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化学品安全技术说明书
MSDS

样品名称及型号 Sample Name & Model	锂锰扣式电池 CR2032 Li-MnO_2 Button cell CR2032 (3.0V 240mAh 合计锂含量/Aggregate lithium content: 0.068g)
委托单位 Applicant	力源电池科技（宜春）有限公司 Liyuan Battery Technology (Yichun) Co., LTD
单位地址 Address	江西省宜春市上高县工业园区食品大道 166 号力源电池科技产业园 Liyuan Battery Technology Industrial Park, No.166, Food Avenue, Shanggao County Industrial Park, Yichun City, Jiangxi Province

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化学品安全技术说明书
Material Safety Data Sheet

GB/T16483-2008 & GB/T17519-2013 & GB 30000.2-29-2013

第一部分 化学品及企业标识
Section 1 - Chemical Product and Company Identification

化学品信息 Chemical Product Identification

样品名称 Sample Name： 锂锰扣式电池 Li-MnO_2 Button cell

样品型号 Sample Model： CR2032

推荐用途 Recommended Uses： 无资料 N/A

限制用途 Restrictions on Use： 无资料 N/A

供应商信息 Supplier Information

企业名称 Company Name： 力源电池科技（宜春）有限公司 Liyuan Battery Technology (Yichun) Co., LTD

地址 Address： 江西省宜春市上高县工业园区食品大道 166 号力源电池科技产业园 Liyuan Battery Technology Industrial Park, No.166, Food Avenue, Shanggao County Industrial Park, Yichun City, Jiangxi Province

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电子邮件地址 E-mail： xuliqing@liyuancell.com

第二部分 危险性概述
Section 2 - Hazards Identification

紧急情况概述 Emergency overview： 本产品是一个电池。此物出售时暴露的安全信息已给出。产品的预期用途不会导致化学物质的暴露。如果破裂，存在以下危害。

This product is a battery. Intended use of the product should not result in exposure to the chemical substance. In case of rupture the below hazards exist.

GHS 危险性类别 Classification according to GHS：

急性毒性，经口 Acute toxicity, oral (4)

急性毒性，吸入 Acute toxicity, inhalation (4)

皮肤腐蚀/刺激 Skin corrosion/irritation (1)

严重眼损伤/眼刺激 Serious eye damage/eye irritation (1)

皮肤致敏 Sensitisation, skin (1)

致癌性 Carcinogenicity (2)

特异性靶器官毒性，一次接触；呼吸道刺激 Specific target organ toxicity, single exposure; Respiratory tract irritation (3)

特异性靶器官毒性，反复接触 Specific target organ toxicity, repeated exposure (2)

GHS 标记要素 GHS Label elements：

危害类型象形图
Hazard pictogram(s):



信号词 **Signal word：** 危险 Danger

危险性说明 Hazard statement(s)：

H302 吞咽有害 Harmful if swallowed

H332 吸入有害 Harmful if inhaled

H314 造成严重皮肤灼伤和眼损伤 Causes severe skin burns and eye damage

H318 造成严重眼损伤 Causes serious eye damage

H317 可能造成皮肤过敏反应 May cause an allergic skin reaction

H351 怀疑会致癌 Suspected of causing cancer

H335 可能引起呼吸道刺激 May cause respiratory irritation

H373 长期或反复接触可能损害器官 May cause damage to organs through prolonged or repeated exposure

防范说明 Precautionary statement(s)：

预防措施 Prevention：

P201 在使用前取得专用说明 Obtain special instructions before use.

P202 在读懂所有安全防范措施之前切勿搬动 Do not handle until all safety precautions have been read and understood.

P260 不要吸入粉尘、烟、气体、烟雾、蒸气和喷雾 Do not breathe dust, fume, gas, mist, vapours, spray.

P264 作业后彻底清洗皮肤和衣物 Wash skin and clothing thoroughly after handling.

P270 使用本产品时不要进食、饮水或吸烟 Do not eat, drink or smoke when using this product.

P272 受沾染的工作服不得带出工作场地 Contaminated work clothing should not be allowed out of the workplace.

P280 戴防护手套、穿防护服、戴防护眼罩和戴防护面具 Wear protective gloves, protective clothing, eye protection, face protection.

事故响应 Response：

P330 漱口 Rinse mouth.

