

江门市宏力能源有限公司
Jiangmen Hongli Energy Co.,Ltd.

材料安全数据表

Material Safety Data Sheet

锂-二氧化锰圆柱电池
Li-MnO₂ Cylindrical Battery

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产品名称: 锂-二氧化锰圆柱电池

客户编号/Client No.: NM50HLE

修订日期: 2019年01月02日

Product name: Li-MnO₂ Cylindrical Battery

MSDS No.: N50.160.602.001.HLE-4

Revision date: Jan. 02, 2019

第一部分 产品及企业标识

Section 1 - Product and Company Identification

1.1. 产品标识

Product Identification

产品名称: 锂-二氧化锰圆柱电池

Product name: Li-MnO₂ Cylindrical Battery

型号: CR123A

HS Code: CR123A

版本: 4.0

Version: 4.0

1.2. 物质或混合物的相关用途标识及限制用途

Relevant identified uses of the substance or mixture and uses advised against

推荐用途: 工业、安防

Identified uses: Industry, security

限制用途: 无

Use advised against: None

1.3. 制造商和申请商的详细信息

Details of the manufacturer or applicant

制造商: 江门市宏力能源有限公司

Manufacturer: Jiangmen Hongli Energy Co.,Ltd.

地址: 中国广东江门市蓬江区新南路82号9栋

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Pengjiang district, Jiangmen city, Guangdong province, China.

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Post code: 529000

1.4. 应急电话

Emergency telephone

应急电话: +86-750-3338733

Emergency call: +86-750-3338733

第二部分 危险性概述

Section 2 - Hazard Description

2.1. 物质或混合物的 GHS 分类/GHS Classification:

眼睛损伤/刺激, 类别 1

Eye damaged/irritation, category 1

皮肤腐蚀/刺激, 类别 1B

Skin corrosion / irritation, category 1B

急性毒性, 经口, 类别 4

Acute toxicity, oral, category 4

急性毒性, 吸入, 类别 4

Acute toxicity, inhalation, category 4

生殖毒性, 类别 1B

Reproductive toxicity, category 1B

致癌性, 类别 2

Carcinogenicity, Category 2; H351

靶器官毒性 (反复接触), 类别 1

Specific Target Organ Toxicity (repeated exposure), Category 1; H372

皮肤过敏, 类别 1

Skin sensitisation, Category 1; H317

对水环境有害, 慢性, 类别 1

Hazardous to the aquatic environment, Chronic Category 3; H412

2.2. 标记要素/ Label elements:

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象形图/ Pictograms:



警示词/ Signal word: 危险/ Danger

危险申明/ Dangerous state:

H314 造成严重皮肤灼伤和眼损伤。

H314 Causes severe skin burns and eye damage.

H318 造成严重眼损伤。

H318 Causes serious eye damage.

H302 吞咽有害。

H302 Harmful if swallowed.

H332 吸入有害。

H332 Harmful if inhaled.

H360 可能对生育能力或胎儿造成伤害。

H360 May damage fertility or the unborn child.

H351 怀疑会致癌。

H351 Suspected of causing cancer.

H372 长时间或反复暴露引起器官损害。

H372 Causes damage to organs through prolonged or repeated exposure.

H317 可能引起皮肤过敏反应。

H317 May cause an allergic skin reaction.

H412 对水生生物有害的长期持久的影响。

H412 Harmful to aquatic life with long lasting effects.

警告申明/ Warning statement

预防措施/ Preventive measures:

P260 不要吸入粉尘/烟/气体/烟雾/蒸气/喷雾。

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 作业后彻底清洗。

P264 Do not get in eyes, on skin, or on clothing.

P273 避免释放到环境中。

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P273 Avoid release to the environment.

P280 戴防护手套/穿防护服/戴护目镜/戴面罩.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P261 避免吸入粉尘/气体/烟雾/蒸气/喷雾.

P261 Avoid breathing dust/ Gas / smoke / vapour / spray.

P337 + P313 如发生眼睛刺激: 求医/ 就诊。

P332 + P313 If eyes irritation occurs: Get medical advice/attention.

