



杭州海关技术中心
国家危险化学品检测重点实验室（杭州）

电话 (Tel): 0571 8352 7220
传真 (Fax): 0571 8352 7219
邮编 (Post code): 311215
地址 (Add.): 中国杭州市萧山区建设三路 398 号

正本/ORIGIN

编号: TCH26001030
No: TCH26001030
日期: 2026-01-29
Date: 2026-01-29

ZAIQ-RF(HH)-01-19

Safety Data Sheet

扫描查看在线报告



Applicant name: Zhejiang Sunseeker Industrial Co., Ltd.

**Product name: LAWN MOWER (Rechargeable Li-ion Battery LBF2010 18V 20V
Max 10Ah 180Wh)**

Date of issue: 2026-01-29

Edit institution: Technology Center of Hangzhou Customs District

Approver:

万旺军

Note: 1. Unless other wise stated, this test report is only responsible for the sample(s).
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声 明

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The result in this test report is only valid for the tested samples.

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3. 对本报告中检测数据如有异议，请在收到报告后十五天内提出复测申请（部分特殊项目不能复测）。复测以原样为准，复测维持原结论时，由申请方承担复测费。

If there is any dissidence to the test data, the entrusting party shall apply for retesting within 15 days upon receiving this report (Some special item can not be retested). The former tested samples will be used as the retested ones. If the retest results are the same as the former ones, the retest fee will be paid by the entrusting party.

4. 本报告各页均为报告不可分割部分，使用者部分使用检测报告而导致误解或由此造成后果，本机构不承担任何责任。

This report shall be used in integrity. This organization will not be responsible for any misleading caused by the content of this report.

1. Identification of substance

Product Name	LAWN MOWER (Rechargeable Li-ion Battery LBF2010 18V 20V Max 10Ah 180Wh)
Other Name	None
Chemical Name	None
Recommended Use	Used in garden machinery
Manufacturer	Zhejiang Sunseeker Industrial Co., Ltd.
Address	988, Jinde Rd, Jiangdong Industrial Park, Jinhua, Zhejiang, 321000, China
Supplier	Zhejiang Sunseeker Industrial Co., Ltd.
Address	988, Jinde Rd, Jiangdong Industrial Park, Jinhua, Zhejiang, 321000, China
Phone Number	+86-159 5841 2556
Fax Number	None
WEB or E-mail	js68@sunseekerpower.cn
Emergency Phone Number	+86-0752-2630809 or Call your nearest poison control centre

2. Hazards identification

GHS classification	The product meets the definition of "article". In the Globally Harmonized system of Classification and Labeling of Chemicals (GHS), the "articles" defined by the US Occupational Safety and Health Administration "Hazard Communication Standard" (29 CFR 1910.1200) or similar definitions do not fall within the scope of this system. [Rev. 11 (2025) Part 1.3.2.1.1]. According to GHS system (11 th revised edition), not classified as a hazardous chemical.
GHS Pictograms	—
Signal words	—
Hazard statements	—
Precautionary Statement Prevention	—
Precautionary Statement Response	—
Precautionary Statement Storage	—
Precautionary Statement Disposal	—
Other hazards which do not result in classification	Not available.

3. Composition/information on ingredients

 Substances

 Mixtures

Component Information

Component	CAS number	EINECS number	Mass(%wt)
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LAWN MOWER (Rechargeable Li-ion Battery LBF2010 18V 20V Max 10Ah 180Wh)

According to GHS rev 11

Lithium Nickel Oxide	12325-84-7	---	25~35
Graphite (C)	7782-42-5	231-955-3	20~30
Iron	7439-89-6	231-096-4	10~20
Copper	7440-50-8	231-159-6	5~15
cobalt lithium dioxide	12190-79-3	235-362-0	1~5
Methyl propanoate	554-12-1	209-060-4	1~5
Aluminium	7429-90-5	231-072-3	1~5
lithium			
hexafluorophosphate(1-)	21324-40-3	244-334-7	1~3
4-Fluoro-1,3-dioxolan-2-one	114435-02-8	483-360-5	1~3
dimethyl carbonate	616-38-6	210-478-4	1~3
Polyethylene	9002-88-4	618-339-3	1~3
diiron trioxide	1309-37-1	215-168-2	0.1~1
Boehmite (Al(OH)O)	1318-23-6	215-284-3	0.1~1
Carbon black	1333-86-4	215-609-9	0.1~1
Nickel	7440-02-0	231-111-4	0.1~1
Aluminum lithium oxide (LiAlO)	11089-89-7	---	0.1~1
Chromium	7440-47-3	231-157-5	0.1~1
lithium carbonate	554-13-2	209-062-5	0.1~1
ethylbenzene	100-41-4	202-849-4	0.1~1

Note: 1. Unless a component presents a severe hazard, it does not need to be considered in the SDS if the concentration is less than 1%.

