

MATERIAL SAFETY DATA SHEET

FILE NO.:

MSDS DATE: 6/30/2020

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: COB + Spot Rechargeable Spotlight
PRODUCT CODES: 41-4356

MANUFACTURER: Dorcy International
ADDRESS: 2700 Port Rd, Columbus, OH, 43217
EMERGENCY PHONE: 800-837-8558
CHEMTREC PHONE: N/A
OTHER CALLS: N/A
FAX: 614-497-5822
PRODUCT USE: Lighting

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT: (list out ingredient name and percentage, must total add up to 100%)

| <u>Part</u> | <u>Material 原材料</u> | <u>Weight Percentage 重量比例</u> | <u>Actual Weight 实际重量</u> |
|----------------|---------------------|-------------------------------|---------------------------|
| 1.Body 灯身 | ABS+TPR | 13.5% | 53g / pack |
| 2.head 面盖 | ABS+TPR | 30.3% | 118.5g / pack |
| 3 Reflector 光碗 | PC | 1% | 4g / pack |
| 5.镜片 | PC | 1.1% | 4.5g / pack |
| 7.支架 | ABS+TPR | 13.2% | 51.5g / pack |
| 8.装饰盖 | ABS | 1.2% | 5g / pack |
| 9.透明盖 | PC | 0.9% | 3.6g / pack |
| 10.按钮 +O 形圈 | 硅胶 | 0.7% | 3 g / pack |
| 11.导光块 | PMMA | 0.2% | 1g / pack |
| 12.小塑料件 | ABS+PC | 0.2% | 1 g / pack |
| 13.五金件 | AL6063 | 8.3% | 32.5 g / pack |
| 14.线路板 | FR-4 | 1.9% | 7.5 g / pack |
| 15.电线 | copper | 0.2% | 1g / pack |
| 16. COB | | 0.8% | 3.5 g / pack |
| 17.电池 | LI-BATTERY | 24.7% | 96.5g / pack |
| 18.螺丝 | 铁 | 1.2% | 5g / pack |

SECTION 3: HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYES: No health effects are expected

SKIN: No health effects are expected.

INGESTION: No health effects are expected.

MATERIAL SAFETY DATA SHEET

FILE NO.:

MSDS DATE: 6/30/2020

INHALATION: No health effects are expected

CARCINOGENICITY

OSHA:

ACGIH:

NTP:

IARC:

OTHER: No conclusive data is available to indicate product or any component present is greater than 0.1% may cause cancer.

SECTION 4: FIRST AID MEASURES

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

EYES: No need for first aid is anticipated

SKIN: No need for first aid is anticipated

INGESTION: No need for first aid is anticipated

INHALATION: No need for first aid is anticipated

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS IN AIR, UPPER: Not Applicable
(% BY VOLUME) **LOWER:** Not Applicable

FLASH POINT:

F: Not Applicable

C: Not Applicable

METHOD USED: Not Applicable

AUTOIGNITION TEMPERATURE:

F: Not Applicable

C: Not Applicable

NFPA HAZARD CLASSIFICATION

HEALTH: 0

FLAMMABILITY: 1

REACTIVITY: 0

OTHER:

EXTINGUISHING MEDIA: Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide)

SPECIAL FIRE FIGHTING PROCEDURES: As with any fire, avoid inhalation of hazardous decomposition products. Wear self-contained breathing apparatus and protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: No unusual fire or explosion hazards are anticipated.

HAZARDOUS DECOMPOSITION PRODUCTS: Not Applicable

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Not Applicable

SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions. Store under normal warehouse conditions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Not Applicable

VENTILATION : Not Applicable

MATERIAL SAFETY DATA SHEET

FILE NO.:

MSDS DATE: 6/30/2020

RESPIRATORY PROTECTION: Avoid inhaling product.

EYE PROTECTION: Avoid eye contact.

SKIN PROTECTION: Gloves not required.

EXPOSURE GUIDELINES: None Established

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:

ODOR: None

PHYSICAL STATE: Solid

pH AS SUPPLIED: N/A

pH (Other): N/A

BOILING POINT:

F: Not Applicable

C: Not Applicable

MELTING POINT:

F: Not Applicable

C: Not Applicable

FREEZING POINT:

F: Not Applicable

C: Not Applicable

VAPOR PRESSURE (mmHg):

@

F: Not Applicable

C: Not Applicable

VAPOR DENSITY (AIR = 1):

@

F: Not Applicable

C: Not Applicable

SPECIFIC GRAVITY (H₂O = 1):

@

F: Not Applicable

C: Not Applicable

EVAPORATION RATE: Not Applicable

BASIS (=1): Not Applicable

SOLUBILITY IN WATER: No

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable

HAZARDOUS POLYMERIZATION: Hazardous polymerization will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: Not Applicable

SECTION 11 NOTES:

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Not Applicable

MATERIAL SAFETY DATA SHEET

FILE NO.:

MSDS DATE: 6/30/2020

SECTION 12 NOTES:

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Reclaim if feasible. If product cannot be reclaimed, dispose of waste product in a sanitary landfill. Alternatively, incinerate the waste product in an industrial, commercial, or municipal incinerator.

