材料安全数据表
MATERIAL SAFETY DATA SHEET

报告编号/Report No: STS2401024B02

Issued for

DONGGUAN SMARFODY MOBILITY TECHNOLOGY CO.LTD.

Room 202,Building2,No. 9,Junpu Industry 1ST Road,Houjie Town,Dongguan City,Guangdong Province，China

产品名称: **Product Name:**	锂离子电池 Lithium-ion Battery
型号名称: **Model Name:**	T300 T330 T580
标称电压: **Nominal Voltage:**	25.9V
额定容量: **Rated Capacity:**	10.4Ah
商标: **Brand:**	/
版本号: **Version number:**	V1.0

修订历史/Revision History

Rev.	Issue Date	Report No.	Effect Page	Contents
00	2024-01-16	STS2401024B02	ALL	Initial Issue

Section 1-化学品及企业标识 Chemical Product and Company Identification

产品名称Product Identification:	锂离子电池 Lithium-ion Battery
商标Brand Name:	/
型号名称Model Name:	T300
Rated Power:	269Wh
制造商 Manufacture's/Supplier Name:	深圳市博贝斯科技有限公司 Shenzhen Bobes Technology Co.,Ltd
地址 Address:	中国广东省深圳市龙华区大浪街道华盛路 134 号雅景轩商业大厦 1448 室 Room 1448, Yongjingxuan Commercial Building, 134 Huasheng Road, Dalang Street, Longhua District, Shenzhen，Guangdong Province，China
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This MSDS was prepared by Shenzhen STS Test Services Co., Ltd.

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

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SHENZHEN STS TEST SERVICES CO.,LTD. TESTING APPROVAL

Section 2 –危险性概述 Hazards Identification

爆炸危险性 Explosive risk	该物品不属于爆炸危险品 This article does not belong to the explosion dangerous goods
易燃危险性 Flammable risk	该物品不属于易燃危险品 This article does not belong to the flammable material
氧化危险性 Oxidation risk	该物品不属于氧化危险品 This article does not belong to the oxidation of dangerous goods
毒害危险性 Toxic risk	该物品不属于毒害危险品 This article does not belong to the toxic dangerous goods
放射危险性 Radioactive risk	该物品不属于放射危险品 This article does not belong to the radiation of dangerous goods
腐蚀危险性 Mordant risk	该物品不属于腐蚀危险品 This article does not belong to the corrosion of dangerous goods
其他危险性 other risk	该电池瓦时率 37Wh，属于锂离子电池（包括锂离子聚合物电池） Watt hour rate 37Wh, which belong to the Lithium ion batteries (including lithium ion polymer batteries)

Section 3 –成分/组成信息 Composition/Information on Ingredients

化学名称 Chemical Name	百分含量 Percentage content	CAS号 CAS Number
钴酸锂 Lithium cobaltate	15-40%	12190-79-3
石墨 Graphite	10-30%	7782-42-5
六氟磷酸锂 Phosphate(1-), hexafluoro-, lithium	10-30%	21324-40-3
铜 Copper	7-13%	7440-50-8
铝 Aluminium	5-10%	7429-90-5
镍 Nickel	1-5%	7440-02-0

Section 4 –急救措施 First-aid Measures

吸入： Inhalation	立即从暴露处移至空气清新处，如果呼吸困难给予输氧，立即就医。 Remove from exposure and move to fresh air immediately. Use oxygen if available.
皮肤接触Skin contact	万一接触，用大量水冲洗至少 15 分钟，同时除去污染的衣物和鞋子，迅速就医。 Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.
眼睛接触Eye contact	万一接触，立即用大量的清水冲洗至少 15 分钟，翻起上下眼睑，直到化学的残留物消失为止， 迅速就医。 Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
食入Ingestion	饮用两杯牛奶或水。如果当事人仍然清晰可以采取催吐的方法，并且立即就医。 Give at least 2 glasses of milk or water. Induce vomiting unless patient is unconscious. Call a physician