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 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P303 + P361 + P353 如皮肤（或头发）沾染：立即脱掉所有沾染的衣服。用水清洗皮肤 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.

P364 沾染的衣服清洗后方可重新使用 Wash contaminated clothing before reuse.

P310 立即呼叫解毒中心或医生 Immediately call a POISON CENTER.

P321 具体治疗（参看附加示急救指） Specific treatment (See additional emergency instructions).

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

P302 + P352 如皮肤沾染：用大量肥皂和流水清洗 IF ON SKIN: Wash with plenty of water.

安全储存 Storage：

P403 + P233 存放在通风良好的地方。保持容器密闭 Store in a well-ventilated place. Keep container tightly closed.

P405 存放处须加锁 Store locked up

废弃处置 Disposal：

P501 将内容物处理到得到批准的废物处理厂 Send contents to approved waste treatment plants

其他危险 Other hazards

物理和化学危险 Physical and chemical hazards： 详细信息见第十部分 See Section 10

健康危害 Human health hazards： 详细信息见第十一部分 See Section 11

环境危害 Environmental hazards： 详细信息见第十二部分 See Section 12

第三部分 成分/组成信息
Section 3 – Composition/Information on Ingredients

化学品性质Chemical characterization： 混合物Mixture

化学名称 Chemical Composition	CAS No.	EC#	百分含量 Weight（%）
不锈钢 Stainless steel	12597-68-1	603-108-1	53.0
碳酸丙二醇酯1,2-Propanediolcyclic carbonate	108-32-7	203-572-1	2.8
二氧化锰 Manganese dioxide	1313-13-9	215-202-6	35.0
聚四氟乙烯树脂 Polytetrafluoroethylene resin	9002-84-0	618-337-2	1.40
石墨 Graphite	7782-42-5	231-955-3	1.40
锂 Lithium	7439-93-2	231-102-5	1.9
高氯酸锂 Lithium Perchlorate	7791-03-9	232-237-2	2.8
乙二醇二甲醚Ethylene glycol dimethyl ether	110-71-4	203-794-9	1.4
聚丙烯Polypropylene	9003-07-0	618-352-4	0.30

第四部分 急救措施
Section 4 - First Aid Measures

急救Description of first aid measures：

总说明General information：正常情况下不需要特别的措施 No special measures required.

眼睛接触After eye contact：张开眼睛在流水下冲洗至少20分钟，如果症状仍然持续，请咨询医生 Flush eyes with plenty of water for Twenty minutes while holding eyelids open. Get medical attention if irritation persists.

皮肤接触After skin contact：脱去污着衣服和鞋袜，用流动的水清洗，然后清洗双手。衣服和鞋袜清洗后再使用。如果症状持续，速就医 Remove contaminated clothing and shoes. Immediately wash with running water, and then wash your hands. Wash clothing and shoes before reuse. If irritation occurs, get medical attention.

吸入After inhalation：立即将人员移至通风处。如果呼吸困难速进行人工呼吸抢救。如症状持续速就医 Remove victim to fresh area. Administer artificial respiration if breathing is difficult. Seek medical attention.

食入After swallowing：禁止催吐。速就医 Do not induce vomiting. Get medical attention.

第五部分 消防措施
Section 5 - Fire Fighting Measures

适用灭火剂Suitable extinguishing media：轻微火灾：采用干粉灭火剂、苏打粉、石灰或者砂石灭火。重大火灾：用干燥砂石、干粉灭火器、苏打粉或石灰灭火，或者撤离该区域并让其燃烧；在没有危险的情况下，从事故现场运走盛有此类物质的容器。Small Fire: Dry chemical, soda ash, lime or sand. Large Fire: DRY sand, dry chemical, soda ash or lime or withdraw from area and let fire burn. Move containers from fire area if you can do it without risk.

不适用灭火剂Unsuitable extinguishing media：水和泡沫Water or foam.

特别危险性Specific Hazards arising from the chemical：在起火条件下，电池可能会破裂，释放出有害的分解产物。与水接触可产生易燃气体，与水和潮湿空气接触可点燃该类物质，有些物质遇水发生剧烈或爆炸性反应。受热、火花或明火可引起燃烧。熄灭后该类物质可复燃。泄漏可引起燃烧或爆炸的危险。Special hazards arising from the substance or mixture Battery may burst and release hazardous decomposition products when exposed to a fire situation. Produce flammable gases on contact with water. May ignite on contact with water or moist air. Some react vigorously or explosively on contact with water. May be ignited by heat, sparks or flames. May re-ignite after fire is extinguished. Runoff may create fire or explosion hazard.

