




Sample Description:											
Client		Paul C. Buff, Inc.									
Address		2725 Bransford Avenue Nashville, Tennessee 37204									
Manufacturer		Shandong Goldencell Electronics Technology Co., Ltd									
Address		Fifth Fuyuan Road, Thailand Industrial Park, Hi Tech District Zaozhuang City, Shandong Province									
Name of samples		Lithium ion Battery									
Model/type reference		VLXBAT									
Trademark		-									
Nominal Voltage	25.6V	Rated Capacity	6.2Ah (158.7Wh)								
Standard Charge Current	1240mA (0.2C)	Max. Continuous Charge Current	1500mA								
Limited Charge Voltage	29V	Cut-Off Voltage	20V								
Max. continuous Discharge Current	20A	Cells Number	16 cells								
Rated Capacity of Single Cell	3.1Ah	Appearance of Samples	Purple and Prismatic								
Classification of Samples	Small Lithium ion Batteries	Size (T×W×L)	53.0×105.0×155.0mm								
Receiving Date	2014-05-19	Completing Date	2014-05-29								
<p>Tested according to: Amendments to the Fifth Revised Edition of the Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria, section 38.3 lithium batteries (ST/SG/AC.10/11/Rev.5/Amend.1 section 38.3).</p>											
<p>Test items:</p> <table> <tr> <td>Test 1: Altitude simulation</td> <td>Test 5: External short circuit</td> </tr> <tr> <td>Test 2: Thermal Test</td> <td>Test 6: Impact</td> </tr> <tr> <td>Test 3: Vibration</td> <td>Test 7: Overcharge</td> </tr> <tr> <td>Test 4: Shock</td> <td>Test 8: Forced discharge</td> </tr> </table>				Test 1: Altitude simulation	Test 5: External short circuit	Test 2: Thermal Test	Test 6: Impact	Test 3: Vibration	Test 7: Overcharge	Test 4: Shock	Test 8: Forced discharge
Test 1: Altitude simulation	Test 5: External short circuit										
Test 2: Thermal Test	Test 6: Impact										
Test 3: Vibration	Test 7: Overcharge										
Test 4: Shock	Test 8: Forced discharge										
<p>Test Conclusion: The Lithium ion Battery submitted by Paul C. Buff, Inc. is tested according to Section 38.3 of Amendments to the Fifth Revised Edition of the Recommendations on the Transport of Dangerous Goods, Manual of Test and Criteria (ST/SG/AC.10/11/Rev.5/Amend.1). Test results: PASS</p>											
Tested by: Gary Wu		Reviewed by: Kevin Zou									
		Approved by:  Seal of NTEK									



Shenzhen Toby Technology Co.,Ltd.

1A/F., Bldg.6, Yusheng Industrial Zone, The National Road No.107
Xixiang Section 467, Xixiang, Bao'an, Shenzhen, Guangdong
Tel:0755-26509301 Fax:0755-26509195 www.toby.com.cn

CERTIFICATE OF CONFORMITY

Certificate No.: TB14058096

The following products has been tested by us with the listed standards and found in compliance with the technical requirements stipulated in Paragraph 1 of Article 8 of Electrical Appliance and Material Safety Law and the requirements defined by the ordinance of the Ministry of Economy, Trade and Industry based on Paragraph 2 of Article 9 of the Law.

Applicant : Paul C. Buff, Inc.
Address : 2725 Bransford Avenue Nashville, Tennessee 37204
Manufacturer : Shandong Goldencell Electronics Technology Co.,Ltd.
Address : Fifth Fuyuan Road, Thailand Industrial Park, Hi-Tech District
Zaozhuang City, Shandong Province, China
Product : Lithium ion Battery
Model(s) : VLXBAT
Report No. : TB-PSE140317

Test Standards	
Electrical Appliance and Material Safety Law Appendix 9	Lithium-ion Battery

The statement is based on a single evaluation of representative samples of above mentioned products. It does not imply an assessment of the whole production and does not permit the use of the test lab. logo.