4. First-aid measures

NOTE TO PHYSICIAN	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation.
After inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Get immediate medical attention.
After skin contact	In case of contact with substances in the battery, immediately flush skin thoroughly with soap and plenty of water. Remove and isolate contaminated clothing and shoes. If irritation persists, get medical attention immediately. For minor skin contact, avoid spreading material on unaffected skin. Wash clothing separately before reuse.
After eye contact	In case of contact with substances in the battery, immediately flush eyes with plenty of running water or normal saline for a few minutes. Assure adequate flushing of the eyes by separating the eyelids with fingers. Get medical attention immediately.
After ingestion	Rinse mouth. Do not induce vomiting without medical advice. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Loosen tight clothing such as a collar, tie, belt or waistband. Do not use mouth-to-mouth

Most important symptoms / effects, acute and delayed	method if victim ingested the substance. Seek immediate medical attention. The battery's electrolyte can irritate skin, eyes, and mucosal tissues.
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5. Fire-fighting measures

Suitable extinguishing agents	Water (cooling), use a HFC (hydrofluorocarbon) clean-agent fire extinguisher or alcohol resistant foam fire extinguishers. Heptafluoropropane and perfluorohexanone have better extinguishing effects.
Special hazards caused by the material, its products of combustion or flue gases	Cell may vent when subjected to excessive heat-exposing battery contents. Can be released in case of fire: carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen fluoride, hydrogen cyanide, benzene, toluene, methane, lithium oxide fumes, phosphorus oxides, irritating and toxic fumes and gases.
Protective equipment for fire-fighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask, insulating gloves, insulating boots, etc.

6. Accidental release measures

Person-related safety precautions	If the battery material is released, remove personnel from area until fumes dissipate. Provide maximum ventilation to clear out hazardous gases. Avoid skin and eye contact or inhalation of vapors.
Measures for environmental protection	Prevent further leakage or spillage if safe to do so. Do not allow material to be released to the environment without proper governmental permits.
Measures for cleaning/collecting	If batteries show signs of leaking, avoid skin or eye contact with the material leaking from the battery. Use chemical resistant rubber gloves and non-flammable absorbent materials for clean up. Mix with inert material (e.g. dry sand, vermiculite) and transfer to sealed container for disposal.
Additional information	See Section 7 for information on safe handling See section 8 for information on personal protection equipment. See Section 13 for information on disposal.

7. Handling and storage

Handling Information for safe handling	Operators should be trained and strictly abide by the operating procedures. It is recommended that operators wear general protective clothing and safety gloves. Keep away from fire, heat source and direct sunlight. Smoking is strictly prohibited in the workplace. Provide ventilation systems and
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Information about protection against explosions and fires	<p>equipment in the workplace. Such batteries must be packed in inner packages in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. Avoid mechanical or electrical abuse. More than a momentary short circuit will generally reduce the battery service life. Avoid reversing battery polarity within the battery assembly. In case of a battery unintentionally be crushed, rubber gloves must be used to handle all battery components. Avoid contact with eyes, skin. Avoid inhalation. Store separately from strong oxidizing agents, corrosives.</p> <p>Avoid mechanical and electrical abuse. Do not short circuit or install incorrectly.</p> <p>Batteries may explode or cause burns if disassembled, crushed, recharged or exposed to high temperatures. Install batteries in accordance with equipment instructions.</p>
STORAGE Requirements to be met by storerooms and containers	<p>Avoid physical or electrical abuse. Storage at high temperatures should be avoided. Storage preferably in cool, dry and ventilated area, which is subject to little temperature change. Do not place the battery near heating equipment, nor expose to direct sunlight for long periods.</p>
Information about storage in one common storage facility	<p>Store in a cool, dry and well-ventilated area. Keep away from fire, heat source and direct sunlight. Such batteries must be packed in inner packages in such a manner as to effectively prevent short circuits and to prevent movement which could lead to short circuits. Materials to Avoid: strong oxidizing agents, flammables, explosive material, corrosives, harmful substances.</p>
Further information about storage conditions	<p>The storage area shall be equipped with corresponding types and quantities of fire-fighting equipment, leakage emergency treatment equipment and appropriate materials.</p>

8. Exposure controls/personal protection

Limit Values for Exposure					
Component	CAS number	ACGIH TLV-TWA mg/m ³	ACGIH TLV-STEL mg/m ³	NIOSH REL-TWA mg/m ³	NIOSH REL-STEL mg/m ³
Lithium Nickel Oxide	12325-84-7	N.E.	N.E.	N.E.	N.E.
Graphite (C)	7782-42-5	2	N.E.	2.5	N.E.
Iron	7439-89-6	N.E.	N.E.	N.E.	N.E.
Copper	7440-50-8	0.2	N.E.	1	N.E.
cobalt lithium dioxide	12190-79-3	N.E.	N.E.	N.E.	N.E.
Methyl propanoate	554-12-1	N.E.	N.E.	N.E.	N.E.
Aluminium	7429-90-5	1	N.E.	10 (total) 5 (resp)	N.E.

LAWN MOWER (Rechargeable Li-ion Battery LBF2010 18V 20V Max 10Ah 180Wh)

According to GHS rev 11

lithium hexafluorophosphate(1-)	21324-40-3	N.E.	N.E.	N.E.	N.E.
4-Fluoro-1,3-dioxolan-2-one	114435-02-8	N.E.	N.E.	N.E.	N.E.
dimethyl carbonate	616-38-6	N.E.	N.E.	N.E.	N.E.
Polyethylene	9002-88-4	N.E.	N.E.	N.E.	N.E.
diiron trioxide	1309-37-1	5	N.E.	5	N.E.
Boehmite (Al(OH)O)	1318-23-6	N.E.	N.E.	N.E.	N.E.
Carbon black	1333-86-4	3	N.E.	3.5	N.E.
Nickel	7440-02-0	(Elemental /Metal)	N.E.	0.015	N.E.
Aluminum lithium oxide (LiAlO)	11089-89-7	N.E.	N.E.	N.E.	N.E.
Chromium	7440-47-3	0.5	N.E.	0.5	N.E.
lithium carbonate	554-13-2	N.E.	N.E.	N.E.	N.E.
ethylbenzene	100-41-4	20 ppm	N.E.	100 ppm	125 ppm
Appropriate engineering controls	Use ventilation system and equipment. In case of battery venting, provide as much ventilation as possible. Avoid confined areas with venting cell cores. Provide safety shower and eye wash equipment.				
General protective and hygienic measures	Not necessary under conditions of normal use. Personal protection is recommended for venting battery. No smoking, drinking and eating at working site. Wash thoroughly after handling.				
Personal protective equipment	Personal protection is recommended for venting battery: respiratory protection, protective gloves, protective clothing and safety glass with side shields.				
Breathing equipment	When workers are facing high concentrations they must use appropriate certified respirators. Respiratory protection is not necessary under conditions of normal use.				
Protection of hands	Not necessary under conditions of normal use.				
Eye/Face protection	Not necessary under conditions of normal use. Use safety glasses with side shields or safety goggles as mechanical barrier for prolonged exposure if necessary.				
Body protection	Not necessary under conditions of normal use. Full set of anti chemical reagent overalls, flame retardant antistatic protective clothing if necessary, choose body protection according to the amount and concentration of the dangerous substance at the work place.				