特殊灭火方法Special fire extinguishing methods：无可用数据No data available.

消防员防护装备Specific protective actions for fire-fighters：穿戴正压自给式呼吸器（SCBA）；一般的消防员防护服主要提供隔热防护，仅能提供有限的化学防护Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

第六部分 泄漏应急处理
Section 6 - Accidental Release Measures

作业人员防护措施、防护装备和应急处置程序 **Personal precautions, protective equipment and emergency procedures：**穿上保护装备。作为一个紧急预防措施，液体物质泄露区域四周必须被隔离至少 50m，固体物质泄露区域四周必须被隔离至少 25m；撤离无关人员；停留在上风向；远离低洼地区；进入封闭区域前先通风 As an immediate precautionary measure, isolate spill or leak area in all directions for at least 50 meters (150 feet) for liquids and at least 25 meters (75 feet) for solids. Keep unauthorized personnel away. Stay upwind, uphill and/or upstream. Ventilate the area before entry.

环境保护措施 **Environmental protection measures：**若无政府许可，勿将材料排入周围环境 Do not discharge materials into the surrounding environment without government permission.

泄漏化学品的收容、清除方法及所使用的处置材料 **Methods and material for containment and cleaning up：**消除所有点火源（泄露区附近严禁吸烟、点火、火花或其他明火）；不要接触或穿越泄露物；用雾状水抑制蒸气或改变蒸气的流向，禁止将水直接喷向泄露区域或容器内；不要让水接触泄露物质或让水进入盛有泄漏物的容器。轻微火灾：用干燥沙土或者其他不可燃物品覆盖并用塑料布盖好尽量减少扩散或与雨水接触；拦截回收泄漏物以便后续处理；不要水幕，除非有特别要求。粉末泄露：用塑料布或防水毡布覆盖泄漏物，减少粉末物继续泄露，最大限度减少泄漏物扩散并保持干燥；应在专业人员指导下清楚或处理泄漏物 ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch or walk through spilled material. Stop leak if you can do it without risk. Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material. DO NOT GET WATER on spilled substance or inside containers. Small Spill: Cover with DRY earth, DRY sand or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain. Dike for later disposal; do not apply water unless directed to do so. Powder Spill: Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. DO NOT CLEAN-UP OR DISPOSE OF, EXCEPT UNDER SUPERVISION OF A SPECIALIST.

防止次生灾害的预防措施 **Methods and materials for containment and cleaning up：**

所有废弃物必须参照联合国，国家，地方性法规进行处置 For all waste handing must refer to United Nations, National and Local Regulations for disposal.

有关安全处理的资料请参阅第 7 部分 See Section 7 for information on safe handling.

有关个人保护装备的资料请参阅第 8 部分 See Section 8 for information on personal protection equipment.

有关弃置的资料请参阅第 13 部分 See Section 13 for disposal information.

第七部分 操作处置与储存
Section 7 - Handling and Storage

操作处置 **Precautions for safe handling：**

避免短路电池。避免电池的机械损坏。不要打开或拆卸。电池在拆开，挤压，遇火或高温情况下，会引起起火或爆炸，严禁短路或非正确操作。防止所有接触，包括吸入。当有接触危险时，穿戴防护服。在通风良好的区域使用。防止本品在低洼处汇集 Avoid short circuiting the battery. Avoid mechanical damage of the battery. Do not open or disassemble. Batteries may explode or cause burns, if

disassembled, crushed or exposed to fire or high temperatures. Do not short or install with incorrect polarity. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps.

储存Conditions for safe storage, including any incompatibilities：

储存在一个低温，干燥，通风良好的环境。远离热源，避免长时间阳光照射 Store in a cool, dry, well-ventilated place. Keep away from heat, avoiding the long time of sunlight.