事故响应/Accident response:

P363 沾污的衣服清洗后方可再用。

P363 Wash contaminated clothing before reuse.

P304 + P340 如吸入: 将患者移到新鲜空气处休息, 并保持呼吸舒畅的姿势。

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P301 + P330 + P331 如果吞咽: 漱口, 不要催吐。

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 如果皮肤(或头发)接触: 立即除去/脱掉所有沾污的衣物, 用水清洗皮肤/淋浴。

P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 如进入眼睛: 用水小心冲洗几分钟。如戴隐形眼镜并可方便地取出, 取出隐形眼镜。继续冲洗。

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301+P312 如误吞咽: 如感觉不适, 呼叫中毒急救中心/医生。

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P304+P340 如误吸入: 将受害人转移到空气新鲜处, 保持呼吸舒适的休息姿势。

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P301 + P310 如果吞下去了: 立即呼救解毒中心或医生。

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P321 具体处置 (见本标签上提供的急救指导)。

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P321 Specific treatment (see first aid on this label).

安全储存/Safety storage:

P235+ P233 存放于通风良好处。保持容器密闭。

P235+ P233 Keep cool. Keep container closed.

废弃处置/Waste disposal:

P501 将内容物/ 容器处理到得到批准的废物处理厂。

P501 Dispose of contents/container to the approval of the waste treatment plant

2.3. 其他危害: 无。

Other hazards: None.

第三部分 成分/组成信息

Section 3 - Composition / Ingredient Data

成分名称/Ingredient name	CAS No.	EC No.	含量% /Wt%
二氧化锰/ Manganese dioxide	1313-13-9	215-202-6	46%
铁/ Iron	7439-89-6	231-096-4	25-30%
碳酸丙烯酯/ Propylene carbonate	108-32-7	203-572-1	7%
聚四氟乙烯/ Poly(tetrafluoroethylene)	9002-84-0	204-126-9	5%
乙二醇二甲醚/ 1,2-Dimethoxyethane	110-71-4	203-794-9	5%
锂/ Lithium	7439-93-2	231-102-5	3.8%
聚丙烯/ Polypropylene	9003-07-0	-	3%
石墨/ Graphite	7782-42-5	231-955-3	2-3%
铝/ Aluminium	7429-90-5	231-072-3	2%
高氯酸锂/ Lithium perchlorate	7791-03-9	232-237-2	1-1.5%
镍/ Nickel	7440-02-0	231-853-9	1%

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第四部分 急救措施

Section 4 - First Aid Measures

急救(适用于从电池内部泄露出的物质)/ First aid (Apply to leak out of the material from inside the battery):

4.1. 一般建议: 向到现场的医生出示此安全技术说明书。在收到急救措施的要求后, 必要时要送往医院治疗。

General advice: Show this safety data sheet to the doctor in attendance. After receiving the first-aid measure required, consult a physician if necessary.

4.2. 皮肤接触: 立即去除污染的衣物和鞋子。用肥皂和大量的水洗掉。如化学烧伤或皮肤持续刺激, 立即就医。

Skin contact: Remove contaminated clothing and shoes immediately. Wash off with soap and plenty of water. If chemical burns or skin sustained stimulation, consult a physician immediately

4.3. 眼睛接触: 检查并删除任何隐形眼镜。得到医学关注。保持眼睑张开, 立即用清水冲洗眼睛至少30分钟, 直到残留的化学残留物为止。提供一种方便洗眼设备和快速安全淋浴。不要用手揉眼睛。

Eyes contact: Check for and remove any contact lenses. Get medical attention. Immediately flush eyes with running water for at least 30 minutes, disappear until the chemical residues so far, keeping eyelids open. Provide a readily-accessible eyewash facility and quick-drench safety shower. Do not rubbing eyes with hand.