Note: 1. N.E. means not established.

9.Physical and chemical properties

Physical state The lawn mower contains a lithium-ion battery pack packed

	and transported inside. The appearance of the lithium-ion battery pack is blue prismatic. A lawn mower is packaged together with a lithium-ion battery pack. Size (L*W*H): 113*55.5*76 (mm) Weight: 826.5g
Colour	See Physical state
Odour	No pungent odour
Melting point/freezing point	No data available
Boiling point or initial boiling point and boiling range	No data available
Flammability	No data available
Lower and upper explosion limit/flammability limit	No data available
Flash point	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH	No data available
Kinematic viscosity	No data available
Solubility	No data available
Partition coefficient: n-octanol/water (log value)	No data available
Vapour pressure	No data available
Density and/or relative density (water=1)	No data available
Relative vapour density (air=1)	No data available
Particle characteristics	No data available
10. Stability and reactivity	
Reactivity	No data available.
Chemical stability	This is a stable product under recommended storage conditions.
Possibility of hazardous reactions	No polymerization.
Conditions to avoid (e.g. static discharge, shock or vibration)	Fire source, heating source, disassemble, external short circuit, crushes, deformation, high temperature, direct sunlight, high humidity, immerse in water or overcharge, etc.
Incompatible materials	Explosives, flammables, strong oxidants and corrosives. If leaked, forbidden to contact with strong oxidizing agents,

Hazardous decomposition products	mineral acids, strong alkalis, etc. May include metal oxides, carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen fluoride, hydrogen cyanide, benzene, toluene, methane, phosphorus oxides and other toxic smoke and gas.
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11. Toxicological information

Routes of Entry: Dermal contact, eye contact, inhalation, ingestion.	
Acute Toxicity	
lithium	LD50 (Oral, rat) >50-300 mg/kg
hexafluorophosphate(1-) (CAS 21324-40-3)	LC50 (Inhalation, rat) N/A LD50 (Dermal, rabbit) N/A
Skin corrosion/Irritation	lithium hexafluorophosphate(1-) (CAS 21324-40-3): Causes skin corrosion.
Serious eye damage/irritation	lithium hexafluorophosphate(1-) (CAS 21324-40-3): Causes serious eye damage.
Respiratory or skin sensitization	Not classified
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified
Reproductive toxicity	Not classified
STOT-single exposure	Not classified
STOT-repeated exposure	lithium hexafluorophosphate(1-) (CAS 21324-40-3): Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	Not classified
Chronic Effects	Not classified
Further Information	In the event of exposure to internal contents, moderate or severe irritation, burning and dryness of the skin may occur, and may damage the nerves of the target organs. No detailed toxicological study.

12. Ecological information

Ecotoxicity	
Aquatic Toxicity	Test & Species 96 Hr LC50 fish: N/A 48 Hr EC50 Daphnia: N/A 72 Hr EC50 Algae: N/A
Persistence and degradability	High persistence (water/soil/air): dimethyl carbonate. Low persistence (water/soil/air): Graphite (C), Polyethylene.
Bioaccumulative potential	dimethyl carbonate: Log Kow 0.2336 (Low) Polyethylene: Log Kow 1.2658 (Low)
Mobility in soil	dimethyl carbonate: Koc 8.254 (Low) Polyethylene: Koc 14.3 (Low)
Additional Information	May cause water or soil pollution.

13. Disposal considerations

WASTE DISPOSAL INSTRUCTIONS

Contact a qualified professional waste disposal service to dispose of this material.
 Dispose of in accordance with local environmental regulations or local authority requirements.

14. Transport information

The Recommendation of Transport of Dangerous Goods(TDG)

UN Number UN 3481
 Proper Shipping Name LITHIUM ION BATTERIES PACKED WITH EQUIPMENT
 Class/Division Class 9 Miscellaneous Dangerous Substances and Articles
 Package Group —
 Subsidiary risk —
 labeling pictogram



Note: This sample contains a rechargeable Lithium-ion Battery Pack with a Watt-hour rating in excess of 100Wh, containing 10 cells in 2 parallels and 5 strings, and passed the tests required by UN 38.3. Batteries do not equipped with battery overcharge protection, are only designed as a component in another battery or equipment which affords such protection. Cells and batteries incorporate a safety venting device. Cells and batteries are properly protected to prevent short circuits and reverse current, and have a high quality management programme can be transported as mentioned above. Strong outer packagings constructed of suitable material, and of adequate strength and design in relation to the packaging capacity and its intended use. They shall be constructed in such a manner as to prevent accidental operation during transport. Packagings need not meet the requirements of TDG 4.1.1.3.