第八部分 接触控制和个体防护
Section 8 - Exposure Controls And Personal Protection

控制参数 Control parameters：

CAS No.	ACGIH	NIOSH	OSHA
12597-68-1	N/A	N/A	N/A
108-32-7	N/A	N/A	N/A
1313-13-9	N/A	N/A	N/A
9002-84-0	N/A	N/A	N/A
7782-42-5	TLV-TWA 2mg/m^3	REL-TWA 2.5mg/m^3	PEL-TWA 15mppcf PEL-TWA 20mppcf
7439-93-2	N/A	N/A	N/A
7791-03-9	N/A	N/A	N/A
110-71-4	N/A	N/A	N/A
9003-07-0	N/A	N/A	N/A

适当的工程控制 Appropriate engineering controls：

当处理化学物品时，应遵循一般的预防措施 The usual precautionary measures for handling chemicals should be followed.

远离食品，饮料和饲料 Keep away from foodstuffs, beverages and feed.

立即脱掉所有脏衣服或被污染的衣物 Remove all soiled and contaminated clothing immediately.

在休息之前和工作结束之后洗手 Wash hands before breaks and at the end of work.

个体防护装备 Personal Protective Equipment：

呼吸系统防护 Respiratory protection：佩戴合适的防护口罩以减少呼吸系统接触。大量泄漏时，穿戴化学防护服包括自给式呼吸器 Wear suitable protective mask. For a large large number of battery leakages, wear chemical protective clothing, including self-contained breathing apparatus.

手防护 Hand Protection：佩戴合适的防护手套以减少皮肤接触Wear appropriate protective gloves to reduce skin contact.

眼睛防护 Eye Protection：佩戴安全护目镜或眼睛防护结合呼吸防护Wear safety goggles or eye protection combined with respiratory protection.

皮肤和身体防护 **Skin and Body Protection**：工作环境需要时，穿着合适的防护服以减少皮肤接触。防护设备的类型必须根据特定工作场所中的危险物的浓度和含量来选择 Working environment required, wear suitable protective clothing to minimize contact with skin. The type of protective equipment must be according to the concentration and the content of certain hazardous substances in the workplace.

第九部分 理化特性
Section 9 - Physical and Chemical Properties

有关基本物理及化学特性的信息 Information on basic physical and chemical properties

外观与性状 **Appearance and Characteristic：**	银色，纽扣。 Silver, Button.
气味 **Odour：**	无资料 Not available.
pH值，并指明浓度 pH, specify the concentration：	无资料 Not available.
熔点/凝固点 **Melting point/freezing point：**	无资料 Not available.
沸点、初沸点和沸程 **Boiling point or initial boiling point and boiling range：**	无资料 Not available.
闪点 **Flash Point：**	无资料 Not available.
易燃性 **Flammability：**	无资料 Not available.
溶解性 **Solubility：**	无资料 Not available.
爆炸极限 **Lower and upper Explosion limit/flammability limit：**	无资料 Not available.
蒸气压 **Vapour pressure：**	无资料 Not available.
蒸气密度(空气=1) **Vapor density（Air=1）：**	无资料 Not available.
密度/相对密度**Density and/or relative density：**	无资料 Not available.
n-辛醇/水分配系数 **Partition coefficient n-Octanol/water：**	无资料 Not available.
自燃温度 **Auto-ignition temperature：**	无资料 Not available.
分解温度 **Decomposition temperature：**	无资料 Not available.
气味阈值 **Odor Threshold：**	无资料 Not available.
蒸发速率 **Evaporation rate：**	无资料 Not available.
其他信息 **Other information**	
电压 **Voltage：**	3.0V
电容量 **Electric capacity：**	240mAh
合计锂含量 **Aggregate lithium content：**	0.068g

第十部分 稳定性和反应活性
Section 10 - Stability and Reactivity

稳定性 **Chemical stability**：在正常环境温度下储存和使用稳定 Stable in storage and use at normal ambient temperature.

危险反应 **Possibility of hazardous reactions**：无可用数据 No data available

应避免的条件 **Conditions to Avoid**：火焰，火花和其他热源，禁忌物 Flames, sparks, and other sources of ignition, incompatible materials.

不相容的物质**Incompatible materials**：氧化剂，酸，碱 Oxidizing agents, acid base.

危险分解产物 **Hazardous decomposition products**：二氧化碳,一氧化碳,锂的金属氧化物,其他刺激性和毒性气体 Carbon dioxide, carbon monoxide, lithium metal oxides, other irritating and toxic gases.