Section 5 –消防措施 Fire-fighting Measures

燃点： Flash Point:	不适用 N/A
自燃温度： Auto-Ignition Temperature:	不适用 N/A.
灭火介质： Extinguishing Media:	大量水（降温），二氧化碳 Water, CO2
特殊灭火程序： Special Fire-Fighting Procedures:	自给式呼吸器 Self-contained breathing apparatus.
异常火灾或爆炸： Unusual Fire and Explosion Hazards:	当电芯暴露于过热的环境中时，安全阀可能会打开。 Cell may vent when subjected to excessive heat-exposing battery contents.
燃烧产生的危险物品： Hazardous Combustion Products:	一氧化碳，二氧化碳，锂氧化物烟气 Carbon monoxide, carbon dioxide, lithium oxide fumes.

Section 6 –泄露应急处理 Accidental Release Measures

为防止电池材料泄露或释放采取的措施 Steps to be Taken in case Material is Released or Spilled	如果电池内部材料泄露，试验人员应立刻撤离试验区直到烟气消散。将通风设备打开吹散危 险性气体。用抹布擦净试验区，清除溢出的液体，将泄露电池放进塑料袋中，然后放进钢制容器。 避免皮肤和眼睛接触或吸入有害气体。 If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Wipe it up with a cloth, and dispose of it in a plastic bag and put into a steel can. The preferred response is to leave the area and allow the battery to cool and vapors to dissipate. Provide maximum ventilation. Avoid skin and eye contact or inhalation of vapors. Remove spilled liquid with absorbent and incinerate.
废弃物处置方法 **Waste Disposal Method**	建议将电池完全放电，消耗电池内部的锂金属，并且深埋于土壤中。 It is recommended to discharge the battery to the end, to use up the metal lithium inside the battery, and to bury the discharged battery in soil.

Section 7 –处理和储存 Handling and Storage

处理： Handling：	禁止打开、毁坏或焚烧电池，因为电池有可能在这些处理过程中发生爆炸、破裂或泄露等事故。 禁止将电池短路、过充、强制放电或扔入火中。禁止挤压刺穿电池或将电池浸入溶液中。 The battery should not be opened, destroyed or incinerate, since they may leak or rupture and release to the environment the ingredients that they contain in the hermetically sealed container. Do not short circuit terminals, or over charge the battery, forced over-discharge, throw to fire. Do not crush or puncture the battery, or immerse in liquids.
操作处置和储存中的防范措施： **Precautions to be taken in handling and storing：**	禁止物理或电滥用，禁止高温储存，最好将电池储存在阴凉、干燥、通风等温度变化较小的环境 中。禁止将电池接触加热设备或将电池直接暴露与阳光中。 Avoid mechanical or electrical abuse. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Storage at high temperatures should be avoided. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.

其他要注意的防范措施： Other Precautions：	拆解、挤压、直接放入火中或高温条件下，电池可能发生爆炸和燃烧。禁止短接或将电池正负极 错误的安装在设备中。 The battery may explode or cause burns, if disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity.

Section 8 –接触控制和个人防护 Exposure Controls and Personal Protection

呼吸防护： **Respiratory Protection：**	当电池排气阀打开时，应尽量使通风设备开至最大，避免将打开排气阀的电芯局限在某一狭窄空 间内。正常操作条件下，呼吸保护是不必要的。 In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores. Respiratory Protection is not necessary under conditions of normal use.
通风条件： Ventilation：	正常使用条件下不需要。 Not necessary under conditions of normal use.
防护手套： Protective Gloves：	正常使用条件下不需要。 Not necessary under conditions of normal use.
其他防护服装或设备： Other Protective Clothing or Equipment：	正常使用条件下不需要。 Not necessary under conditions of normal use.
电池开阀试验时应做好个人防护 呼吸防护，防护手套，防护服装和有护边的安全玻璃罩都是要准备的。 Personal Protection is recommended for venting battery Respiratory Protection, Protective Gloves, Protective Clothing and safety glass with side shields.	