Large equipment can be offered for transport unpackaged or on pallets when the cells or batteries are afforded equivalent protection by the equipment in which they are contained.

Each package must be labeled with the Class 9 Lithium Battery hazard label (Model No.9A ,5.2.2.2.2 in TDG) .

According to 2.9.4 (g) of TDG (24th revised edition.), except for button cells installed in equipment (including circuit boards), manufacturers and subsequent distributors of cells or batteries manufactured after 30 June 2003 shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5.

Maritime transport IMDG Being same with TDG

<p>Air transport ICAO-TI and IATA-DGR</p>	<p>Marine pollutant (Yes/No): No EmS No.: F-A, S-I Each package must be labeled with the Class 9 Lithium Battery hazard label (Model No.9A ,5.2.2.2.2 in IMDG Code). According to 2.9.4.7 of IMDG Code (2024 Edition), except for button cells installed in equipment (including circuit boards), manufacturers and subsequent distributors of cells or batteries manufactured after 30 June 2003 shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5. Being same with TDG Each package must be labeled with the Class 9 Lithium Battery hazard label (Figure 7.3.X in IATA DGR). The product shall meet the General Requirements and section I of Packaging Instruction 966. According to 3.9.2.6.1(g) of IATA DGR (67th Edition), except for button cells installed in equipment (including circuit boards), manufacturers and subsequent distributors of cells or batteries manufactured after 30 June 2003 must make available the test summary as specified in the UN Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5. According to Special Provisions of IATA DGR (67th Edition) A802 Notwithstanding the absence of a packing group in column E, substances and articles assigned to these entries must be packed in UN Specification packagings that meet packing group II performance standards. This does not apply when lithium batteries prepared in accordance with Section IB of Packing Instructions 965 or 968.</p>
<p>Road transport RID</p>	<p>Being same with TDG Each package must be labeled with the Class 9 Lithium Battery hazard label (Model No.9A, 5.2.2.2.2 in RID 2025 edition). According to 2.2.9.1.7.1 (g) of RID (2025 Edition), except for button cells installed in equipment (including circuit boards), manufacturers and subsequent distributors of cells or batteries manufactured after 30 June 2003 shall make available the test summary as specified in the Manual of Tests and Criteria, Part III, sub-section 38.3, paragraph 38.3.5.</p>

15. Regulatory information

<p>European/International Regulations</p>	
<p>OSHA:</p>	<p>Hazardous by definition of Hazard Communication Standard (29CFR 1910.1200).</p>
<p>EINECS Status:</p>	<p>The main components of this sample (except Lithium Nickel Oxide, 4-Fluoro-1,3-dioxolan-2-one, Polyethylene, Aluminum</p>

EPA TSCA Status:

lithium oxide (LiAlO)) are included in EINECS inventory.
The main components of this sample (except Lithium Nickel Oxide) are included in TSCA public inventory.

Canadian DSL/NDSL (Domestic Substances List/ Non-domestic Substances List):

The main components of this sample (except Lithium Nickel Oxide) are included in DSL/NDSL.

HMIS (Hazardous Material Identification System Ratings):

Health: 1
Flammability: 0
Physical hazard: 0
Personal protection: F
(4. Severe Hazard; 3. Serious Hazard; 2. Moderate Hazard; 1. Slight Hazard; 0. Minimal Hazard)

WHMIS (Canadian Workplace Hazardous Material Identification System Ratings):

B4, D2B (Iron, Copper),
D2A (cobalt lithium dioxide, lithium carbonate),
B2 (Methyl propanoate, dimethyl carbonate),
B6 (Aluminium), B2, D2A (ethylbenzene),
D2B (4-Fluoro-1,3-dioxolan-2-one, Chromium),
D1A, D2B, E (lithium hexafluorophosphate(1-)),
B4, D2A (Carbon black).

ICAO-TI

1. Each cell or battery must meet the provisions of 2;9.3.
2. The equipment must be secured against movement within the outer packaging and must be equipped with an effective means of preventing accidental activation. The number of cells or batteries in each package must not exceed the number required for the equipment's operations, plus two spare sets. A "set" of cells or batteries is the number of individual cells or batteries that are required to power each piece of equipment.
3. Unless be approved according to ICAO TI, Lithium ion cells/batteries (UN 3480, PI 966) must be offered for transport at a state of charge (SoC) not exceeding 30% of their rated design capacity.

List of dangerous goods (GB 12268-2025)

UN Number: UN3481, Shipping Name: LITHIUM ION BATTERIES PACKED WITH EQUIPMENT, Class or Division: 9, Packing Group: —.
Lithium cells and batteries listed in this report are of the types proven to meet the requirements of each applicable test in the UN Manual of Tests and Criteria, Part III, sub-section 38.3.

16. other information

Employers should use this information only as a supplement to other information

gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

This Material Safety Data Sheet was based on the "Globally Harmonized System of Classification and Labelling of Chemicals", Recommendations on the TRANSPORT OF DANGEROUS GOODS Model Regulations", "International Maritime Dangerous Goods Code", Dangerous Goods Regulations by the "International Air Transport Association", the National Standards and other related dangerous chemicals management laws, regulations and standards, which are periodically updated and changed. To make dangerous goods / hazardous chemicals comply with the relevant requirements of the latest management, regularly update is recommended.

This Material Safety Data Sheet has been compiled in both English and Chinese. For any discrepancies, the Chinese version shall prevail.