After preparation of the necessary technical documentation as well as the conformity declaration, in order for a notifying importer to sell electrical appliance, in addition to fulfilling the obligation of complying with technical requirements, the importer should make sure that, the PSE marking as shown below should be affixed on the products.



Justin Zhang
Justin Zhang
(Manager)
May 28, 2014



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CERTIFICATE OF CONFORMITY

證書番号: TB14058097

適合証明

以下の製品に関し、下記該当規格による当社実施の試験にて電気用品安全法、第 8 項、第 1 章で規定の技術要求事項および経済産業省令第 9 項、第 2 章で定義された要求事項に適合することを証明する。

申請者: Paul C. Buff, Inc.
申請者住所: 2725 Bransford Avenue Nashville, Tennessee 37204
製造者: 山東精工電子科技有限公司
製造者住所: 山東省棗莊市ハイテク産業開発区工業園の復元タイ 5 番
製品名称: リチウムイオン電池
モデル番号: VLXBAT
報告番号: TB-PSE140317

試験規格	
電気用品安全法 別表第九	リチウムイオン蓄電池

このステートメントは上記製品の代表的サンプル 1 回の評価に基づくものであり、製品全てを含んでいるものではない。従って評価試験所のロゴの使用は許可しない。

電気機器を販売する届出輸入業者は技術要件に適合する義務を満たすことに加え、適合証明取得および必要技術文書準備の後、下記 PSE マークを製品に貼付しなければならないことを確認する必要がある。



Justin Zhang
(Manager)
May 28, 2014



Material Safety Data Sheet

For

Paul C. Buff, Inc.

2725 Bransford Avenue Nashville, Tennessee 37204

and for their product

Lithium Ion Battery

Model/type reference: VLXBAT

Nominal Voltage.....: 25.6V

Typical Capacity.....: 6.2Ah

Weight.....: N/A.

Shape and Physical Dimension
(mm).....: L: 186±2
W: 127±2
T: 60±2

Version number.....: V1.0

Revision date.....: N/A.

Laboratory: Shenzhen STONE Testing Technology Co., Ltd.

Address: East of F/4, Bldg. 11B, Area A, Tanglang Industrial Park, Taoyuan
Street, Nanshan District, Shenzhen, Guangdong, China

Compiled by (name+ signature) ...: *Andy Huang*

Approved by (+ signature): *sthan chen*



Section 1- Chemical Product and Company Identification

Product Identification: Lithium Ion Battery

Model: VLXBAT

Manufacturer's/Supplier Name: Shandong Goldencell Electronics Technology Co., Ltd.

Address: Fifth Fuyuan Road, Thailand Industrial Park, Hi Tech District Zaozhuang City, Shandong Province, China (post code: 277800)

Telephone number of the supplier: 86-632-5292512

Emergency Telephone No.(24h): 86-632-5292512

Fax: 86-632-5199218

E-mail address: market13@heter.biz

Preparation Date: 2014-05-16

This MSDS was prepared by Shandong Goldencell Electronics Technology Co., Ltd.

Item Number: STT20140514308R

Referenced documents: ISO 11014:2009 Safety data sheet for chemical products

Section 2 – Hazards Identification

Preparation hazards and classification	Not dangerous with normal use. Do not dismantle, open or shred Lithium-ion Battery the ingredients contained within or their ingredients products could be harmful.
Appearance, Color, and Odor	Solid object with no odor, no color.
Primary Route(s) of Exposure	These chemicals are contained in a sealed stainless steel enclosure. Risk of exposure occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, exposure to the electrolyte solution contained within can occur by Inhalation, Ingestion, Eye contact and Skin contact
Potential Health Effects:	<p>ACUTE (short term): see Section 8 for exposure controls In the event that this battery has been ruptured, the electrolyte solution contained within the battery would be corrosive and can cause burns.</p> <p>Inhalation: Inhalation of materials from a sealed battery is not an expected route of exposure. Vapors or mists from a ruptured battery may cause respiratory irritation.</p> <p>Ingestion: Swallowing of materials from a sealed battery is not an expected route of exposure. Swallowing the contents of an open battery can cause serious chemical burns of mouth, esophagus, and gastrointestinal tract.</p> <p>Skin: Contact between the battery and skin will not cause any harm. Skin contact with contents of an open battery can cause severe irritation or burns to the skin.</p> <p>Eye: Contact between the battery and the eye will not cause any harm. Eye contact with contents of an open battery can cause severe irritation or burns to the eye.</p> <p>CHRONIC (long term): see Section 11 for additional toxicological data</p>



Medical Conditions Aggravated by Exposure	Not applicable
Reported as carcinogen	Not applicable

Section 3 – Composition/Information on Ingredients

Battery s a mixture.

