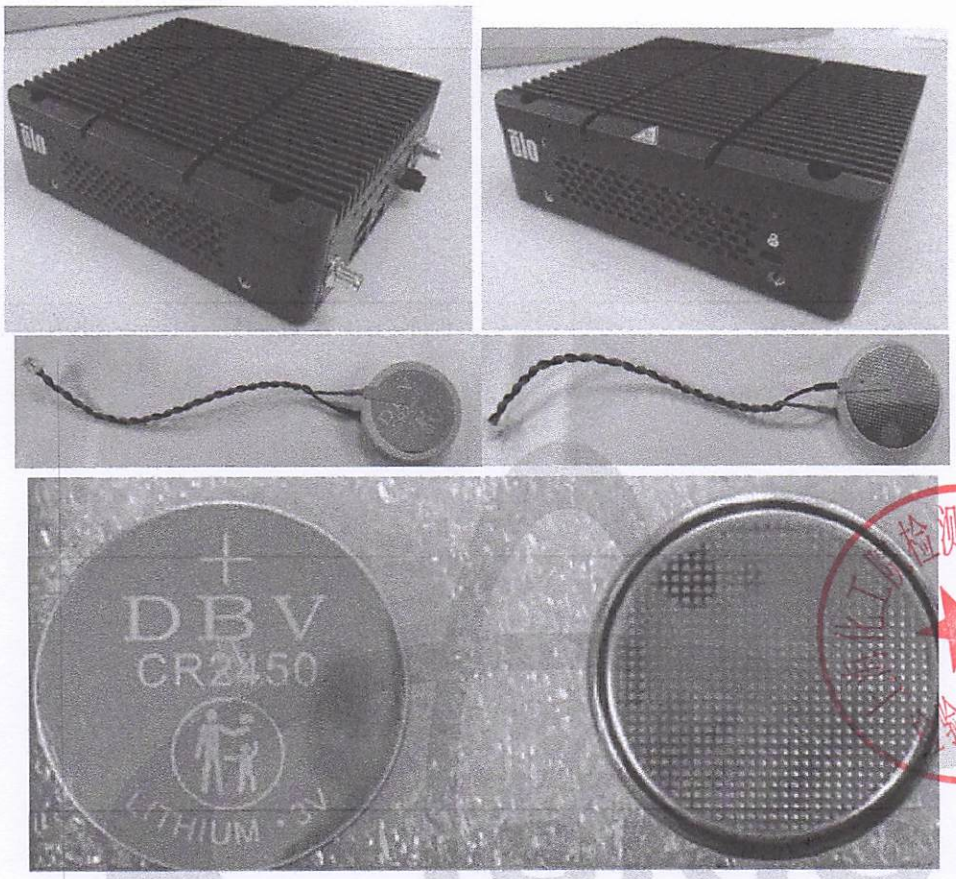
Hazard Classification and Identification Report for Transport of Goods

NO. 212600315273497

序号 No.	检验结果及其他事项 Inspection results and other things
1	本鉴定书所述锂电池按照《国际海运危险货物规则》(2024版) 2.9.4.5规定的质量管理体系进行制造。 Lithium cells and batteries listed in this report were manufactured under the quality management program described in IMDG CODE 2024 EDITION 2.9.4.5 .
2	本鉴定书所述锂电池已通过联合国《试验和标准手册》第III部分38.3小节相应测试要求。 Lithium cells and batteries listed in this report are of the types proved to meet the requirements of each applicable test in the UN Manual of Tests and Criteria, Part III, sub-section 38.3. UN38.3试验概要编号 The UN38.3 Test Summary No.(s) 812100000829367 详细信息请扫描右侧二维码。 Please scan the QR code on the right for more information.
3	设备应装入由适当材料构造的坚固外包装内，材料的强度和设计应与包装的容量和用途相符，除非装有电池的设备对电池提供了等效保护。 The equipment should be packed in strong outer packagings constructed of suitable material of adequate strength and design in relation to the packaging' s capacity and its intended use unless the battery is afforded equivalent protection by the equipment in which it is contained.
4	电池具有适当的防短路措施。 设备固定在外包装内以免移动，并配备防止发生意外启动的有效手段。 Cells and batteries are properly protected to prevent short circuits. The equipment is secured against movement within the outer packaging and is equipped with an effective means of preventing accidental activation.
5	每个包装件必须标示恰当的锂或钠离子电池标记。 本要求不适用于： —包装件仅含有安装在设备(包括线路板)内的钮扣电池；或 —托运货物不超过2个包装件，且每个包装件中安装在设备内的电池芯不超过4颗或电池组不超过2颗。 Each package shall be marked with the appropriate lithium or sodium ion battery mark. This requirement does not apply to: —packages containing only button cell batteries installed in equipment (including circuit boards); or —consignments of two packages or less where each package contains no more than four cells or two batteries installed in equipment.
6	/
7	/

运输危险性鉴定书

Hazard Classification and Identification Report
for Transport of Goods



报告结束

海 运
By Sea

NO.212500400979198

中国认可
检验
INSPECTION
CNAS IB0071

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

锂电池类物品

样品名称 ： 锂二氧化锰电池/钮扣电池/锂电池/原电池 CR2450 带线 DBV 3V 600mAh

Sample name: Lithium manganese dioxide battery CR2450 Wire DBV 3V 600mAh

委托单位 ： 广立登股份有限公司
Double Best Corporation Limited

生产单位 ： 宜昌力佳科技有限公司
YICHANG POWER GLORY TECHNOLOGY CO., LTD

上海化工院检测有限公司 检验检测专用章

Witness Better Life
SICIT 上海化工院检测有限公司
SHANGHAI INSTITUTE OF CHEMICAL INDUSTRY TESTING CO.,LTD.

海 运
By Sea

海 运
By Sea

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

NO. 212500400979198

样品名称 Sample Name	中文 Chinese	锂二氧化锰电池/钮扣电池/锂电池/原电池 CR2450 带线 DBV 3V 600mAh
	英文 English	Lithium manganese dioxide battery CR2450 Wire DBV 3V 600mAh
委托单位 Applicant		广立登股份有限公司 Double Best Corporation Limited
生产单位 Manufacturer		宜昌力佳科技有限公司 YICHANG POWER GLORY TECHNOLOGY CO., LTD
检验方法、程序 Inspection method and procedure		国际海事组织《国际海运危险货物规则》（2022版） IMO International Maritime Dangerous Goods Code (2022 Edition)
样品外观 Sample appearance		黑色塑料薄膜外壳 Black Plastic film shell
包装件信息 Package information		重量≤30kg。 weight≤30kg.