Abbreviations and acronyms

TDG: The Recommendation of Transport of Dangerous Goods
 ADR: Agreement Concerning the International Carriage of Dangerous Goods by Road
 RID: Regulation Concerning the International Carriage of Dangerous Goods by Rail
 IMDG: International Maritime Dangerous Goods Code
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air by the "International Civil Aviation Organization" (ICAO)
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 EC50: Effective concentration, 50 percent

Edit Date 29.01.2026
Update and Revise Original edition
Edit Standard *Globally Harmonized System of Classification and Labelling of Chemicals* Part 1.5
Revised Institution Technology Center of Hangzhou Customs District



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化学品安全数据表



申请单位: 浙江白马科技有限公司

产品名称: 割草机内含可充电锂离子电池包 LBF2010 18V 20V Max 10Ah 180Wh

签发日期: 2026-01-29

编制机构: 杭州海关技术中心

批准人:

万旺军

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This report shall be used in integrity. This organization will not be responsible for any misleading caused by the content of this report.

1. 标识

产品名称	割草机内含可充电锂离子电池包 LBF2010 18V 20V Max 10Ah 180Wh
英文名称	LAWN MOWER (Rechargeable Li-ion Battery LBF2010 18V 20V Max 10Ah 180Wh)
其他名称	无
化学名称	无
使用建议	用于园林机器
生产商	浙江白马科技有限公司
地址	浙江省金华市江东工业园金德路 988 号/321000
供应商	浙江白马科技有限公司
地址	浙江省金华市江东工业园金德路 988 号/321000
固定电话	+86-159 5841 2556
传真	无
网址或电子邮件地址	js68@sunseekerpower.cn
应急电话	+86-0752-2630809 或向离你最近的解毒中心求助

2. 危险标识

GHS 危险性分类	该产品符合“物品”的定义。在全球化学品统一分类和标签制度(GHS)中, 美国职业安全与健康署“危险公示标准”(29 CFR 1910.1200)或类似定义界定的“物品”不属于这一制度的范围。[Rev. 11 (2025) Part 1.3.2.1.1]。根据 GHS 制度(第十一修订版), 未被归类为危险化学品。
GHS 危险标签	—
信号词	—
危险说明	—
防范说明	—
预防	—
防范说明	—
反应	—
防范说明	—
贮存	—
防范说明	—
处置	—
不导致分类的其他危险	未知

3. 成分构成/成分信息

<input type="checkbox"/> 物质			
<input checked="" type="checkbox"/> 混合物			
成分信息			
成分	CAS 号	EINECS 号	含量(%wt)
锂镍氧化物	12325-84-7	—	25~35
石墨 (C)	7782-42-5	231-955-3	20~30
铁	7439-89-6	231-096-4	10~20

铜	7440-50-8	231-159-6	5~15
钴酸锂	12190-79-3	235-362-0	1~5
丙酸甲酯	554-12-1	209-060-4	1~5
铝	7429-90-5	231-072-3	1~5
六氟磷酸锂	21324-40-3	244-334-7	1~3
氟代碳酸乙烯酯	114435-02-8	483-360-5	1~3
碳酸二甲酯	616-38-6	210-478-4	1~3
聚乙烯	9002-88-4	618-339-3	1~3
三氧化二铁	1309-37-1	215-168-2	0.1~1
勃姆石(Al(OH)O)	1318-23-6	215-284-3	0.1~1
炭黑	1333-86-4	215-609-9	0.1~1
镍	7440-02-0	231-111-4	0.1~1
铝锂氧化物(LiAlO)	11089-89-7	——	0.1~1
铬	7440-47-3	231-157-5	0.1~1
碳酸锂	554-13-2	209-062-5	0.1~1
乙苯	100-41-4	202-849-4	0.1~1

注：1.在化学品安全数据表中无需考虑百分含量小于 1%的成分，除非该成分呈现出严重的危害性。

4. 急救措施

对医师的建议	在呼吸急促的情况下，需给受害人输氧。保持受害人温暖。让受害人处于观察监护下。
吸入后	转移到有新鲜空气的地方。如需要，须输氧或进行人工呼吸。马上就医。
皮肤接触后	若接触到电池内的物质，立即用肥皂和大量清水彻底冲洗皮肤。脱掉被污染的衣服和鞋子。如皮肤刺激仍继续：须求医。如原是小面积的皮肤接触，防止接触面积的扩大。污染的衣服在使用前，须单独清洗。
眼睛接触后	若接触到电池内的物质，立即用大量流动清水或生理盐水冲洗眼睛数分钟。用手指分开眼睑以保证充分冲洗眼睛。马上就医。
摄入后	漱口。无医师建议的情况下不要引吐。如果受害人需呕吐，使其前倾以减少倒吸的危险。解松过紧的衣物，如领子、领带、皮带或腰带。不要使用嘴对嘴的方法实施救助。马上就医。
主要的症状和影响，包括急性和迟发效应	电池的电解质会刺激皮肤、眼睛和黏膜组织。

5. 消防措施

合适的灭火剂	大量水（降温），可用 HFC（氢氟碳化合物）清洁剂灭火器或耐醇泡沫灭火器。七氟丙烷和全氟己酮对锂电池灭火效果较好。
由物质本身或其燃烧产物、烟气产生的特殊危险	当电芯暴露于过热的环境中时，安全阀可能会打开。在发生火灾时可能释放：一氧化碳、二氧化碳、氮氧化物、氟化氢、氰化氢、苯、甲苯、甲烷、锂氧化物烟气，磷氧化物，刺激性有毒烟雾和气体。
消防人员的特殊防护设备	穿全套防护衣物，包括头盔，自给正压式呼吸器，防护服和面罩，绝缘手套、绝缘靴等。