Section 9 -物理和化学特性 Physical and Chemical Properties

外形： Appearance:	方型 Square
颜色： Color：	黑色 Black
气味： Odour:	泄漏时，有醚的气味。 If leaking, smells of medical ether.
酸碱度： pH:	不适用 Not applicable as supplied.
燃点： Flash Point:	除单个电芯暴露试验外其他不适用。 Not applicable unless individual components exposed.

可燃性： Flammability:	除单个电芯暴露试验外其他不适用。 Not applicable unless individual components exposed.
相对密度： Relative density:	除单个电芯暴露试验外其他不适用。 Not applicable unless individual components exposed
溶解性（水溶性）： Solubility (water):	除单个电芯暴露试验外其他不适用。 Not applicable unless individual components exposed
溶解性（其他）： Solubility (other):	除单个电芯暴露试验外其他不适用。 Not applicable unless individual components exposed

Section 10 -稳定性和反应活性 Stability and Reactivity

稳定性： Stability：	该产品在正常条件下稳定 The product is stable under normal conditions.
应避免的条件： Conditions to Avoid :	加热 70°C 以上或焚烧。变形。毁坏。粉碎。拆卸。过充电。短路。长时间暴露 在潮湿的条件下。 Heat above 70°C or incinerate. Deform. Mutilate. Crush. Disassemble. Overcharge. Short circuit. Expose over a long period to humid conditions.
应避免的材料： Materials to avoid:	氧化剂，碱，水。 Oxidising agents, alkalis, water.
危险分解物： Hazardous Decomposition Products :	有毒烟雾，并可能形成过氧化物。 Toxic Fumes, and may form peroxides.
聚合危害： Hazardous Polymerization :	不适用 N/A.
如果发生泄露，避免与强氧化剂，无机酸，强碱，卤代烃接触。 If leaked, forbidden to contact with strong oxidizers, mineral acids, strong alkalies, halogenated hydrocarbons.	

Section 11 -毒理学资料 Toxicological Information

标志及症状： Signs & symptoms:	无，除非电池破裂。 None, unless battery ruptures.
内部物质暴露的情况下，蒸汽烟雾可能对眼睛和皮肤的刺激性。 In the event of exposure to internal contents, vapour fumes may be very irritating to the eyes and skin.	
吸入： Inhalation:	对肺有刺激性。 Lung irritant.
皮肤接触： Skin contact:	对皮肤刺激性。 Skin irritant.
眼睛接触： Eye contact:	对眼睛有刺激性。 Eye irritant

食入： Ingestion:	吞下中毒。 Poisoning if swallowed..
下列情况下健康状况会恶化：万一发生与电池内部材料接触的事故，轻微或严重的刺激，都可能 使皮肤出现干燥和灼烧的感觉，并且损坏靶器官（肝脏，肾脏）的神经。 Medical conditions generally aggravated by exposure: In the event of exposure to internal contents, moderate to server irritation, burning and dryness of the skin may occur, Target organs nerves, liver and kidneys.	

Section 12 -生态学资料 Ecological Information

对哺乳动物的影响： Mammalian effects:	目前未知。 None known at present.
生态毒性： Eco-toxicity:	目前未知。 None known at present.
生物体内积累： Bioaccumulation potential:	慢慢地生物降解。 Slowly Bio-degradable.
环境危害： Environmental fate:	目前没有已知的环境危害。 None known environmental hazards at present.

Section 13 –废弃处置 Disposal Considerations

不要焚烧，或使电池温度超过 70°C，这种滥用可导致泄漏和/或电池爆炸。按照相应的地方性法 规处理。

Do not incinerate, or subject cells to temperature in excess of 70°C, Such abuse can result in loss of seal leakage, and/or cell explosion. Dispose of in accordance with appropriate local regulations.