4.4. 吸入: 把暴露人员移动到新鲜的空气处。保持人员温暖并休息。如果呼吸停止或者呼吸不规则, 由经过训练的人员提供人工呼吸或者供氧。提供嘴对嘴的人工复苏可能是危险的。如果不利健康影响依然存在或是严重的, 获取医疗照顾。如果无意识, 在恢复的位置立即获得医疗照顾。保持气道开放。

Inhalation: Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

4.5. 食入: 用水漱口。将暴露的人移到新鲜空气中。保持人的温暖并休息。如果材料被吞食和被暴露的人是有意识的, 喝少量的水。如果暴露的人感觉不舒服并呕吐, 给水可能是危险的。除非有医务人员的指导, 不要诱导呕吐。如果发生呕吐, 头部应保持低位, 使呕吐物不能进入肺部。如果不利健康的影响持续或严重的话, 获取医疗照顾。切勿向失去意识的人口喂任何东西。如果无意识, 将在恢复位置并立即寻求医疗救治。保持气道通畅。

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Ingestion: Wash out mouth with water. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway.

4.6. 最重要症状及影响, 急性和慢性的: 最重要的已知的症状和影响如第2部分或第11部分。

Most important acute and delayed symptoms/effects: The most important known symptoms and effects are described in section 2 or section 11.

4.7. 立即治疗和特殊治疗的指示: 继续采取急救措施, 对症治疗和辅助治疗。

Immediate / special treatment: Continue with first aid measures. Treat symptomatically and supportively.

第五部分 消防措施

Section 5 – Firefighting Measures

5.1. 灭火方法和灭火剂: 可以使用水冷却相邻电池以控制火灾的蔓延。小火的首选灭火介质是二氧化碳、干化学或泡沫灭火剂。然而, 用水时产生的氢气可能与空气混合形成爆炸性混合物, 铜粉末灭火器、砂可以作为窒息剂。

Extinguishing media: Can use water cooling adjacent batteries so as to control the spread of fire. The preferred medium for small fire is carbon dioxide, dry chemical, or foam fire extinguishing agent. however, when using water to produce hydrogen gas may be mixed with air to form explosive mixture. Copper powder fire extinguishers, sand can be used as smothering agent.

5.2. 产生的特殊危险物质或混合物: 在燃烧时会释放出有毒气体, 金属氧化物。

Special hazards arising from the substance or mixture: In combustion emits toxic fumes, metallic oxides.

5.3 灭火注意事项及措施: 消防人员必须戴正压式呼吸器, 穿全身消防服, 在上风向灭火。尽可能将容器从火场移至空旷处。喷水保持火场容器冷却, 直至灭火结束。

Firefighters must wear self-contained breathing apparatus, wear full body fire suit, fire extinguishing in the upwind. As far as possible will be transferred to empty containers from the scene. Keep the fire water spray container cooling, until the end of fire.

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第六部分 泄露应急处理

Section 6 - Accidental Release Measures

- 6.1. 个人防护, 防护设备和应急程序: 涉及任何个人风险或没有经过适当的培训不要采取任何行动。疏散周围区域。保持不必要的和未受保护的人员进入。请勿触摸或跨过溢出物质。避免吸入蒸气或烟雾。提供足够的通风。通风不足时戴合适的呼吸器。穿上适当的个人防护设备(参阅第8部分)。

Personal precautions, protective equipment and emergency procedures: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8).

- 6.2. 环境保护措施: 如能确保安全, 可采取措施防止进一步的泄漏或溢出。防止泄漏物进入下水道、地表水和地下水。

Environmental precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

- 6.3. 收容、清除方法及处理材料: 小泄露: 若无危险, 阻止泄漏。移离泄漏区域容器。如果是水溶性的话用水稀释。相应的, 如果不溶于水, 用一种惰性的干燥材料吸收放在适当的废物处理容器中。经由特许的废弃物处理承包商处置。

大泄露: 若无危险, 阻止泄漏。移离泄漏区域容器。从上风向接近泄漏物。防止进入下水道, 水道, 地下室或密闭区域。冲洗溢出物至废水处理厂或者进行如下操作。遏制和用不燃吸收剂收集泄漏物如沙、土、蛭石、硅藻土。根据当地法规处理容器(见第13部分)。经由特许的废弃物处理承包商处置。被污染的吸附物质可能和溢出产品带来同样的危害。注: 见应急联系信息和废物处理第8部分。

必须遵守当地的废物处理法规。

Collecting, clearing method and disposal material: Small spill: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor. Large spill: Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with

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non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

Note: see section 1 for emergency contact information and section 13 for waste disposal.