6. 泄漏应急处理

与人相关的安全防范措施	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。避免皮肤和眼睛接触或吸入有害气体。
环境保护措施	如能做到应防止进一步的泄露和溢出。无相关政府许可，不允许把该物质释放到环境中。
清洁/收集措施	如果电池有泄漏迹象，避免皮肤或眼睛接触电池泄漏的材料。使用耐化学腐蚀的橡胶手套和不易燃的吸收性材料进行清洁。与惰性材料（如干沙，蛭石）混合并转移到密封的容器待处理。
附加说明	关于安全操作的信息见第 7 部分 关于个人防护设备的信息见第 8 部分 关于处置的信息见第 13 部分

7. 操作和存储

操作

安全操作的信息 操作人员应经过培训，严格遵守操作规程。建议操作人员穿一般作业防护服，戴安全手套。远离火种、热源，避免阳光直射。工作场所严禁吸烟。工作场所应有通风系统和设备。避免随意拆卸电池和弄错正负极。须牢固在内包装中，以有效防止短路和防止可导致短路的移动。万一电池内的物质泄漏，避免眼睛、皮肤直接接触，避免吸入。应与强氧化剂、腐蚀品分开存放。

防止爆炸和火灾的信息 避免机械和电气的滥用。不要短路或安装错误。电池如果拆卸、压碎、充电或暴露在高温下，可能会发生爆炸和燃烧。按照设备说明书安装电池。

存储

对储藏室和容器的要求 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于阳光中。

关于储藏在普通存储设施中的信息 储存于阴凉、通风的库房内。远离火种、热源，避免阳光直射。须牢固在内包装中，以有效防止短路和防止可导致短路的移动。应与强氧化剂、易燃易爆、腐蚀品、有害物质分开存放。

关于储藏条件进一步的信息 储存区配备相应品种和数量的消防器材、泄漏应急处理设备和合适的收容材料。

8. 暴露控制/人身保护

暴露限值

成分	CAS 号	ACGIH 阈限值-时间加 权平均浓度 mg/m ³	ACGIH 阈限值-短 时间接触 限值 mg/m ³	NIOSH 阈 限值-时间加 权平均浓度 mg/m ³	NIOSH 阈 限值-短时间 接触限值 mg/m ³
锂镍氧化物	12325-84-7	N.E.	N.E.	N.E.	N.E.
石墨 (C)	7782-42-5	2	N.E.	2.5	N.E.
铁	7439-89-6	N.E.	N.E.	N.E.	N.E.
铜	7440-50-8	0.2	N.E.	1	N.E.
钴酸锂	12190-79-3	N.E.	N.E.	N.E.	N.E.
丙酸甲酯	554-12-1	N.E.	N.E.	N.E.	N.E.

铝	7429-90-5	1	N.E.	10 (总尘) 5 (呼尘)	N.E.
六氟磷酸锂	21324-40-3	N.E.	N.E.	N.E.	N.E.
氟代碳酸乙烯酯	114435-02-8	N.E.	N.E.	N.E.	N.E.
碳酸二甲酯	616-38-6	N.E.	N.E.	N.E.	N.E.
聚乙烯	9002-88-4	N.E.	N.E.	N.E.	N.E.
三氧化二铁	1309-37-1	5	N.E.	5	N.E.
勃姆石(Al(OH)O)	1318-23-6	N.E.	N.E.	N.E.	N.E.
炭黑	1333-86-4	3	N.E.	3.5	N.E.
镍	7440-02-0	1.5 (元素/金属)	N.E.	0.015	N.E.
铝锂氧化物(LiAlO)	11089-89-7	N.E.	N.E.	N.E.	N.E.
铬	7440-47-3	0.5	N.E.	0.5	N.E.
碳酸锂	554-13-2	N.E.	N.E.	N.E.	N.E.
乙苯	100-41-4	20 ppm	N.E.	100 ppm	125 ppm
减少接触的工程控制方法	有通风系统和设备。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。提供安全淋浴和洗眼设备。				
一般保护和卫生措施	正常使用条件下不需要。电池开阀试验时应做好个人防护。工作场所严禁吸烟、饮水和饮食。工作后，沐浴更衣。				
个人防护用品	电池开阀试验时应做好个人防护，呼吸防护，防护手套，防护服和有护边的安全玻璃罩。				
呼吸设备	当工人在高浓度的环境下工作时，必须使用合适的已认证的呼吸器。正常操作条件下，呼吸保护是不必要的。				
双手保护	正常使用条件下不需要。				
眼睛/面部保护	正常使用条件下不需要。必要时使用带侧罩或安全眼镜的护目镜作为工人长期暴露的机械屏蔽。				
身体保护	正常使用条件下不需要。必要时穿戴全套防化学试剂工作服，阻燃防静电防护服，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。				
注:1. N.E. — 未建立。					

9.物理和化学特性

物理状态	割草机，内有一起打包运输的锂离子电池组。锂离子电池组外观为蓝色棱柱形。一个割草机搭配一个锂离子电池组一起打包。 尺寸（长宽高）：113*55.5*76 (mm) 重量：826.5g
颜色	见物理状态
气味	无刺鼻气味
熔点/凝固点	无数据资料
沸点或初始沸点和沸程	无数据资料
易燃性	无数据资料

上、下爆炸极限/易燃极限	无数据资料
闪点	无数据资料
自燃温度	无数据资料
分解温度	无数据资料
pH 值	无数据资料
运动粘度	无数据资料
溶解性	无数据资料
分配系数：正辛醇/水（对数值）	无数据资料
蒸汽压	无数据资料
密度和/或相对密度（水=1）	无数据资料
相对蒸气密度（空气=1）	无数据资料
颗粒特征	无数据资料