Hazardous Ingredients (Chemical Name)	Concentration or concentration ranges (%)	CAS Number
Aluminum Foil(Al)	4.0%	7429-90-5
Copper Foil (Cu)	9.22%	7440-50-8
Graphite(C)	20.10%	7782-42-5
Carboxymethyl Cellulose (CMC)	1.10%	9004-32-4
Lithium Iron Phosphate (LiFePO ₄)	38.09%	15365-14-7
Super-P	0.62%	7782-42-5
KS-15	0.34%	7782-42-5
Poly(vinylidene fluoride) (PVDF)	1.04%	24937-79-9
Separator (PP)	0.23%	9003-07-0
PET	0.2%	25038-59-9
SPCC	25.06%	N/A

Labeling according to EC directives.

No symbol and risk phrase are required.

Note: CAS number is Chemical Abstract Service Registry Number.

N/A=Not apply.

Section 4 – First-aid Measures

Inhalation	If contents of an opened battery are inhaled, remove source of contamination or move victim to fresh air. Obtain medical advice.
Skin contact	If skin contact with contents of an open battery occurs, as quickly as possible remove contaminated clothing, shoes and leather goods. Immediately flush with



	lukewarm, gently flowing water for at least 30 minutes. If irritation or pain persists, seek medical attention. Completely decontaminate clothing, shoes and leather goods before reuse or discard.
Eye contact	If eye contact with contents of an open battery occurs, immediately flush the contaminated eye(s) with lukewarm, gently flowing water for at least 30 minutes while holding the eyelids open. Neutral saline solution may be used as soon as it is available. If necessary, continue flushing during transport to emergency care facility. Take care not to rinse contaminated water into the unaffected eye or onto face. Quickly transport victim to an emergency care facility.
Ingestion	If ingestion of contents of an open battery occurs, never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. DO NOT INDUCE VOMITING. Have victim drink 60 to 240 mL (2-8 oz.) of water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Have victim rinse mouth with water again. Quickly transport victim to an emergency care facility.

Section 5 – Fire-fighting Measures

Flammable Properties	In the event that this battery has been ruptured, the electrolyte solution contain within the battery would be flammable. Like any sealed container, battery cells may rupture when exposed to excessive heat; this could result in the release of flammable or corrosive materials.
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Suitable extinguishing Media	Use extinguishing media suitable for the materials that are burning.
Unsuitable extinguishing Media	Not available
Explosion Data	Sensitivity to Mechanical Impact: This may result in rupture in extreme cases Sensitivity to Static Discharge: Not Applicable
Specific Hazards arising from the chemical	Fires involving Lithium-ion Battery can be controlled with water. When water is used, however, hydrogen gas may evolve. In a confined space, hydrogen gas can form an explosive mixture. In this situation, smothering agents are recommended to extinguish the fire
Protective Equipment and precautions for firefighters	As for any fire, evacuate the area and fight the fire from a safe distance. Wear a pressure-demand, self-contained breathing apparatus and full protective gear. Fight fire from a protected location or a safe distance. Use NIOSH/MSHA approved full-face self-contained breathing apparatus(SCBA) with full protective gear.
NFPA	Health: 0 Flammability: 0 Instability: 0



Section 6 – Accidental Release Measures

Personal Precautions, protective equipment, and emergency procedures	Restrict access to area until completion of clean-up. Do not touch the spilled material. Wear adequate personal protective equipment as indicated in Section 8.
Environmental Precautions	Prevent material from contaminating soil and from entering sewers or waterways.
Methods and materials for Containment	Stop the leak if safe to do so. Contain the spilled liquid with dry sand or earth. Clean up spills immediately.
Methods and materials for cleaning up	Absorb spilled material with an inert absorbent (dry sand or earth). Scoop contaminated absorbent into an acceptable waste container. Collect all contaminated absorbent and dispose of according to directions in Section 13. Scrub the area with detergent and water; collect all contaminated wash water for proper disposal.