Local waste disposal regulations must be followed

第七部分 操作处置与储存

Section 7 - Handling and Storage

7.1. 操作注意事项: 使用时不要反向的位置 (+) 和负 (-) 端子。不要将电池连接到电源插座上。不要使用或离开电池靠近热源, 如消防或加热。不要将电池浸泡在水中或海水中, 并将电池放在阴凉干燥的环境中, 如果它在使用储存过程中电池发出异味、发热、变色、变形或出现任何异常, 立即将电池从装置移除, 停止使用。不要将电池过度的振动, 避免短路, 然而短时间的意外短路不会对电池有严重影响。长时间的短路可以使电池丢失能量, 产生大量的热烧伤皮肤, 甚至引起火灾或爆炸。混乱的电池散装货箱, 硬币, 金属饰品, 或金属带等用于组装的电池装置都可能是引起短路的来源。电池运输或储存时应具备有效防短路措施, 不要拆卸分解或损毁电池。远离热源、火花、明火和热表面。

Precautions for handling: Don't reverse the position (+) and negative (-) terminals when used. Don't connect the battery to an electrical outlet. Don't use or leave the battery near a heat source as fire or heater. If the battery gives off an odor, generates heat, becomes discolored or deformed, or in any way appear abnormal during use or storage, immediately remove it from the device and stop using. Don't put the battery excessive vibration, avoid short circuit, however accidental short circuit for a short period of time will not have a serious impact on the battery. Long-term short circuit can make battery loss of energy, generate a lot of heat burn skin, and even cause a fire or explosion. Chaos of the battery in bulk in containers, coins, metal accessories, metal workbench, covered by or metal belt and so on battery device can be used for assembly is the source of cause a short-circuit. Transport or storage battery should have effective measures of prevent short circuit. Don't disassembly or damage to the battery. Away from heat, sparks, open flames and hot surfaces.

7.2. 存储的条件, 包括任何不相容性: 存放在阴凉、干燥、通风的地方, 高温、泄露和生锈可能导致电池性能损失。不要将电池暴露在明火下, 远离水储存。

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Conditions for safe storage, including any incompatibilities: Stored in a cool, dry and ventilated place, may cause the battery performance loss under high temperature, leakage, rust. Don't expose the battery under the open flame, stored away from moisture.

第八部分 接触控制/个人防护

Section 8 - Exposure Controls/ Personal Protection

- 8.1. 接触限值: 石墨: ACGIH TLV-TWA 2 mg/m³, OSHA PEL (Gen Indu): 8H TWA 15 mppcf;
 锂: PC-TWA: 3 mg/m³; OSHA PEL (Gen Indu): 8H TWA 15 mg(Al)/m³, 总尘;
 ACGIH TLV-TWA 10 mg(Al)/m³ (金属粉尘);
 镍: PC-TWA: 3 mg/m³; OSHA PEL (Gen Indu): 8H TWA 15 mg(Al)/m³, 总尘;
 ACGIH TLV-TWA 10 mg(Al)/m³ (金属粉尘);
 二氧化锰: MSHA STANDARD-air: CL 5 mg(Mn)/m³; OSHA PEL (Gen Indu): CL 5 mg(Mn)/m³;
 铝: ACGIH TLV-TWA 10 mg(Al)/m³ (金属粉尘), OSHA PEL (Gen Indu): 8H TWA 15 mg(Al)/m³ (总尘)。
 Exposure limit: Graphite: ACGIH TLV-TWA 2 mg/m³, OSHA PEL (Gen Indu): 8H TWA 15 mppcf;
 Aluminium: PC-TWA: 3 mg/m³; OSHA PEL (Gen Indu): 8H TWA 15 mg(Al)/m³, total dust;
 ACGIH TLV-TWA 10 mg(Al)/m³ (metal dust);
 Nickel: OSHA PEL (Gen Indu): 8H TWA 1 mg(Ni)/m³; OSHA PEL (Gen Indu): 8H TWA 1 mg(Ni)/m³;
 Manganese dioxide: MSHA STANDARD-air: CL 5 mg(Mn)/m³; OSHA PEL (Gen Indu): CL 5 mg(Mn)/m;
 Aluminium: ACGIH TLV-TWA 10 mg(Al)/m³ (metal dust),
 OSHA PEL (Gen Indu): 8H TWA 15 mg(Al)/m³, total dust.
- 8.2. 工程控制: 保持充分的通风, 以保持空气中的低浓度。提供安全洗眼和淋浴设备。
 Engineering control: Use adequate ventilation to keep airborne concentrations low. Equipped with safety shower and eyes bath.
- 8.3. 呼吸系统防护: 如果电池泄露必须尽可能保持空气流通, 避免狭窄的地方操作, 在正常的使用条件下呼吸的保护设备是不必要的。在过多的空气污染存在的情况下, 可能需要呼吸防护。
 Respiratory protection: If the batteies leaks must try to keep the air circulation, avoid operating in a