10. 稳定性和反应活性

反应性	无数据资料。
化学稳定性	在要求的贮存条件下，这是个稳定的产品。
有害反应的可能性	不聚合。
需避免的条件（如：静电放电，震动等）	火源、热源、拆卸、外部短路、压碎、变形、高温、阳光直射、高湿度、浸水或过充等。
不相容的物质	爆炸品、易燃物、强氧化剂和腐蚀剂。如果发生泄漏，避免与强氧化剂，无机酸，强碱等接触。
有害分解产物	可能包括金属氧化物，一氧化碳，二氧化碳、氮氧化物、氟化氢、氰化氢、苯、甲苯、甲烷、磷氧化物等有毒烟雾和气体。

11. 毒理学信息

进入人体内的途径：	皮肤接触、眼睛接触、吸入和摄入。
急性毒性	
六氟磷酸锂（CAS 21324-40-3）	LD50（口服，大鼠）： >50-300 mg/kg LC50（吸入，大鼠）：未知 LD50（皮肤，兔子）：未知
皮肤腐蚀/刺激	六氟磷酸锂（CAS 21324-40-3）：造成皮肤腐蚀。
严重眼损伤/刺激	六氟磷酸锂（CAS 21324-40-3）：造成严重眼损伤。
呼吸或皮肤敏化作用	未分类
生殖细胞致突变性	未分类
致癌性	未分类
生殖毒性	未分类
特定目标器官毒性-单次接触	未分类
特定目标器官毒性-重复接触	六氟磷酸锂（CAS 21324-40-3）：长期或反复接触会对器官造成伤害。

吸入危险	未分类
慢性影响	未分类
其他信息	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，并可能损坏靶器官的神经。无详细的毒理学研究。

12. 生态学信息

生态毒性	
水生毒性	测试 & 物种 96 Hr LC50 鱼：未知 48 Hr EC50 溞类：未知 72 Hr EC50 藻类：未知
持久性和降解性	高持久性（水/土壤/空气）：碳酸二甲酯。 低持久性（水/土壤/空气）：石墨，聚乙烯。
潜在的生物累积性	碳酸二甲酯：Log Kow 0.2336 (低) 聚乙烯：Log Kow 1.2658 (低)
土壤中的迁移性	碳酸二甲酯：Koc 8.254 (低) 聚乙烯：Koc 14.3 (低)
其他信息	可能造成水或土壤污染。

13. 废弃处置

废物处置说明

联系一家有资质的专业废物处置机构来处置。
按照当地的环境法规或地方当局的要求来进行处置。

14. 运输信息

联合国《关于危险货物运输的建议书 规章范本》(TDG)

UN 编号	UN 3481
正式运输名称	包含在设备中的锂离子电池组
危险类/项别	第 9 类 杂项危险物质和物品
包装类别	—
次要危险性	—
危险性标签	



注：该样品含有可充电锂离子电池组，瓦特-小时额定值大于 100 Wh，内含 5 串 2 并共 10 个电芯，并通过 UN 38.3 要求的各项试验。该锂离子电池组未安装过充电保护装置，按设计要求只用于作为另一带过充电保护装置电池组或设备的部件。该锂电池需装有安全排气、防止外部短路以及防止反向电流造成危险所需的有效装置，并有高质量的管理方案才可按上述条目运输。以适当材料制造的坚固外包装，对于包装的容量和预期用途而言，有足够的强度和设计。它们的构造应能防止在运输过程中意外启动。包装无需满足 TDG 4.1.1.3 的要求。大型设备，如其中的电池或电池组已得到设

备同等程度的保护，可在无包装的条件下或放在货板上运输。
 每个包装件必须使用 9 类锂电池危险性标签（TDG 5.2.2.2.2 图 No.9A）。
 根据 TDG（第 24 修订版）的 2.9.4 (g)，除了安装在设备（包括电路板）上的纽扣电池外，2003 年 06 月 30 日以后制造的锂电池或电池组的制造商和出厂后的销售商应提供联合国《试验和标准手册》第 III 部分第 38.3 小节第 38.3.5 段规定的 UN38.3 试验概要。

国际海运危规
 IMDG

与 TDG 的分类相同
 海洋污染物（是/否）：否
 EmS 编号：F-A, S-I
 每个包装件必须使用 9 类锂电池危险性标签（IMDG Code 5.2.2.2.2 图 No.9A）。
 根据 IMDG Code (2024 版)的 2.9.4.7，除了安装在设备（包括电路板）中的纽扣电池，2003 年 06 月 30 日之后生产的锂电池或电池组的制造商和出厂后的销售商应提供联合国《试验和标准手册》第 III 部分第 38.3 小节第 38.3.5 段规定的 UN38.3 试验概要。

国际空运危规
 IATA-DGR 和
 ICAO-TI

与 TDG 的分类相同
 每个包装件必须使用 9 类锂电池危险性标签（DGR 图 7.3.X）。
 空运中本品应满足 IATA DGR 包装说明 966 的基本要求和第 I 部分的规定。
 根据 IATA DGR (67 版)的 3.9.2.6.1(g)，除了安装在设备（包括电路板）中的纽扣电池，2003 年 06 月 30 日之后生产的锂电池或电池组的制造商和出厂后的销售商必须提供联合国《试验和标准手册》第 III 部分第 38.3 小节第 38.3.5 段规定的 UN38.3 试验概要。
 IATA DGR (67 版)特殊规定 A802，尽管 E 栏无包装等级，此条目所列物品必须包装在符合包装等级 II 级的联合国规格包装容器中。此规定不适用于按包装说明 965 或 968 第 IB 部分准备的锂电池。