序号 NO.	电池种类 Battery type	型号 Model	容量Capacity /锂含量Li content	放置方式 Placement
1	不可充电锂金属单电芯电池 Primary Li-metal single cell battery	CR2450	600mAh / ≤0.3g	电池单独运输 Battery only

鉴定结论 IDENTIFICATION CONCLUSION

1. 危险性识别(Hazards identification)

锂金属电池。

Lithium metal battery.

2. 海运按照国际海事组织《国际海运危险货物规则》办理的类项(Suggestion according to IMO IMDG Code)

根据特殊规定188，该物品不受IMO IMDG Code其他条款限制。

The article is not subject to other provisions of IMO IMDG Code according to special provision 188.

3. 包装要求(Packaging requirements)

无。

None.

检验日期: Inspection Date: 2024-11-25　签发日期: Issue Date: 2024-11-25　生效日期: Effective Date: 2025-01-01

备注 Comment	/

批准 Approver: 王宝　审核 Checker: 董学胜　主检 Appraiser: 孙倩

运输危险性鉴定书

Hazard Classification and Identification Report for Transport of Goods

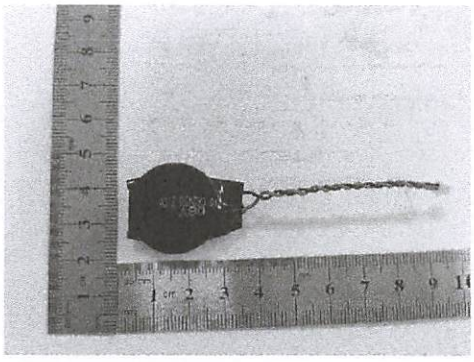
NO. 212500400979198

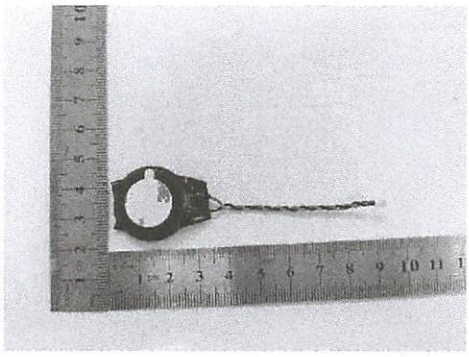
序号 No.	检验结果及其他事项 Inspection results and other things
1	本鉴定书所述锂电池按照《国际海运危险货物规则》(2022版) 2.9.4.5规定的质量管理体系进行制造。 Lithium cells and batteries listed in this report were manufactured under the quality management program described in IMDG CODE 2022 EDITION 2.9.4.5 .
2	本鉴定书所述锂电池已通过联合国《试验和标准手册》第III部分38.3小节相应测试要求。 包装件能够承受1.2m跌落试验。 Lithium cells and batteries listed in this report are of the types proved to meet the requirements of each applicable test in the UN Manual of Tests and Criteria, Part III, sub-section 38.3. The package has passed the 1.2m drop test. UN38.3试验概要编号 The UN38.3 Test Summary No.(s) 812100000829367 详细信息请扫描右侧二维码。 Please scan the QR code on the right for more information.
3	锂电池完全封装在内包装内，位于坚固的外包装中。 Lithium cells and batteries are packed in inner packagings that completely enclose the cell or battery and placed in a strong outer packaging.
4	电池具有适当的防短路措施。 Cells and batteries are properly protected to prevent short circuits.
5	每个包装件必须标示恰当的锂电池标记。 装有锂电池的包装件，符合国际民航组织《危险物品安全航空运输技术细则》第4部分第11章的包装说明965或968第IB部分规定的，黏贴5.2.1.10(锂电池标记)和5.2.2.2所示的9A型标签，应视为符合本特殊规定188的规定。注：《国际海运危险货物规则》(2020版)5.2.1.10中显示电话号码附加信息的锂电池标记，可继续使用至2026年12月31日。 Each package shall be marked with the appropriate lithium battery mark. Packages containing lithium batteries packed in conformity with the provisions of part 4, chapter 11, packing instructions 965 or 968, section IB of the ICAO Technical Instructions for the Safe Transport of Dangerous Goods by air that bear the mark as shown in 5.2.1.10(lithium battery mark) and the label shown 5.2.2.2, Model No.9A shall be deemed to meet the provisions of this special provision 188. Note: The mark shown in 5.2.1.10(lithium battery mark) of the IMDG CODE 2020 EDITION, showing the telephone number for additional information, may continue to be applied until 31 December 2026.
6	/
7	/

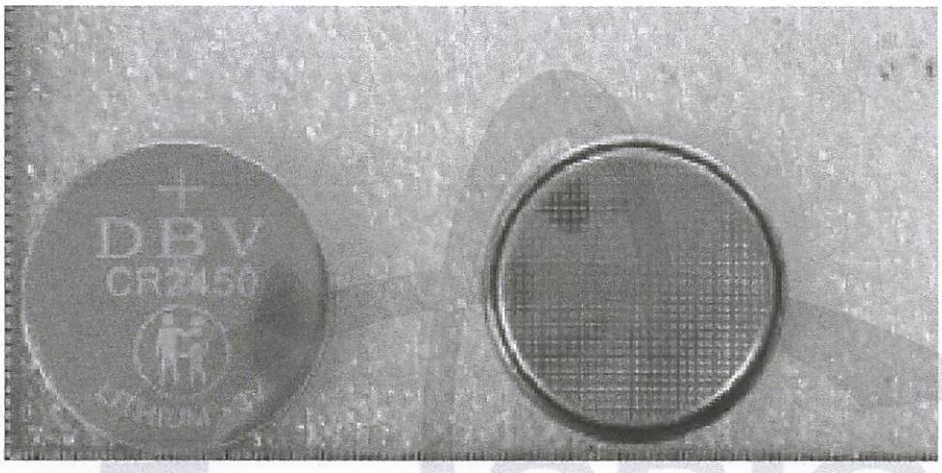
-验证码:459068-

运输危险性鉴定书

Hazard Classification and Identification Report
for Transport of Goods







报告结束

中国认可
检测
TESTING
CNAS L0748

CMA
170014233963

NO.1121030631

检 测 报 告

Test Report

样品名称：	鋰二氧化錳電池 DBV CR2450 3V 600mAh
Name of Sample:	Lithium manganese dioxide battery DBV CR2450 3V 600mAh
委托单位:	广立登股份有限公司
Consignor:	Double Best Corporation Limited

上海化工院检测有限公司

Shanghai Institute of Chemical Industry Testing Co., Ltd.