Section 7 – Handling and Storage

Handling	<p>Don't handling Lithium-ion Battery ith metalwork. Do not open, disassemble, crush or burn battery. Ensure good ventilation/ exhaustion at the workplace.</p> <p>Prevent formation of dust.</p> <p>Information about protection against explosions and fires: Keep ignition sources away- Do not smoke.</p>
Storage	<p>If the Lithium-ion Battery are subject to storage for such a long term as more than 3 months, it is recommended to recharge the Lithium-ion Battery periodically.</p> <p>3 months: -10°C~+40°C, 45 to 85%RH</p> <p>And recommended at 0°C~+35°C for long period storage.</p> <p>The capacity recovery rate in the delivery state (50% capacity of fully charged) after storage is assumed to be 80% or more.</p> <p>The voltage for a long time storage shall be 3.7V~4.2V range.</p> <p>Do not storage Lithium-ion Battery haphazardly in a box or drawer where they may short-circuit</p>



	<p>each other or be short-circuited by other metal objects.</p> <p>Keep out of reach of children.</p> <p>Do not expose Lithium-ion Battery to heat or fire. Avoid storage in direct sunlight.</p> <p>Do not store together with oxidizing and acidic materials.</p>
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Section 8 – Exposure Controls and Personal Protection

Engineering Controls	<p>Use local exhaust ventilation or other engineering controls to control sources of dust, mist, fumes and vapor.</p> <p>Keep away from heat and open flame. Store in a cool, dry place.</p>
Personal Protective Equipment	<p>Respiratory Protection: Not necessary under normal conditions.</p> <p>Skin and body Protection: Not necessary under normal conditions, Wear neoprene or nitrile rubber gloves if handling an open or leaking battery.</p> <p>Hand protection: Wear neoprene or natural rubber material gloves if handling an open or leaking battery.</p> <p>Eye Protection: Not necessary under normal conditions, Wear safety glasses if handling an open or leaking battery.</p>
Other Protective Equipment	Have a safety shower and eye wash fountain readily available in the immediate work area.
Hygiene Measures	<p>Do not eat, drink, or smoke in work area.</p> <p>Maintain good housekeeping.</p>

Section 9 - Physical and Chemical Properties

Physical State	Form: Solid	
	Color: Silver	
	Odour: Monotony	
Change in condition:		
pH, with indication of the concentration		Not applicable
Melting point/freezing point		Not available.



Boiling Point, initial boiling point and Boiling range:	Not available.
Flash Point	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapor Pressure:	Not applicable
Vapor Density: (Air = 1)	Not applicable
Density/relative density	Not available.
Solubility in Water:	Insoluble
n-octanol/water partition coefficient	Not available.
Auto-ignition temperature	130°C
Decomposition temperature	Not available.
Odour threshold	Not available.
Evaporation rate	Not available.
Flammability (soil, gas)	Not available.
Viscosity	Not applicable

Section 10 - Stability and Reactivity

Stability	The product is stable under normal conditions.
Conditions to Avoid (e.g. static discharge, shock or vibration)	Do not subject Lithium-ion Battery to mechanical shock. Vibration encountered during transportation does not cause leakage, fire or explosion. Do not disassemble, crush, short or install with incorrect polarity. Avoid mechanical or electrical abuse.
Incompatible Materials	Not Available
Hazardous Decomposition Products	This material may release toxic fumes if burned or exposed to fire
Possibility of Hazardous Reaction	Not Available