第十一部分 毒理学资料
Section 11 - Toxicological Information

急性毒性**Acute Toxicity**

CAS No.	LC50/LD50
12597-68-1	无可用数据 No data available.
108-32-7	LD50 Rat (oral): ≥29000mg/kg; LD50 Rabbit (Dermal): >20000mg/kg
1313-13-9	无可用数据 No data available.
9002-84-0	无可用数据 No data available.
7782-42-5	无可用数据 No data available.
7439-93-2	无可用数据 No data available.
7791-03-9	无可用数据 No data available.
110-71-4	LD50 Rat (oral): 2525mg/kg
9003-07-0	无可用数据 No data available.

皮肤刺激或腐蚀**Skin corrosion Or irritation**：无可用数据No data available.

眼睛刺激或腐蚀**Serious eye damage Or irritation**：无可用数据No data available.

呼吸或皮肤过敏 **Respiratory or Skin sensitization**：无可用数据No data available.

生殖细胞突变性**Germ Cell mutagenicity**：无可用数据 No data available.

致癌性**Carcinogenicity**：无可用数据No data available.

生殖毒性**Reproductive toxicity**：无可用数据No data available.

特异性靶器官系统毒性——一次性接触**Specific target organ toxicity-Single exposure**：无可用数据 No data available.

特异性靶器官系统毒性——反复接触**Specific target organ toxicity-Repeated exposure**：无可用数据No data available.

吸入危害**Aspiration hazard**：无可用数据 No data available.

潜在的有害效应**Information on the likely routes of exposure**：无可用数据No data available.

第十二部分 生态学资料
Section 12 - Ecological Information

生态毒性 **Ecological Toxicity：**

CAS# 108-32-7

LC50: >1000 mg/L - Fish (Carp) - 96h;

EC50: >1000 mg/L - Crustaceans (Daphnia magna) - 48h;

EC50: >900 mg/L - Algae (Scenedesmus subspicatus) - 72h

持久性和降解性 **Persistence and degradability：**无可用数据No data available.

潜在的生物累积性 **Bioaccumulative Potential：**无可用数据 No data available.

土壤中的迁移性 **Mobility in Soil：**无可用数据 No data available.

其他有害效应 **Other adverse effects：**无可用数据 No data available.

第十三部分 废弃处置
Section 13 - Disposal Considerations

废弃处置方法 **Disposal methods**

建议 **Recommendation：**请参考国家和地方的相关法规正确进行处理Consult state, local or national regulations to ensure proper disposal.

受污染的容器和包装**Uncleaned packaging**

建议 **Recommendation：**必须根据官方的规章来丢弃 Disposal must be made according to official regulations.

第十四部分 运输信息
Section 14 - Transport Information

联合国编号或识别编号 **UN or ID Number**	
IATA	UN3090
IMDG	UN3090
Model Regulation	UN3090
运输专用名称/说明 **Proper Shipping Name/Description**	
IATA	锂金属电池 Lithium metal batteries
IMDG	锂金属电池 LITHIUM METAL BATTERIES
Model Regulation	锂金属电池 LITHIUM METAL BATTERIES

类别或项别（次要危险） **Class or Div. (Sub Hazard)** **IATA**	9
包装等级 **Packing Group** **IATA** **IMDG** **Model Regulation**	N/A N/A N/A
危险性标签 **Hazard Label** **IATA** **IMDG** **Model Regulation**	 N/A N/A
危害环境 **Environmental hazards** 海运污染物质 **Marine pollutant:**	不是
IMDG EmS:	F-A, S-I
用户特别预防措施 **Special precautions for user**	无资料 No information available.

运输信息 **Transport information**：该锂锰扣式电池 CR2032已通过UN38.3测试，报告编号为MTIZURMG7748997U5.
The Li-MnO_2 Button cell CR2032 has passed the test UN38.3, according to the report ID: MTIZURMG7748997U5.

运输过程中请根据危险品规则DGR第67版包装规定968第IB部分执行，仅限货机。
According to the Packing Instruction 968 section IB of IATA DGR 67th Edition for transportation, Cargo aircraft only.

运输过程中请根据海运危险品规则IMDG (42-24)特殊规定188，或者《联合国危险货物运输的建议书规章范本》(24th) 特殊规定188执行，该物品不受本规则其它规定限制。
According to the special provision 188 of IMDG (42-24) or the special provision 188 of <<Recommendations On The Transport Of Dangerous Goods-Model Regulations>> (24th), the goods are not subject to other provision of this code.