上海化工院检测有限公司
检 测 报 告

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report

NO. 1121030631

样品名称 Name of Sample	中文 Chinese	鋰二氧化錳電池 DBV CR2450 3V 600mAh		
	英文 English	Lithium manganese dioxide battery DBV CR2450 3V 600mAh		
样品编号 Sample No.	1121030631			
委托单位 Consignor	广立登股份有限公司 Double Best Corporation Limited			
生产单位 Manufacturer	宜昌力佳科技有限公司 Yichang Power Glory Technology Co., LTD			
检测方法 Test method	联合国《关于危险货物运输的建议书 试验和标准手册》 ST/SG/AC.10/11/Rev.6 Amend.1 38.3 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Amend.1 Section 38.3			
判定标准 Criterion	联合国《关于危险货物运输的建议书 试验和标准手册》 ST/SG/AC.10/11/Rev.6 Amend.1 38.3 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Amend.1 Section 38.3			
样品外观 Appearance	银色 钮扣状金属外壳 Silvery Button metal shell			
样品接受日期 Accepted Date	2021-03-23	检测起迄日期 Test Date	2021-04-01 ~ 2021-04-29	
检测项目 Test Items	高度模拟;热测试;振动;冲击;外短路;挤压;强制放电 Altitude simulation, Thermal test, Vibration, Shock, External short circuit, Crush, Forced discharge			
检测结论 Conclusion	经检测，该样品符合联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1 38.3标准要求。 The sample has passed the test items of UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Amend.1 38.3 生效日期(Date)：2021-04-29			
备注 Comment	锂含量0.165g 。Lithium content:0.165g. 不可充电锂电池芯Primary Lithium Cell./			
委托单位地址 Consignor Address	/	邮政编码 Post Code	/	

批准 Approver: 王宝

审核 Checker: 高平

编制 Compiler: 傅欣

职务 Title: 副总工程师(Vice chief engineer)

序号 No.	检测项目名称 Name of Test Items	标准要求或标准条款号 Standard requirement or The Clause Number of Standard	检测结果 Test Result	本项结论 Conclusion	备注 Remark
1	高度模拟 Altitude simulation	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1 38.3 试验T.1 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Amend.1 Section 38.3 Test T.1	见附表 1 See Appendix 1	合格 Passed	/
2	热测试 Thermal test	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1 38.3 试验T.2 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Amend.1 Section 38.3 Test T.2	见附表 2 See Appendix 2	合格 Passed	/
3	振动 Vibration	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1 38.3 试验T.3 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Amend.1 Section 38.3 Test T.3	见附表 3 See Appendix 3	合格 Passed	/
4	冲击 Shock	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1 38.3 试验T.4 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Amend.1 Section 38.3 Test T.4	见附表 4 See Appendix 4	合格 Passed	/
5	外短路 External short circuit	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1 38.3 试验T.5 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Amend.1 Section 38.3 Test T.5	见附表 5 See Appendix 5	合格 Passed	/
6	挤压 Crush	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1 38.3 试验T.6 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Amend.1 Section 38.3 Test T.6	见附表 6 See Appendix 6	合格 Passed	/
7	强制放电 Forced discharge	联合国《关于危险货物运输的建议书 试验和标准手册》ST/SG/AC.10/11/Rev.6 Amend.1 38.3 试验T.8 UN Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6 Amend.1 Section 38.3 Test T.8	见附表 7 See Appendix 7	合格 Passed	/
8	以下空白	This space intentionally left blank			

检测环境条件 Test Environment Condition	环境温度:20℃-23℃;环境湿度:/% Ambient temperature:20℃-23℃;Ambient humidity:/%				
分包检验情况 Subcontracted Test Condition	检测项目 Test Item	/			
	分包实验室 Subcontracted Laboratory	名称 Name	/	邮编 Post Code	/
		地址 Address	/	电话 Tel	/

上海化工院检测有限公司
检 测 报 告－附表1

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report—Appendix 1

序号 No.	1	检测项目名称 Name of Test Items		高度模拟 Altitude simulation				
样品编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	未放电 Undischarged	6.2793	3.27	6.2790	3.27	0.00	100.00	O
002	未放电 Undischarged	6.3383	3.27	6.3380	3.27	0.00	100.00	O
003	未放电 Undischarged	6.3409	3.27	6.3414	3.27	0.00	100.00	O
004	未放电 Undischarged	6.3112	3.27	6.3111	3.27	0.00	100.00	O
005	未放电 Undischarged	6.2499	3.27	6.2501	3.27	0.00	100.00	O
006	未放电 Undischarged	6.3071	3.27	6.3071	3.27	0.00	100.00	O
007	未放电 Undischarged	6.2671	3.26	6.2675	3.26	0.00	100.00	O
008	未放电 Undischarged	6.2840	3.26	6.2843	3.26	0.00	100.00	O
009	未放电 Undischarged	6.1414	3.27	6.1417	3.27	0.00	100.00	O
010	未放电 Undischarged	6.2999	3.27	6.3002	3.27	0.00	100.00	O
011	完全放电 Fully discharged	6.3071	/	6.3071	/	0.00	/	O
012	完全放电 Fully discharged	6.2392	/	6.2394	/	0.00	/	O
013	完全放电 Fully discharged	6.2991	/	6.2989	/	0.00	/	O
014	完全放电 Fully discharged	6.3002	/	6.3014	/	0.00	/	O
015	完全放电 Fully discharged	6.2483	/	6.2491	/	0.00	/	O
016	完全放电 Fully discharged	6.2915	/	6.2919	/	0.00	/	O
017	完全放电 Fully discharged	6.3247	/	6.3245	/	0.00	/	O
018	完全放电 Fully discharged	6.2770	/	6.2773	/	0.00	/	O
019	完全放电 Fully discharged	6.2716	/	6.2721	/	0.00	/	O
020	完全放电 Fully discharged	6.3588	/	6.3592	/	0.00	/	O

备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting, No Disassembly,No Rupture & No Fire.

上海化工院检测有限公司
检 测 报 告－附表2

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report—Appendix 2

序号 No.	2	检测项目名称 Name of Test Items		热测试 Thermal test				
样品编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	未放电 Undischarged	6.2790	3.27	6.2759	3.27	0.05	100.00	O
002	未放电 Undischarged	6.3380	3.27	6.3354	3.27	0.04	100.00	O
003	未放电 Undischarged	6.3414	3.27	6.3370	3.27	0.07	100.00	O
004	未放电 Undischarged	6.3111	3.27	6.3083	3.27	0.04	100.00	O
005	未放电 Undischarged	6.2501	3.27	6.2475	3.27	0.04	100.00	O
006	未放电 Undischarged	6.3071	3.27	6.3067	3.27	0.01	100.00	O
007	未放电 Undischarged	6.2675	3.26	6.2641	3.27	0.05	100.00	O
008	未放电 Undischarged	6.2843	3.26	6.2815	3.27	0.04	100.00	O
009	未放电 Undischarged	6.1417	3.27	6.1384	3.27	0.05	100.00	O
010	未放电 Undischarged	6.3002	3.27	6.2974	3.27	0.04	100.00	O
011	完全放电 Fully discharged	6.3071	/	6.3045	/	0.04	/	O
012	完全放电 Fully discharged	6.2394	/	6.2375	/	0.03	/	O
013	完全放电 Fully discharged	6.2989	/	6.2971	/	0.03	/	O
014	完全放电 Fully discharged	6.3014	/	6.2980	/	0.05	/	O
015	完全放电 Fully discharged	6.2491	/	6.2463	/	0.04	/	O
016	完全放电 Fully discharged	6.2919	/	6.2882	/	0.06	/	O
017	完全放电 Fully discharged	6.3245	/	6.3210	/	0.06	/	O
018	完全放电 Fully discharged	6.2773	/	6.2745	/	0.04	/	O
019	完全放电 Fully discharged	6.2721	/	6.2685	/	0.06	/	O
020	完全放电 Fully discharged	6.3592	/	6.3558	/	0.05	/	O