铁路运输 RID

与 TDG 的分类相同
 每个包装件必须使用 9 类锂电池危险性标签（RID 2025 版 5.2.2.2.2 图 No.9A）。
 根据 RID (2025 版)的 2.2.9.1.7.1 (g)，除了安装在设备（包括电路板）中的纽扣电池，2003 年 06 月 30 日之后生产的锂电池或电池组的制造商和出厂后的销售商应提供联合国《试验和标准手册》第 III 部分第 38.3 小节第 38.3.5 段规定的 UN38.3 试验概要。

15. 法规信息

欧洲/国际法规

OSHA (美国职业安全健康管理法): 危险性根据危害通讯标准来编写 (29CFR 1910.1200).

EINECS (欧洲现有商业化学物质名录): 该样品各主要成分（除了锂镍氧化物，氟代碳酸乙烯酯，聚乙烯，铝锂氧化物(LiAlO)）已被列入 EINECS 目录中。

EPA TSCA(有毒物质控制法): 该样品各主要成分（除了锂镍氧化物）已被列入 TSCA 公开目录中。

加拿大 该样品各主要成分（除了锂镍氧化物）已被列入 DSL/NDSL 目录中。

DSL/NDSL(国内物质清单)/ (非国内

物质清单):

HMIS (危险品识别系统): 健康危害: 1
 易燃性: 0
 物理危害: 0
 个人防护: F
 (4. 极其严重危害; 3. 严重危害; 2. 中度危害; 1. 轻度危害; 0. 极小危害)

WHMIS (加拿大工作场所所有有害物质识别系统): B4, D2B (铁, 铜); D2A (钴酸锂, 碳酸锂);
 B2 (丙酸甲酯, 碳酸二甲酯); B6 (铝); B2, D2A (乙苯); D2B (氟代碳酸乙烯酯, 铬);
 D1A, D2B, E (六氟磷酸锂); B4, D2A (炭黑)。

ICAO-TI
 1.每个电池芯或电池必须满足 2;9.3 的规定。
 2.设备必须在外包装内得到固定以免移动,并配备防止发生意外启动的有效措施。每个包装件内电池芯或电池的数量不得超过为驱动设备所需的电池数量,加上两组备用电池芯或电池。“一组”电池芯或电池是指为驱动每件设备所需的单个电池芯或电池的数量。
 3.除非依据《技术细则》的相关要求取得特别批准,按照包装说明 966 要求运输的锂离子电池(芯)货物,交运时锂离子电池(芯)的荷电状态不得超过其额定容量的 30%。

危险货物品名表 (GB 12268-2025) 联合国编号: UN 3481, 名称和说明: 与设备包装在一起的锂离子电池组, 类别: 9, 包装类别: 一。
 本报告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。

16. 其他信息

雇主只能把本化学品安全数据表的信息当作他们所获其他信息的补充信息,并能独立判断此信息的适用性,以确保正确使用并保护雇员的健康和安全。此化学品安全数据表提供的信息并不具担保作用,任何未按本化学品安全数据表使用产品、或与其他产品和操作过程同时使用本产品时产生的后果由用户自行承担。


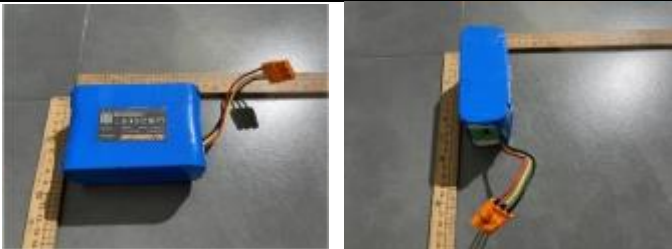



本化学品安全数据表是根据《全球化学品统一分类和标签制度》,联合国《关于危险货物运输的建议书》,《国际海运危险货物规则》,国际航空运输协会《危险货物规则》和国家标准等相关危险化学品管理法律法规和标准进行编制,而上述法律法规和标准均会定期进行更新和变化。为使危险货物/危险化学品符合相关最新的管理要求,建议定期审核更新化学品安全数据表。

本化学品安全数据表分别以中、英文编制,在对中、英文本的理解上发生歧义时,以中文文本为准。

缩略语
 TDG: 联合国《关于危险货物运输的建议书 规章范本》
 ADR: 《国际危险货物公路运输协定》
 RID: 《国际危险货物铁路运输规则》
 IMDG: 国际海事组织《国际海运危险货物规则》
 IATA-DGR: 国际航空运输协会《危险货物规则》(IATA)
 ICAO-TI: 国际民用航空组织《危险物品安全航空运输技术细则》(ICAO)
 EINECS: 欧洲现有商业化学物质名录
 CAS: 化学文摘号

	LC50: 半数致死浓度
	LD50: 半数致死剂量
	EC50: 半数效应浓度
编制日期	2026.01.29
更新和修改	第 1 版
编制标准	全球化学品统一分类和标签制度 第 1.5 部分
编制机构	杭州海关技术中心

附：样品照片

样品照片 Sample Photos		
内部电芯/Inner Cell (INR21700-50S)		
		
电池/Battery (可充电锂离子电池包/Rechargeable Li-ion Battery LBF2010 18V 20V Max 10Ah 180Wh)		
		
铭牌/ Nameplate		
		
设备/Equipment (割草机/ LAWN MOWER)		
		
委托方提供的包装照片/ Package Photos provided by the Applicant		
		

报告结束