电池需互相隔开以防短路，并装放在结实的容器里。每个电池或电池组应加有安全通风装置或被设计成在正常运输条件下不会突然爆裂。远离高温和明火。
Separate batteries to prevent short-circuiting. and they should be packed in strong package during transport. Lithium cell or battery should incorporate a safety venting device or be designed to prevent a violent rupture under normal transport conditions. Keep away from high temperature and open flames.

运输方式 **Transport Fashion**：空运 By air，海运 by sea，铁路 by railway，公路 by road.

第十五部分 法规信息
Section 15 - Regulatory Information

物质或混合物的安全，健康和环境的规章 /法规信息

Safety, health and environmental regulations/legislation specific for the substance or mixture

CAS No.	中国现有化学品名录 IECSC	危险化学品目录 Catalogue of hazardous chemicals
12597-68-1	列入 Listed	未列入 Not Listed
108-32-7	列入 Listed	未列入 Not Listed
1313-13-9	列入 Listed	未列入 Not Listed
9002-84-0	列入 Listed	未列入 Not Listed
7782-42-5	列入 Listed	未列入 Not Listed
7439-93-2	列入 Listed	未列入 Not Listed
7791-03-9	列入 Listed	未列入 Not Listed
110-71-4	列入 Listed	未列入 Not Listed
9003-07-0	列入 Listed	未列入 Not Listed

第十六部分 其他信息
Section 16 - Other Information

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注Notice to reader： 本份MSDS中的信息只是基于我们当前的所拥有的相关材料的信息而编制的，只是为了描述本品的健康、安全与环境需求，以使各有关方面能更好地了解和信任本产品。这些信息只是提供给您，以供考虑、研究和确认。其中的一些危害预防措施描述并非是唯一的。

所以本份MSDS不能作为使用本品实现任何特定目的的保证。各有关使用者有责任预先完成本品的安全性及其他方面的测试，以评判其是否满足您的使用目的。

The information in this MSDS is based on current information we have on the material in question and is only intended to describe the health, safety and environmental needs of this product so that all interested parties can better understand and trust the product. This information is provided to you only for your consideration, research and confirmation. Some of the hazard precautions described are not unique.

Therefore, this MSDS cannot be used as a guarantee for any specific purpose. It is the responsibility

of each user to complete safety and other tests on this product in advance to determine whether it meets your purpose of use.

缩略语和首字母缩写Abbreviations and acronyms

CAS：化学文摘社 (Chemical Abstracts Service);
EC：欧盟委员会 (European Commission);
ACGIH：美国政府及工业卫生协会 (American Conference of Governmental Industrial Hygienists);
NIOSH：美国国家职业安全健康研究所 (US National Institute for Occupational Safety and Health);
OSHA：美国职业安全与卫生管理局 (US Occupational Safety and Health);
TLV：阈限值 (Threshold Limit Value);
TWA：时间加权平均 (Time Weighted Average);
STEL：短期接触限值 (Short Term Exposure Limit);
PEL：容许暴露限值(Permissible Exposure Level);
REL：推荐的接触限值 (Recommended Exposure Limit);
PC-STEL：短时间接触容许浓度 (Permissible concentration-short time exposure limit);
PC-TWA：时间加权平均容许浓度 (Permissible concentration-time weighted average);
IARC：国际癌症研究中心 (International Agency for Research on Cancer);
LC50：半数致死浓度 (lethal concentration, 50 percent kill);
LD50：半数致死剂量 (lethal dose, 50 percent kill);
EC50：半数效应浓度 (Median effective concentration);
BCF：生物浓缩因子 (Bioconcentration Factor)
BOD：生化需氧量 (Biochemical oxygen demand);
IECSC：中国现有化学品名录 (Inventory of Existing Chemical Substances in China);
NOEC：无可观察效应浓度 (No observed effect concentration);
NTP：美国国家毒理学项目 (US National Toxicology Program);
RTECS：化学物质毒性作用登记 (Registry of Toxic Effects of Chemical Substances);
TOC：总有机碳 (Total Organic Carbon);
TSCA：美国有毒物质控制法 (Toxic Substances Control Act of USA);
DSL：加拿大国内物质清单 (the Domestic Substances List of Canada);
NDSL：加拿大非国内物质清单 (the Non-domestic Substances List of Canada);
TDG：联合国关于危险货物运输的建议书规章范本 (Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations)

批准人 Approver: 郑春扬

报告结束 End of report