备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting, No Disassembly,No Rupture & No Fire.

上海化工院检测有限公司
检 测 报 告－附表3

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report—Appendix 3

NO. 1121030631

序号 No.	3	检测项目名称 Name of Test Items		振动 Vibration				
样品编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	未放电 Undischarged	6.2759	3.27	6.2763	3.27	0.00	100.00	O
002	未放电 Undischarged	6.3354	3.27	6.3358	3.27	0.00	100.00	O
003	未放电 Undischarged	6.3370	3.27	6.3374	3.27	0.00	100.00	O
004	未放电 Undischarged	6.3083	3.27	6.3085	3.27	0.00	100.00	O
005	未放电 Undischarged	6.2475	3.27	6.2477	3.27	0.00	100.00	O
006	未放电 Undischarged	6.3067	3.27	6.3071	3.27	0.00	100.00	O
007	未放电 Undischarged	6.2641	3.27	6.2644	3.27	0.00	100.00	O
008	未放电 Undischarged	6.2815	3.27	6.2818	3.27	0.00	100.00	O
009	未放电 Undischarged	6.1384	3.27	6.1387	3.27	0.00	100.00	O
010	未放电 Undischarged	6.2974	3.27	6.2978	3.27	0.00	100.00	O
011	完全放电 Fully discharged	6.3045	/	6.3049	/	0.00	/	O
012	完全放电 Fully discharged	6.2375	/	6.2379	/	0.00	/	O
013	完全放电 Fully discharged	6.2971	/	6.2975	/	0.00	/	O
014	完全放电 Fully discharged	6.2980	/	6.2983	/	0.00	/	O
015	完全放电 Fully discharged	6.2463	/	6.2466	/	0.00	/	O
016	完全放电 Fully discharged	6.2882	/	6.2885	/	0.00	/	O
017	完全放电 Fully discharged	6.3210	/	6.3217	/	0.00	/	O
018	完全放电 Fully discharged	6.2745	/	6.2748	/	0.00	/	O
019	完全放电 Fully discharged	6.2685	/	6.2683	/	0.00	/	O
020	完全放电 Fully discharged	6.3558	/	6.3561	/	0.00	/	O

备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting,
No Disassembly,No Rupture & No Fire.

上海化工院检测有限公司
检 测 报 告－附表4

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report—Appendix 4

序号 No.	4	检测项目名称 Name of Test Items		冲击 Shock				
样品编号 Sample No.	样品状态 Sample Status	试验前 Before		试验后 After		质量损失 Mass Loss /%	剩余电压 Residual OCV /%	其他现象 Other Event
		质量 Mass /g	开路电压 OCV /V	质量 Mass /g	开路电压 OCV /V			
001	未放电 Undischarged	6.2763	3.27	6.2766	3.27	0.00	100.00	O
002	未放电 Undischarged	6.3358	3.27	6.3352	3.27	0.01	100.00	O
003	未放电 Undischarged	6.3374	3.27	6.3371	3.27	0.00	100.00	O
004	未放电 Undischarged	6.3085	3.27	6.3082	3.27	0.00	100.00	O
005	未放电 Undischarged	6.2477	3.27	6.2473	3.27	0.01	100.00	O
006	未放电 Undischarged	6.3071	3.27	6.3066	3.27	0.01	100.00	O
007	未放电 Undischarged	6.2644	3.27	6.2640	3.27	0.01	100.00	O
008	未放电 Undischarged	6.2818	3.27	6.2812	3.27	0.01	100.00	O
009	未放电 Undischarged	6.1387	3.27	6.1381	3.27	0.01	100.00	O
010	未放电 Undischarged	6.2978	3.27	6.2973	3.27	0.01	100.00	O
011	完全放电 Fully discharged	6.3049	/	6.3044	/	0.01	/	O
012	完全放电 Fully discharged	6.2379	/	6.2375	/	0.01	/	O
013	完全放电 Fully discharged	6.2975	/	6.2972	/	0.00	/	O
014	完全放电 Fully discharged	6.2983	/	6.2980	/	0.00	/	O
015	完全放电 Fully discharged	6.2466	/	6.2461	/	0.01	/	O
016	完全放电 Fully discharged	6.2885	/	6.2880	/	0.01	/	O
017	完全放电 Fully discharged	6.3217	/	6.3212	/	0.01	/	O
018	完全放电 Fully discharged	6.2748	/	6.2743	/	0.01	/	O
019	完全放电 Fully discharged	6.2683	/	6.2681	/	0.00	/	O
020	完全放电 Fully discharged	6.3561	/	6.3564	/	0.00	/	O

备注：L-泄漏 V-漏气 D-解体 R-破裂 F-起火 O-无泄漏、无漏气、无解体、无破裂、无起火。
Note: L-Leakage V-Venting D-Disassembly R-Rupture F-Fire O-No Leakage,No Venting, No Disassembly,No Rupture & No Fire.