Section 11 - Toxicological Information

Irritation	Risk of irritation occurs only if the cell is mechanically, thermally or electrically abused to the point of compromising the enclosure. If this occurs, irritation to the skin, eyes and respiratory
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	tract may occur.
Sensitization	Not Available
Neurological Effects	Not Available
Teratogenicity	Not Available
Reproductive Toxicity	Not Available
Mutagenicity (Genetic Effects)	Not Available
Toxicologically Synergistic Materials	Not Available

Section 12 - Ecological Information

General note:	Water hazard class 1(Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Anticipated behavior of a chemical product in environment/possible environmental impact/ecotoxicity	Not Available
Mobility in soil	Not Available

Persistence and Degradability	Not Available
Bioaccumulation potential	Not Available
Other Adverse Effects	Not Available

Section 13 – Disposal Considerations

Product disposal recommendation: Observe local, state and federal laws and regulations.

Packaging disposal recommendation: Be aware discarded batteries may cause fire, tape the battery terminals to insulate them. Don't disassembly the battery. Completely discharge containers(no tear drops, no powder rest, scraped carefully). Containers may be recycled or re-used. Observe local, state and federal laws and regulations.

Section 14 – Transport Information

The Lithium-ion Battery had passed the test UN 38.3 and are classified as dangerous goods; Paul C. Buff, Inc.'s Lithium-ion Battery comply with the UN Recommendations on the Transport of Dangerous Goods; IATA Dangerous Goods regulations, and applicable U.S. DOT regulations for the



safe transport of Lithium-ion Battery.

The LITHIUM ION BATTERY according to NEW PACKING INSTRUCTION Section II 965-967 of IATA DGR 55th Edition for transportation.

More information concerning shipping, testing, marking and packaging can be obtained from label master at <http://www.labelmaster.com/>.

Each package must be labeled with a Lithium-ion Battery handling label.

Lithium-ion Lithium-ion Battery can be treated as "Non-dangerous goods" under the United Nations Recommendations on the Transport of Dangerous Goods, Special Provision 188, provided that packaging is strong and prevent the products from short-circuit.

With regard to transport, the following regulations are cited and considered:

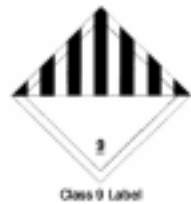
- The International Civil Aviation Organization(ICAO) Technical Instructions.
- The International Air transport Association (IATA) Dangerous Goods Regulations.
- The International Maritime Dangerous Goods (IMDG) Code.
- The US Hazardous Materials Regulation (HMR) pursuant to a final rule issued by RSPA
- The Office of Hazardous Materials Safety within the US Department of Transportations' (DOT) Research and Special Programs Administration (RSPA)

Paul C. Buff, Inc.'s Lithium-ion Battery comply with the UN Recommendations on the Transport of Dangerous Goods; IATA Dangerous Goods regulations, and applicable U.S. DOT regulations for the safe transport of Lithium-ion Battery. Batteries containing these cells should be transported as Class 9 hazardous material, except for those battery types declared to be exempt (contact Paul C. Buff, Inc. for a current listing of exempt batteries) and/or the Lithium-ion Battery have been tested under provisions of the UN Manual of Tests and Criteria, Part III, sub-section 38.3 and are classified as non-dangerous goods.

The Lithium Ion Battery according to NEW PACKING INSTRUCTION 965-967 of IATA DGR 54th Edition for transportation.

Each package had labeled with a Lithium-ion Battery handling label.

The following information is provided for domestic and international transport.

DOT regulations:		
UN Classification (Transport Hazard class):	9	
UN number:	3481	
Packing group:	II	
UN Proper shipping name(technical name):	LITHIUM BATTERIES	
Marine pollutant(Y/N)	Y	
Label:	9	
Land transport ADR/RID (cross-broder):		



warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. users should make their own investigations to determine the suitability of the information for their particular purposes. although reasonable precautions have been taken in the preparation of the data contained herein, it is offered solely for your information, consideration and investigation. this material safety data sheet provides guidelines for the safe handling and use of this product; it does not and cannot advise on all possible situations, therefore, your specific use of this product should be evaluated to determine if additional precautions are required.

The data/information contained herein has been reviewed and approved for general release on the basis that this document contains no export controlled information.

*****The End*****