SECTION 14: TRANSPORT INFORMATION

Please contact the phone numbers listed on the first page of the MSDS for Transport Information for this material.

Section 14 Transportation Information

UNRTDG

UN number : UN 3481
Proper shipping name : Lithium ion batteries container in equipment
(including lithium ion polymer batteries)

Class : 9
Packing group : III
Labels : 9

IATA-DGR

UN/ID NO. : UN3481
Proper shipping name : Lithium ion batteries contained in equipment
(including lithium ion polymer batteries).

Class : 9
Packing group : III
Labels : Miscellaneous Lithium batt
Packing instruction (Cargo aircraft) : 967
Packing instruction (passenger aircraft) : 967
Environmentally hazardous : yes

IMDG-Code

UN number : UN 3481
Proper shipping name : Lithium ion batteries container in equipment
(including lithium ion polymer batteries)

Class : 9
Packing group : III
Labels : 9
EmS Code : F-A, S-F
Marine pollutant : yes

Power battery (watt per hour) : INR18650-2200A 3.7V 2200mAh 8.14wh

MATERIAL SAFETY DATA SHEET

FILE NO.:

MSDS DATE: 6/30/2020

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

Contact Dorcy International for more information.

311/312 HAZARD CATEGORIES:

Fire Hazard – No Pressure Hazard – No Reactivity Hazard – No Delayed Hazard - No

SECTION 16: OTHER INFORMATION

OTHER INFORMATION: None

DISCLAIMER: The information in this Material Safety Data Sheet (MSDS) is believed to be correct as of the date issued. Dorcy International HERE MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether Dorcy International product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a Dorcy International product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the Dorcy International product to determine whether it is fit for a particular purpose and suitable for user's method of use or application. Dorcy International provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, Dorcy International makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the MSDS available directly from Dorcy International.

MATERIAL SAFETY DATA SHEET

FILE NO.:

MSDS DATE: 6/30/2020

SECTION 17: BATTERY MSDS INFORMATION

SAFETY DATA SHEET

Lithium ion Cell INR18650-2200A 3.7V 2200mAh 8.14Wh

SECTION1 PRODUCT AND COMPANY IDENTIFICATION

Product name: Lithium ion Cell INR18650-2200A 3.7V 2200mAh 8.14Wh
Company: Roofer Energy Technology(Baoshan) Co., Ltd.
Address: Luhua Industrial Park, Baoshan Industry and Trade Zone, Baoshan City, Yunnan Province, 518109, P. R. China
Email: hmpz@roofer.com.cn
Fax: 86-755-33239825
Emergency Phone: 86-755-33239825
SDS Number: 2619120224
Effective Date: 2020-01-09

SECTION2 HAZARDS IDENTIFICATION

Hazards Identification:

The battery has passed the test items of UN Model Regulations, Manual of Test and Criteria Section UN 38.3.

Emergency Overview:

Caution: Avoid contact and inhalation the electrolyte contained inside the battery.

SECTION3 INFORMATION ON INGREDIENTS

Product name: Lithium ion Cell INR18650-2200A 3.7V 2200mAh 8.14Wh

| Ingredient | Concentration | CAS No. | EC No. |
|-----------------------------|---------------|------------|-----------|
| Lithium cobalt oxide | 40% | 12190-79-3 | 235-362-0 |
| Graphite | 18% | 7782-42-5 | 7782-42-5 |
| Lithium hexafluorophosphate | 18% | 21324-40-3 | 244-334-7 |
| Copper | 10% | 7440-50-8 | 231-159-6 |
| Aluminum | 5% | 7429-90-5 | 231-072-3 |
| Poly(vinylidene fluoride) | 5% | 24937-79-9 | 607-458-6 |
| Polyvinyl chloride | 3% | 9002-86-2 | 618-338-8 |
| Nickel | 1% | 7440-02-0 | 231-111-4 |



MATERIAL SAFETY DATA SHEET

MSDS DATE: 6/30/2020

FILE NO.:

NO.2619120224

SECTION4 FIRST-AID MEASURES

Skin Exposure:

If the internal battery materials of an opened battery cell come into contact with the skin, immediately flush with plenty of water.

Eye Exposure:

In case of the internal battery materials in contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Inhalation Exposure:

If inhaled the internal materials of battery, remove immediately to fresh air and seek medical attention.