上海化工院检测有限公司
检 测 报 告－附表5
Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report—Appendix 5

序号 No.	5	检测项目名称 Name of Test Items	外短路 External short circuit
样品编号 Sample No.	样品状态 Sample Status	样品表面最高温度 Max. External Temperature /℃	其他现象 Other Event
001	未放电 Undischarged	66.4	O
002	未放电 Undischarged	64.7	O
003	未放电 Undischarged	65.2	O
004	未放电 Undischarged	65.7	O
005	未放电 Undischarged	64.9	O
006	未放电 Undischarged	66.1	O
007	未放电 Undischarged	65.0	O
008	未放电 Undischarged	65.3	O
009	未放电 Undischarged	64.7	O
010	未放电 Undischarged	66.0	O
011	完全放电 Fully discharged	58.8	O
012	完全放电 Fully discharged	58.4	O
013	完全放电 Fully discharged	58.6	O
014	完全放电 Fully discharged	58.7	O
015	完全放电 Fully discharged	58.5	O
016	完全放电 Fully discharged	57.9	O
017	完全放电 Fully discharged	58.0	O
018	完全放电 Fully discharged	58.3	O
019	完全放电 Fully discharged	58.5	O
020	完全放电 Fully discharged	58.9	O

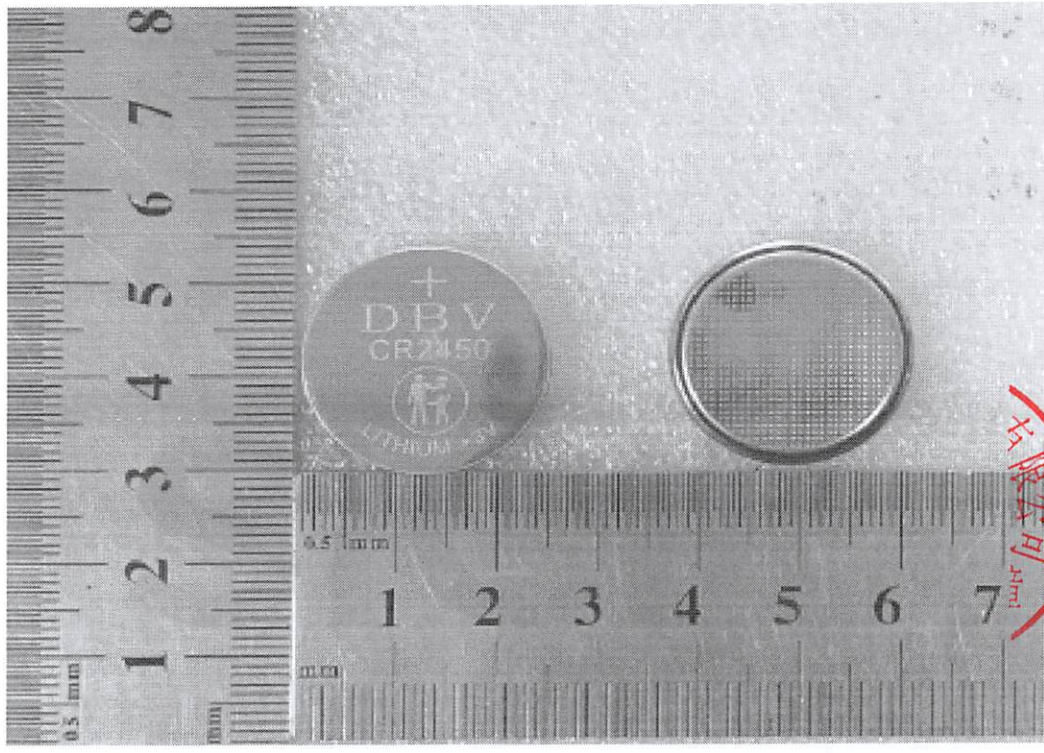
备注：D-解体 R-破裂 F-起火 O-无解体、无起火、无破裂。
Note: D-Disassembly R-Ruptur F-Fire O-No Disassembly,No Fire & No Rupture.

序号 No.	6	检测项目名称 Name of Test Items	挤压 Crush
样品编号 Sample No.	样品状态 Sample Status	样品表面最高温度 Max. External Temperature /℃	其他现象 Other Event
021	未放电 Undischarged	/	O
022	未放电 Undischarged	/	O
023	未放电 Undischarged	/	O
024	未放电 Undischarged	/	O
025	未放电 Undischarged	/	O
026	完全放电 Fully discharged	/	O
027	完全放电 Fully discharged	/	O
028	完全放电 Fully discharged	/	O
029	完全放电 Fully discharged	/	O
030	完全放电 Fully discharged	/	O
以下空白	This space intentionally left blank		

备注：D-解体 F-起火 O-无解体、无起火。
Note: D-Disassembly F-Fire O-No Disassembly & No Fire.

序号 No.	7	检测项目名称 Name of Test Items	强制放电 Forced discharge
样品编号 Sample No.	样品状态 Sample Status	其他现象 Other Event	
031	完全放电 Fully discharged	O	
032	完全放电 Fully discharged	O	
033	完全放电 Fully discharged	O	
034	完全放电 Fully discharged	O	
035	完全放电 Fully discharged	O	
036	完全放电 Fully discharged	O	
037	完全放电 Fully discharged	O	
038	完全放电 Fully discharged	O	
039	完全放电 Fully discharged	O	
040	完全放电 Fully discharged	O	
以下空白	This space intentionally left blank		

备注：D-解体 F-起火 O-无解体、无起火。
Note: D-Disassembly F-Fire O-No Disassembly & No Fire.