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narrow place. In the normal conditions of use respiratory protective equipment is not necessary. Respiratory protection may be required under exceptional circumstances when excessive air contamination exists.

8.4. 眼睛防护: 正常条件下无必要, 如果电池破损或是泄露佩戴化学安全防护眼镜。

Eye protection: Not necessary under normal conditions, if the battery damaged or leaking wear goggles/safety glasses giving complete eye protection.

8.5. 皮肤和身体防护: 正常条件下无必要, 如果电池破损或是泄露穿适当的防护服。

Skin and body protection: Not necessary under normal conditions, if the battery damaged or leaking wear appropriate clothing to minimize skin exposure.

8.6. 手防护: 正常条件下无必要, 如果电池破损或是泄露佩戴适当的防护手套。

Hand protection: Not necessary under normal conditions, if the battery damaged or leaking wear appropriate protective gloves

8.7. 其他防护: 工作场所严禁吸烟、进食、饮水, 工作后淋浴更衣。遵循一般防范措施, 衣物被污染须立即更换, 工作后洗手。

Other protection: Do not eat, drink or smoke in the workplace. Shower and change clothes after work. Observe the common precautionary measures, contaminated clothes must be changed immediately. Wash hands after work is completed.

第九部分 理化特性

Section 9 - Physical and Chemical Properties

外观: 常温下电池状态: 固体, 圆柱

Appearance: Battery State under normal temp: Solid, cylinder

气味: 无

Odor: None

溶性: 不溶于水.

Solubility: Insoluble in water.

熔点: 无数据

Melting point: No data

pH 值: 不适用

pH value: No data

燃点: 180°C

Ignition point: 180°C

易燃性 (固体, 气体): 不易燃

Flammability: Non flammability

爆炸极限: 无

Explosion: None

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第十部分 稳定性和反应性

Section 10 - Stability and Reactivity

10.1. 稳定性: 在建议存储和操作的条件下稳定。

Stability: Stable under recommended storage and handling conditions.

10.2. 反应性: 在燃烧的情况下可能会产生有害的分解产物。

Reactivity: Under the condition of burning may produce harmful breakdown products

10.3. 禁配物: 强氧化剂。

Incompatible materials: Strong oxidizing agents

10.4. 避免接触的条件: 性质相反的材料, 过热, 暴露在潮湿空气或水中, 机械震动和电动滥用

Conditions to avoid: In contrast to the nature of the material, overheating, exposed to damp air or water, mechanical vibration and power abuse.

10.6. 危险聚合: 不会发生。

Hazardous polymerization: Will not occur.

10.5. 危险分解产物: 在着火的情况下可能产生有害的分解产物, 如: 氢气、金属氧化物或烟雾等

Hazardous decomposition products: Hazardous decomposition products formed under the condition of burning. - Metal oxide, H₂ or smoke etc.

第十一部分 毒理学资料

Section 11 - Toxicological Information

11.1. 急性毒性: 二氧化锰: LD50经口-大鼠>3478mg/kg。铁: LD50经口-大鼠30mg/kg。

石墨: 经口-大鼠 -雌性 LD50- > 2g/kg, LC50 吸入-大鼠- 4 h - 2g/m³。

锂: 腹腔注射-小鼠 LD50 1mg/kg。镍: 经口- 大鼠 LDLo 5mg/kg, 腹腔注射-大鼠 LD50 250mg/kg。

Acute toxicity: Manganese dioxide: LD50 Oral-rat>3478mg/kg; Iron: LD50 Oral-rat 30mg/kg

Graphite: LD50 Oral - rat - female - > 2g/kg; LC50 Inhalation - rat - male and female - 4 h - 2g/m³;

Litium: Intraperitoneal-mouse LD50 1mg/kg;

Nickel: Oral - rat LDLo 5mg/kg, Intraperitoneal-rat LD50 250mg/kg.

11.2. 皮肤刺激或腐蚀: 锂: 皮肤腐蚀/刺激, 类别 1B。

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Skin corrosion/irritation: Lithium: Skin corrosion / irritation, category 1B.

11.3. 眼睛刺激或腐蚀: 锂: 眼睛损伤/刺激, 类别1。

Eye corrosion/irritation: Lithium: Eye damaged/irritation, category 1.

11.4. 呼吸或皮肤过敏: 镍: 皮肤过敏 (类别1)。

Respiratory or skin sensitization: Nickel: Skin sensitization (Category 1).

11.5. 生殖细胞突变性: 根据现有数据, 产品不被分类。

Germ cell mutagenicity: According to the existing data, the product is not classified.

11.6. 致癌性: 镍: IARC: 组2B, 潜在的人类致癌物。

Carcinogenicity: Nickel: IARC: 2B group Potential human carcinogens.

11.7. 生殖毒性: 乙二醇二甲醚: 生殖毒性, 类别 1B。

Reproductive toxicity: 1,2-Dimethoxyethane: Reproductive toxicity, category 1B.

11.8. 特异性靶器官系统毒性 (一次接触): 根据现有数据, 产品不被分类。

Specific target organ toxicity –single exposure: According to the existing data, the product is not classified.

11.9. 特异性靶器官系统毒性 (反复接触): 镍: 特异性靶器官系统毒性-反复接触, 类别 1。

Specific target organ toxicity - repeated exposure: Nickel: Specific Target Organ Toxicity (repeated exposure), (Category 1)

11.10. 吸入危害: 二氧化锰: 急性毒性, 吸入, 类别 4。

Aspiration hazard: Manganese dioxide: Acute toxicity, inhalation, category 4.

第十二部分 生态学资料

Section 12 - Ecological Information

12.1. 生态毒性: 铝: LC50: 1.55mg/l (96h) (鱼)。

Ecotoxicity values: Aluminium: LC50: 1.55mg/l (96h) (fish) .

12.2. 持久性和降解性: 无数据。

Persistence and degradability: No data.

12.3 生物富集或生物积累性: 未知。

Bioaccumulative potential: Unknown.

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12.4. 土壤中的迁移性: 无数据。

Mobility in soil: No data.

12.5. 其他有害作用: 无政府许可不允许将该材料释放到环境中。

Other adverse effects: Do not allow material to be released to the environment without proper governmental permits.

第十三部分 废弃处置

Section 13 - Disposal Considerations

13.1. 产生的化学废物必须确定废弃的化学物是否被列为危险废物, 参考州、地方和国家有关法规进行正确处理。尽可能避免或减少废弃物的产生。受污染的包装材料应被视为等同残留的化学成分。根据当地法律, 清洁的包装材料应进行废物管理计划 (回收再利用, 再利用)。避免溢出的材料和径流进入土壤、河道、排水管和下水道。请参阅第七部分 - 操作处置和储存和第八部分 - 暴露控制/个人防护作为附加的处理和个人防护信息。

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Consult state, local or national regulations for proper disposal. The generation of waste should be avoided or minimized wherever possible. Contaminated packaging material should be treated equivalent to residual chemical. Clean packaging material should be subjected to waste management schemes (recovery recycling, reuse) according to local legislation. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Refer to Section 7-Handling and Storage and Section 8-Exposure Controls/Personal Protection for additional handling information and protection of employees.

第十四部分 运输信息

Section 14 - Transport Information

根据国际航空运输协会《危险品规则》60版, 《国际海运危险品规则》39-18版, 《欧洲陆运危规》。

According to IATA DGR 60th Edition for transportation, IMO International Maritime Dangerous Goods Code 39-18th, European Agreement Concerning the International Carriage of Dangerous Goods by Road.

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14.1. 联合国编号/UN No.:

陆运/ADR/RID: 3090

海运/IMDG: 3090

空运/IATA: 3090

14.2. 正确的运输名称/ Proper shipping name:

陆运/ADR/RID: Lithium metal batteries

海运/IMDG: Lithium metal batteries

空运/IATA: Lithium metal batteries

14.3. 分类/Class:

陆运/ADR/RID: 9

海运/IMDG: 9

空运/IATA: 9

14.4. 环境危害/ Environmental hazards:

陆运/ADR/RID: 否/No

海运/IMDG: 海洋污染物(是/否): 否

Marine pollutant(yes/no): no

空运/IATA: 否/No

第十五部分 法规信息

Section 15 - Regulatory Information

有关国内外法规/regulations on domestic and foreign laws

15.1. 国内法规/Domestic Regulation

持久性有机污染物控制法: 不适用

Persistent Organic Pollutant Control Act: Not applicable

15.2. 国外法规/ Foreign Regulation

美国法规/ American Regulations

OSHA 的规定: 列入

OSHA regulation: Listed

EINECS 规定: 列入

EINECS regulation: Listed

欧盟分类代码: 无可用数据

EU Classification code: No data available

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15.3. 操作此产品以及处理废弃物时, 必须遵守所有现存的国家法规。

All existing national regulations must be followed when handle the product and dispose its waste.

第十六部分 其他信息

Section 16 - Other Information

ACGIH	:	American Conference of Governmental Industrial Hygienists 美国政府工业卫生学家会议
ADR	:	European Agreement concerning the International Carriage of Dangerous Goods by Road欧洲关于危险国际货物公路运输的协议
CAS	:	Chemical Abstracts Service化学文摘社
CLP	:	Classification, labeling and packaging分类、包装、标签
EC	:	Council of Europe欧洲委员会
ECHA	:	European Chemicals Agency欧洲化学品管理局
EINECS	:	European Inventory of Existing commercial Chemical Substances 欧洲现有商业化学物质的目录
GHS	:	Globally Harmonized System of Classification and Lablling of Chemicals 全球化学品统一分类和标签制度
IARC	:	International Agency for Research on Cancer国际癌症研究机构
IATA	:	International Air Transport Association国际航空运输协会
ICAO	:	International Civil Aviation Organization国际民航组织
IMDG	:	International Maritime Dangerous Goods Code国际海运危险品规则
IC50	:	Inhibitory Concen Triton 50%半数抑制浓度
LC50	:	Lethal Concentration 50%半数致死浓度
LD50	:	Median Lethal Dose 50%半数致死剂量
MAPROL	:	International Convention for the Prevention of Pollution from Ships 防止船舶造成污染国际公约
REACH	:	REGULATION concerning the Registration, Evaluation, Authorization and Restriction of Chemicals化学品的注册, 评估和授权

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RID	:	Regulation for rail International transportation of Dangerous goods 国际危险货物铁路运输规则
STEL	:	Short Term Exposure Limit短时间暴露限值
TWA	:	Time Weighted Average时间加权平均浓度
MAC	:	Maximum Allowable Concentration最高容许浓度
OSHA	:	Occupational Safety and Health Administration 职业安全与健康管理局
NIOSH	:	National Institute for Occupational Safety and Health国家职业安全卫生研究所
TLV	:	Threshold Limit Value阈限值
TLV-TWA	:	Threshold Limit Value-Time Weighted Average容许最高浓度-时间加权平均值
TLV- STEL	:	Threshold Limit Value-Short term Exposure Limit 容许最高浓度-短时间暴露限值
PC-TWA	:	Permissible Concentration-Time Weighted Average时间加权平均容许浓度
PC-STEL	:	Permissible Concentration-Short Term Exposure Limit短间接接触容许浓度
PEL	:	Permissible Exposure Limit容许暴露限值
OELs	:	Occupational Exposure Limits职业接触限值

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