Section 14 –运输信息 Transport Information

运输标签：第九类危险品标识、仅限货机标识
Label for conveyance: Class 9 hazard label, Cargo Aircraft Only Lable.
UN 编号：Un3480 或Un3481 或 UN3171;
UN Number: Un3480 or Un3481 or UN3171;
包装级别：II
Packaging Group: II
EmS 编号：F-A ,S-I
EmS No: F-A ,S-I
海洋污染物：无
Marine pollutant: No
正确的装运名称:锂离子电池单独运输或锂离子电池伴随设备运输或锂离子电池安装在设备上运输或锂离子电池随整车运输
Proper Shipping name : BATTERY-POWERED VEHICLE/BATTERY-POWERED EQUIPMENT Lithium ion batteries are transported separately or with the equipment or lithium ion
batteries are transported on the equipment or lithium-ion. batteries are transported with the vehicle Proper Shipping name: Separate transport of lithium ion batteries (Including lithium ion polymer batteries)
危害分类：货物应遵守 IATA 第 65 版 DGR 手册包装说明 965 IA 节要求和包装符合 IMDG CODE

（Amdt. 41-22）版要求，包括通过 UN38.3 测试手册要求。

Hazard Classification: The goods shall be complied with the requirements of section IA of Packing Instruction 965 of 65th DGR Manual of IATA. And Package complies with the IMDG CODE（Amdt. 41-22） Edition., including the passing of the UN38.3 test.

Section 15 -法规信息 Regulatory Information

法律信息
Law information
《危险物品规则》
《Dangerous Goods Regulations》
《对危险货物运输的有关规定的建议》
《Recommendations on the Transport of Dangerous Goods Model Regulations》
《国际海运危险货物规则》
《International Maritime Dangerous Goods》
《危险品安全运输技术指令》
《Technical Instructions for the Safe Transport of Dangerous Goods》
《危险货物分类和品名编号》
《Classification and code of dangerous goods》
《职业安全卫生法》
《Occupational Safety and Health Act》(OSHA)
《有毒物质控制法》
《Toxic Substance Control Act》(TSCA)
《消费产品安全法》
《Consumer Product Safety Act》(CPSA)
《联邦环境污染控制法》
《Federal Environmental Pollution Control Act》(FEPCA)
《石油污染法案》
《The Oil Pollution Act》(OPA)
《超级基金修正案和再授权法案Ⅲ(302/311/312/313)》
《Superfund Amendments and Reauthorization Act TitleⅢ (302/311/312/313)》(SARA)
《资源保护及恢复法案》
《Resource Conservation and Recovery Act》(RCRA)
《安全饮用水法》
《Safety Drinking Water Act》(CWA)
《加州 65 提案》
《California Proposition 65》
《美国联邦法规》
《Code of Federal Regulations》(CFR)
根据所有联邦、州和地方法律。
In accordance with all Federal, State and local laws.

Section 16 -其他信息 Other Information

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本文件仅对由委托方东莞灏智动能科技有限公司提供的，并由深圳市博贝斯科技有限公司生产的电池（T300）有效。该电池的成分信息由委托方提供并承诺其完整性和准确性。用户应仔 细阅读此文件，并按照正确的方法使用电池，如因电池使用不当造成的损害或损失，深圳德普华电子测试技术有限公司（STS）不承担任何责任。

This file is only effective to the batteries (T300) provided by commissioner DONGGUAN SMARFODY MOBILITY TECHNOLOGY CO.LTD., which manufactured by Shenzhen Bobes Technology Co.,Ltd.. The commissioner provides the composition information of batteries, and promises its integrity and accuracy. Users should read this file carefully, and use the batteries in correct method. Shenzhen STS Test Services Co., Ltd. (STS) doesn't assume responsibility for any damage or loss because of misuse of batteries.

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