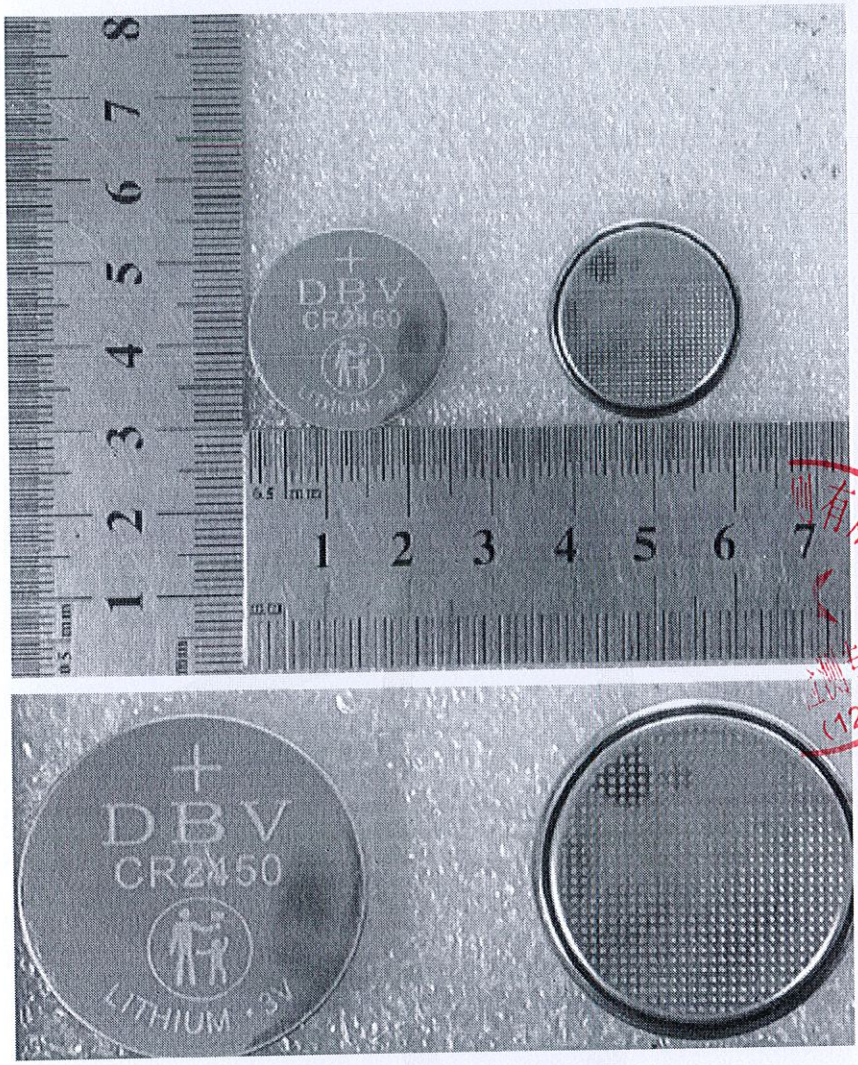
报告结束

UN38.3 试验概要
UN38.3 Test Summary

812100000829367

单位信息 Company information			
委托单位 Consignor	广立登股份有限公司 Double Best Corporation Limited 台北市内湖区港墘路 221 巷 37 号 5 楼 5F., No. 37, Ln.221, Gangqian Rd., Neihu Dist., Taipei City 114, Taiwan +886287519188 angel.chen@double-best.com /		
生产单位 Manufacturer	宜昌力佳科技有限公司 YICHANG POWER GLORY TECHNOLOGY CO., LTD 宜昌市猇亭区先锋路 19 号 NO.19，XIANFENG ROAD，XIAOTING DISTRICT，YICHANG CITY，HUBEI PROVINCE，CHINA 0717-6300188 cy@szlijia.com http://www.szlijia.com		
测试单位 Test lab	上海化工院检测有限公司 Shanghai TECH.Chemical Industry testing Co.,Ltd 中国.上海.普陀区云岭东路 345 号 No.345 East Yunling Road, Putuo, Shanghai, China 200062 86-21-31765555 cq@ghs.cn www.ghs.cn		
电池信息 Battery information			
名称 Name	鋰二氧化錳電池 Lithium manganese dioxide battery	品牌 Brand	DBV
型号 Type	CR2450	原始测试型号 Original tested type	/
标称电压(V) Nominal voltage	3.0	容量/能量 Capacity/energy	600mAh
描述 Description	不可充电锂金属电池芯 Primary	锂含量(g) Li content	0.165
质量(kg) Mass	0.00634	外观 Appearance	银色钮扣状金属外壳 silvery button metal shell
测试信息 Test information			
原报告编号 Original test report No.	1121030631	测试报告日期 Date of test report	2021-04-29
测试标准 Test standard	联合国《关于危险货物运输的建议书试验和标准手册》第 38.3 章 UNITEDNATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria 38.3		ST/SG/AC.10/11/Rev.6/Amend.1
T.1 高度模拟 Altitude simulation	合格 Passed	T.2 温度测试 Thermal test	合格 Passed
T.3 振动测试 Vibration	合格 Passed	T.4 冲击测试 Shock	合格 Passed
T.5 外部短路 External short circuit	合格 Passed	T.6 挤压 Crush	合格 Passed
T.7 过度充电 Overcharge	/	T.8 强制放电 Forced discharge	合格 Passed
38.3.3 (f)	/	38.3.3 (g)	/

样品图片 Sample Picture



结论 Conclusion	测试样品符合联合国《关于危险货物运输的建议书试验和标准手册》ST/SG/AC.10/11/Rev.6/Amend.1 38.3 标准要求。The tested samples meet the requirements of test items of the UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Manual of Tests and Criteria ST/SG/AC.10/11/Rev.6/Amend.1 38.3		
备注 Remark	/		
签名 Signature 职务 Title	王寅 副总工程师 Vice chief engineer	签发日期 Issued date	2021-05-12

-验证码:443457-

报告结束

中国认可
检测
TESTING
CNAS L0748

170014233963

NO.1121070279

检 测 报 告

Test Report

样品名称：	鋰二氧化錳電池/鈕扣電池/鋰電池/原电池 CR2450 带线 DBV 3V 600mAh
Name of Sample:	Lithium manganese dioxide battery CR2450 Wire DBV 3V 600mAh
委托单位:	广立登股份有限公司
Consignor:	/

上海化工院检验有限公司 检验检测专用章

上海化工院检测有限公司

Shanghai Institute of Chemical Industry Testing Co., Ltd.

上海化工院检测有限公司
检 测 报 告

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report

NO. 1121070279

样品名称 Name of Sample	中文 Chinese	鋰二氧化錳电池/鈕扣电池/鋰電池/原电池 CR2450 带线 DBV 3V 600mAh		
	英文 English	Lithium manganese dioxide battery CR2450 Wire DBV 3V 600mAh		
样品编号 Sample No.	1121070279			
委托单位 Consignor	广立登股份有限公司 /			
生产单位 Manufacturer	宜昌力佳科技有限公司 Yichang Power Glory Technology Co., LTD			
检测方法 Test method	联合国《关于危险货物运输的建议书 规章范本》 ST/SG/AC.10/1/Rev.21 3.3章 特殊规定188条款。 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Model Regulations ST/SG/AC.10/1/Rev.21 3.3 special provisions 188			
判定标准 Criterion	联合国《关于危险货物运输的建议书 规章范本》 ST/SG/AC.10/1/Rev.21 3.3章 特殊规定188条款。 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Model Regulations ST/SG/AC.10/1/Rev.21 3.3 special provisions 188			
样品外观 Appearance	长方形瓦楞纸箱(290mm×250mm×100mm)，内装192个锂电池。 Rectangle corrugated carton(290mm×250mm×100mm), containing 192 lithium batteries.			
样品接受日期 Accepted Date	2021-07-12	检测起迄日期 Test Date	2021-07-13 ～ 2021-07-13	
检测项目 Test Items	1.2m跌落试验 1.2m Drop test			
检测结论 Conclusion	被测试包装件能够承受1.2m跌落试验。 The tested package is capable of withstanding a 1.2 m drop test. 生效日期(Date)： 2021-07-14			
备注 Comment	内包装：塑料托盘。Inner package:plastic tray. 包装件毛重(kg)： 2.1 锂电池净重(kg)：1.4			
委托单位地址 Consignor Address	/		邮政编码 Post Code	/

批准 Approver: 无宗

审核 Checker: 陈建峰

编制 Compiler: 傅俊

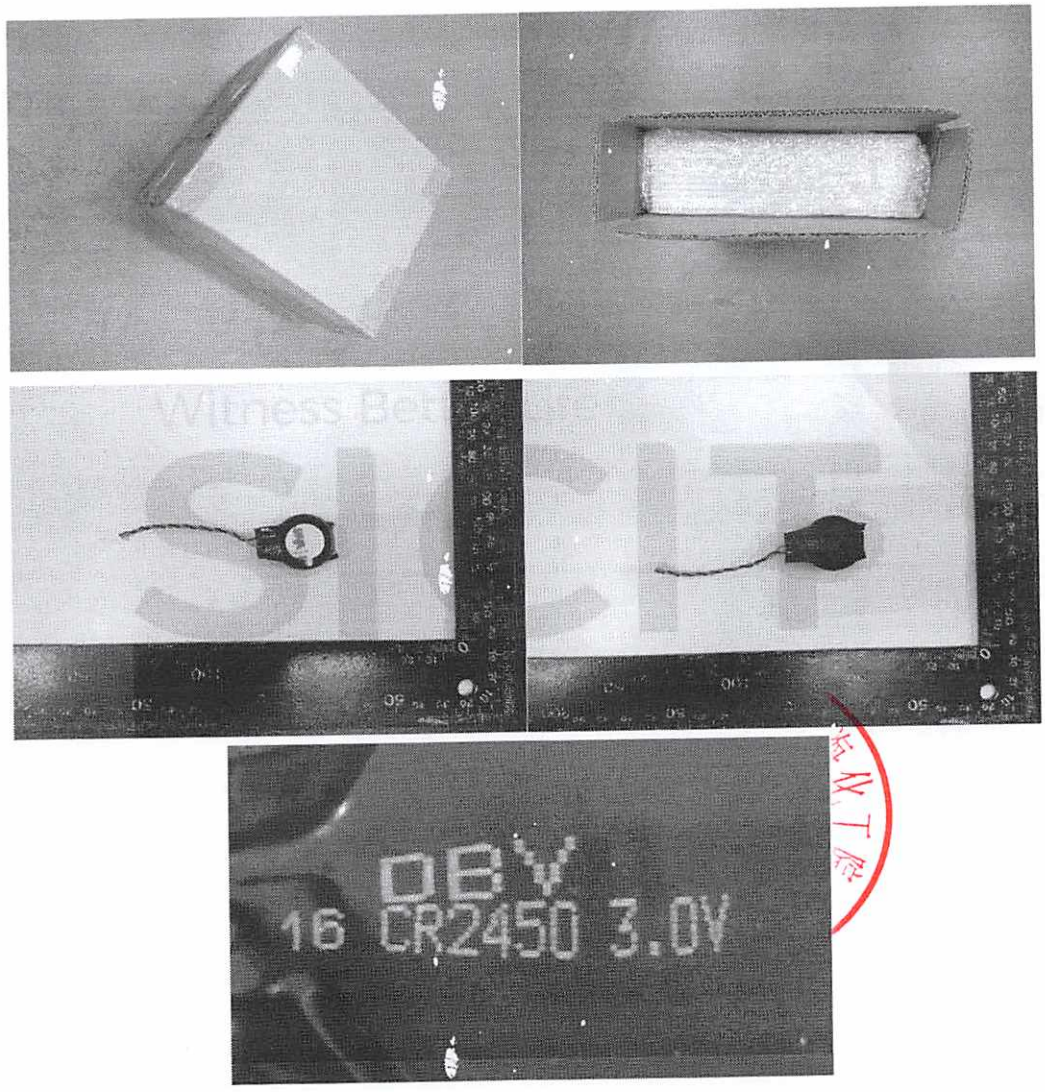
职务 Title: 副总工程师(Vice chief engineer)

上海化工院检测有限公司
检 测 报 告

Shanghai Institute of Chemical Industry
Testing Co., Ltd. Test Report

序号 No	检测项目名称 Name of Test Items	标准要求或标准条款号 Standard requirement or The Clause Number of Standard	检测结果 Test Result		本项结论 Conclusion	备注 Remark
1	1.2米 跌落试验 1.2m Drop Test	联合国《关于危险货物运输的建议书 规章范本》 ST/SG/AC.10/1/Rev.21 3.3章 特殊规定 188条款 UNITED NATIONS "Recommendations on the TRANSPORT OF DANGEROUS GOODS" Model Regulations ST/SG/AC.10/1/Rev.21 3.3 special provisions 188	顶部底部	包装件未破裂。电池未破损，无导致电池直接接触的移动，无内容物泄漏。 The package is not cracked. No damage to battery contained, No shifting of the contents to battery contact, No releasing of contents.	合格 Passed	/
			长短侧面	包装件未破裂。电池未破损，无导致电池直接接触的移动，无内容物泄漏。 The package is not cracked. No damage to battery contained, No shifting of the contents to battery contact, No releasing of contents.		
			棱角	包装件未破裂。电池未破损，无导致电池直接接触的移动，无内容物泄漏。 The package is not cracked. No damage to battery contained, No shifting of the contents to battery contact, No releasing of contents.		

检测环境条件 Test Environment Condition	环境温度:23℃;环境湿度:/% Ambient temperature:23℃, Ambient humidity:/%				
分包检测情况 Subcontracted Test Condition	检测项目 Test Item	/			
	分包实验室 Subcontracted Laboratory	名称 Name	/	邮编 Post Code	/
		地址 Address	/	电话 Tel	/



报告结束

DBV Batteries

CR2450T-20250101

MATERIAL SAFETY DATA SHEET

The batteries are exempt articles and are not subject to the OSHA Hazard Communication Standard Requirement. This sheet is provided as technical information only. The information and recommendations set forth are made in good faith and believed to be accurate as of the date of preparation. However, DBV makes no warranty expressed or Implied.

Section 1-Product and Company Identification

Product Name： Lithium Manganese Dioxide Batteries	CHEMICAL SYSTEM: Lithium Manganese Dioxide	Volts: 3 V
Size: CR2450	Trade Mark: DBV	Approximate Weight: 6.9g
Designed for Recharge: NO	Date of preparation: Jan 01 2025	
Company: Double Best Corporation Limited.		
Address (Number, Street, City, State, and ZIP Code): 5F.,No.37,Ln.221,Gangqian Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C)		Telephone Numbers: 886-(02)-8751-9188

Section 2- Composition/Information on Ingredients

Ingredient	CAS NO.	Content (wt%)
Lithium	7439-93-2	2.39 (0.165 gram)
Propylene Carbonate	108-32-7	6.4
Manganese dioxide	1313-13-9	34.0
1,2-Dimethoxyethane	110-71-4	3.6
Lithium trifluoromethanesulfonate	33454-82-9	2.6
Ethylene carbonate	96-49-1	0.5
Sulfolane	126-33-0	1.2
Graphite	7782-42-5	5.0
Polypropylene	9003-07-0	2.0

Teflon	9002-84-0	2.0
Stainless steel	7439-89-6	40.31

Section 3 – Hazards Identification

Hazards Identification:

The battery has passed the test items of UN Model Regulations, Manual of Test and Criteria Section UN38.3

Emergency Overview：

Caution：Avoid contact and inhalation the electrolyte contained inside the battery

Section 4 – First Aid Measures

None unless internal materials exposure. If contents are leaked out, observe following Instructions

Inhalation	Fumes can cause respiratory irritation. Remove to fresh air and consult a physician.
Skin	Immediately flush skin plenty of water. If itch or irritation by chemical bum persists, consult a physician.
Eyes	Immediately flush eye with plenty of water for at least 15 minutes. Consult a physician immediately
Ingestion	If swallowing a battery, consult a physician immediately. If contents come into mouth, immediately rinse by plenty of water and consult a physician.

Section 5-Fire Fighting Measures

Fire extinguishing agent: When the fire is caused by lithium, dry graphite powder and dry sand should be used to extinguish the flame and isolate the air and water fog. Do not use direct running water, foam or halide to extinguish the fire, direct running water may cause the splash of flammable liquid and spread the fire.

Specific dangers from chemicals: Lithium metal can spontaneously ignite in air when heated to a molten state. Reaction with water or acid releases hydrogen and energy causing combustion or even explosion. After burning, the molten material is dispersed, and white smoke is released, which makes the fire all shaded.

Special protective action for firefighters: Firefighters should wear self-contained positive pressure breathing apparatus and wear fire protective clothing to prevent skin and eye contact. Put out the fire upwind. Evacuate all personnel to a safe area.

Section 6-Accidental Release Measures

Accidental Releases: Do not breathe vapors or touch liquid with bare hands (see section 4).

Waste Disposal Methods: Evacuate area. If possible, a trained person should attempt to stop or contain the leak by neutralizing spill with soda lime or baking soda. A NIOSH Approved Acid Gas Filter Mask or Self-Contained Breathing Apparatus should be worn. Seal leaking battery and soda lime or baking soda in a plastic bag and dispose of as hazardous waste.

Other: Follow North American Emergency Response Guide (NAERG)#138 for cells involved in an accident, cells that have vented, or have exploded.

DBV Batteries

Section 7-Handling and Storage

1) Handling

Never swallow. Never reverse the positive and negative terminals when mounting. Never short-circuit the battery. Never heat. Never expose to open flame. Never disassemble. Never weld the terminal or wire to the body of the battery directly. Never touch the liquid leaked out of battery. Never bring fire close to battery liquid. Never keep in touch with battery.

2) Storage

Never let the battery contact with water. Never store the battery in hot and high humid place. Don't push the battery excessively and destroy the battery packaging, often wet and ventilating the dry place to keep in the normal atmospheric temperature, find the unusual battery is dealt with in time

Section 8 – Exposure Controls, Personal Protection

Respiratory Protection		NA
Ventilation	Local Exhaust	NA
	Mechanical	NA
	Special	NA
	Other	NA
Eye Protection		NA
Protective Gloves		NA
Other protective clothing		NA

Section 9 – Physical/Chemical Characteristics

State of matter: Solid state
Form : Button type
Color: True quality of stainless steel
Smell : Tasteless (At the time of the fullness)
Resolve temperature: NA
Spontaneous combustion temperature: NA
Explosion demarcation line : Higher than 170 degrees Centigrade of batteries will be burnt
To the density (Water =1): NA
Dissolving: NA

Boiling Point:	1,2-Dimethoxyethane : 83℃
Vapor Pressure:	1,2-Dimethoxyethane :6.40(20℃)
Vapor Density:	1,2-Dimethoxyethane : 3.11
Solubility in Water:	1,2-Dimethoxyethane : :diffluence contact with water
Specific Gravity:	1,2-Dimethoxyethane :1.63
Melting Point:	1,2-Dimethoxyethane :-67℃
Evaporation Rate:	N/A
Water Reactive:	1,2-Dimethoxyethane : :diffluence contact with water
Appearance & Odor:	1,2-Dimethoxyethane : achromatism liquid; slight aether odor.

DBV Batteries

Section 10 – Stability and Reactivity

Stability	Stable
Incompatibility	Water
Hazardous polymerization	Will not occur.
Condition to avoid	See section 7.
Hazardous Decomposition or Byproducts	Hydrogen

Section 11 – Toxicological Information

Acute Toxicity:
1,2-Dimethoxyethane:

LC_{50} (Inhalation): N/A
LD_{50} : N/A
Eye Effects: Corrosive
Skin Effects: Corrosive

Section 12 –Ecological Information

Aquatic Toxicity: Do not let internal components enter marine environments. Avoid releases into waterways, wastewater or groundwater.

Section 13 – Disposal condition

The battery may be regulated by national or local regulation. Please follow the instructions of Proper regulation. As electric capacity is left in a discarded battery and it comes into contact With other metals, it could lead to distortion, leakage, overheating, or explosion, so make sure to cover the (+) and (-) terminals with friction tape or some other insulator before disposal.

Section 14 – Transportation Information

IATA:	**Proper shipping Name**：Lithium metal batteries/packed with equipment/contained in equipment
	UN Number:UN3090/UN3091
	The battery has passed the test items of UN Model Regulations, Manual of tests and Criteria, part III, Sub-section 38.3. According to IATA DGR 66th Edition, PACKING INSTRUCTION 968-970 of section II or IB for transportation.
IMO：	**Proper shipping Name**：Lithium metal batteries/packed with equipment/contained in equipment
	UN Number:UN3090/UN3091
	The battery has passed the test items of UN Model Regulations, Manual of tests and Criteria, part III, Sub-section 38.3. The goods is not restricted to IMO IMDG code （Amend 42-24）according To special provision 188.

DBV Batteries

CR2450T-20250101

Section 15-Regulatory Information

US DOT.

Effective December 29, 2004, the DOT requires that the outside of each package the contains primary lithium batteries, regardless of size of number of batteries, batteries, be labeled with the following statement, ” PRIMARY LITHIUM BATTERIES-FOBIDDEN FOR TRANSPORT ABOARD PASSENGER AIRCRAFT”, The labeling requirement covers shipments via highway, rail vessel or cargo-only aircraft and covers all shipment inside, into or out of the US. The label must be in contrasting color and the letters must be 12mm (0.5 in) in height for packages weighing more than 30Kg and 6mm (0.25 in) in height for packages weighting less than 30Kg

Section 16-Other Information

If you want further information, please contact:

FAE
Frank Lee
Double Best Corporation Limited
5F.,No.37,Ln.221,Gangqian Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C)
Tel: +886-2-8751-9188

Last data revised 2025.01.01