Oral Exposure:

If swallowed the internal materials of battery, do not induce vomiting. Seek immediate medical attention.

SECTION5 FIRE FIGHTING MEASURES

Extinguishing Media:

Suitable: Dry chemical, Sandy soil, Carbon dioxide or appropriate foam.

Firefighting:

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific hazards: Emit toxic fumes under fire conditions.

SECTION6 ACCIDENTAL RELEASE MEASURES

Procedure of Personal Precaution:

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.

SECTION7 HANDLING AND STORAGE

Handling:

Keep away from ignition sources, heat and flame. 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. No smoking at working site. Materials to Avoid: Strong oxidizing agents, Corrosives.

Storage:

Store in a cool, well-ventilated area. Keep away from ignition sources, heat and flame. 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, Corrosives.

MATERIAL SAFETY DATA SHEET

MSDS DATE: 6/30/2020

FILE NO.:

NO.2619120224

SECTION8 EXPOSURE CONTROL/PPE

Engineering Controls:

Use ventilation equipment if available. Safety shower and eye bath.

Personal Protective Equipment:

Respiratory System: Not necessary under conditions of normal use.

Eyes: Not necessary under conditions of normal use.

Clothing: Wear appropriate protective clothing.

Hand: Safety gloves.

Other Protect:

No smoking, drinking and eating at working site. Wash thoroughly after handling.

SECTION9 PHYSICAL/CHEMICAL PROPERTIES

Appearance: Multicolor cylinder plastics film shell

Odor: Odorless

Melting Point/°C: >300°C

Solubility: Partial soluble in water

SECTION10 STABILITY AND REACTIVITY

Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Avoid exposure to heat and open flame. Avoid mechanical or electrical abuse. Prevent short circuits. Prevent movement which could lead to short circuits.

Materials to Avoid:

Strong oxidizing agents, Corrosives.

Hazardous Polymerization:

Will not occur.

Hazardous Decomposition Products:

Metal oxides, CO, CO₂.

SECTION11 TOXICOLOGICAL INFORMATION

Toxicity Data:

Not available.

Irritation Data:

The internal battery materials may cause irritation to eyes and skin.

SECTION12 ECOLOGICAL INFORMATION

No data available.

SECTION13 DISPOSAL CONSIDERATION

Appropriate Method of Disposal of Substance:

Lithium batteries are best disposed of as a non-hazardous waste when fully or mostly discharged. Contact a licensed professional waste disposal service to dispose of large quantities materials.

MATERIAL SAFETY DATA SHEET

MSDS DATE: 6/30/2020

FILE NO.:

NO.2619120224

SECTION14 TRANSPORT INFORMATION

The product has passed the test items of UN Model Regulations, Manual of Test and Criteria Section 38.3 and UN Model Regulations, SP188, 1.2m drop test. The total net weight of the Lithium batteries is more than 10 kg.

IATA DGR (61th Edition) :

Proper Shipping Name: Lithium ion batteries

UN Number: UN3480

Hazard Class: 9

The product shall meet the General Requirements and section IA of Packaging Instruction 965.

According to 3.9.2.6.1(g) of IATA DGR (61th Edition), 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.

IMO IMDG Code(2018 Edition):

The product is not restricted to the other provisions of IMO IMDG Code according to special provision 188.

According to 2.9.4.7 of IMDG Code(2018 Edition), Manufacturers and subsequent distributors of cells or batteries manufactured 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.

SECTION15 REGULATORY INFORMATION

ICAO:

1. Unless be exempted according to ICAO TI, the lithium ion cell/batteries (UN 3480, PI 965) and lithium metal cell/batteries (UN 3090, PI 968) are forbidden for carriage on passenger aircraft.
2. Unless be approved according to ICAO TI, Lithium ion cells/batteries (UN 3480, PI 965) must be offered for transport at a state of charge (SoC) not exceeding 30% of their rated design capacity.
3. A shipper is not permitted to offer for transport more than one (1) package prepared according to Section II of PI 965 and PI 968 in any single consignment. Not more than one (1) package prepared in accordance with Section II of PI 965 and PI 968 may be placed into an overpack.
4. Packages prepared according to Section II of PI 965 and PI 968 must be offered to the operator separately from other cargo and must not be loaded into a unit load device (ULD) before being offered to the operator.

SECTION16 OTHER INFORMATION

Date:

2020-01-09

Department:

Shanghai Research Institute of Chemical Industry Testing Co., Ltd.
Tel(Fax):+86-21-52815377/31765555

Revision:

0

Other Information:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. We make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigation to determine the suitability of the information for their particular purposes. In no way shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising from using the above information.

MATERIAL SAFETY DATA SHEET

MSDS DATE: 6/30/2020

FILE NO.:

