



# Safety Data Sheet (SDS) Report

## Safety Data Sheet (SDS) Report

### Report

STSGZ2409193027E-V1

### Number:

**Applicant:** NINGBO HIGHLITE ILLUMINATION CO.,LTD  
ROOM 2202,22F,BANK OF CHINA  
MANSION,COMMERCIAL CENTER

### Issue Date:

15-Jan-2026

**Address:** NO.318,HE YUAN ROAD,YINZHOU  
DIST.,NINGBO,  
315040,CHINA

## Sample Description:

The sample information was submitted and identified on client' s behalf to be:

Product Name : Bionic Floodlight Elite (Built in lithium-ion battery)

Model : #1146,#1186,#4254

Physical State : Silver Solid

Data Received : Sep 19, 2024

Data Reviewed : Sep 23, 2024

Remark: : This report replaces the original report STSGZ2409193027E and the original report is invalid.

## Service Requested:

Based on the information provided by the applicant, the Safety Data Sheet (SDS) was generated in accordance with requirements of Compiled according to US OSHA HCS-2012, for details please refer to attached pages.

Signed for and on behalf of STS

Mark Mai  
(Technical Director)



The sample(s) and sample information was/were submitted and identified by the client. The results shown in this test report refer only to the sample(s) tested unless otherwise stated. This test report shall not be reproduced expected in full, without written approval of the Company.

## Guangzhou Depuhua Test Services Co., Ltd.

A301&A401, 3/F.&4/F., Xinghui Building, Guangqiao, Shilou, Panyu District, Guangzhou, Guangdong, China  
Tel : +86 (0)20-84503814 Fax:+86 (0) 20-6664 1699 e-mail:dphrp@dphl.com  
Web :http://www.dphl.com/

## 1 Identification

### Product identifier

Product Name	#1146 Bionic Floodlight Elite (Built in lithium-ion battery)
CAS No.	Not applicable
EC No.	Not applicable
Molecular Formula	Not applicable

### Recommended use of the product and restrictions on use

Relevant identified uses	Please consult manufacturer.
Uses advised against	Please consult manufacturer.

### Details of the supplier of the Safety Data Sheet

Name of the company	NINGBO HIGHLITE ILLUMINATION CO., LTD
Address of the company	ROOM 2202,22F,BANK OF CHINA MANSION,COMMERCIAL CENTER NO.318,HE YUAN ROAD, YINZHOU DIST.,NINGBO,315040,CHINA
Post code	—
Telephone number	13567929320
Fax number	—
E-mail address	jessie@highlite.cn

### Emergency phone number

Emergency phone number	—
------------------------	---

## 2 Hazard(s) identification

### Classification of the substance or mixture

According to OSHA HCS-2012 APPENDIX D TO §1910.1200

Not classified.

### Label elements

Hazard pictograms	Not applicable
Signal word	Not applicable

### Hazard statements

Hazard statements	Not applicable
-------------------	----------------

### Precautionary statements

#### ◆ Prevention

Prevention	Not applicable
------------	----------------

#### ◆ Response

Response	Not applicable
----------	----------------

#### ◆ Storage

<b>Storage</b>	Not applicable
----------------	----------------

◆ Disposal

<b>Disposal</b>	Not applicable
-----------------	----------------

**Other hazards**

	Not Applicable
--	----------------

### 3 Composition/information on ingredients

**Substance/mixture**

	Mixture
--	---------

Component	CAS No.	EC No.	Concentration (wt, %)
Plastic ABS	9003-56-9	618-371-8	59.83
Plastic PC	25037-45-0	607-501-9	4.67
Plastic PP	9003-07-0	618-352-4	2.6
Plastic PVC	9002-86-2	618-338-8	5.47
Plastic AS	9003-54-7	618-369-7	5.66
Epoxy resin	N/A	N/A	4.36
Lithium (III, IV) permanganate	12057-17-9	601-724-5	8.91
Screw stainless steel, iron	12597-68-1	N/A	2.22
Circuit board	N/A	N/A	5.52
Silicone O-ring, button	112926-00-8	601-214-2	0.76

### 4 First-aid measures

**Description of first aid measures**

<b>General advice</b>	Normally not needed. If the battery is damaged and comes into contact with electrolyte, please seek medical attention immediately. Consult the attending physician for this Safety Data Sheet (SDS).
<b>Eye contact</b>	No harm at the normal use. If contact the Electrolyte liquid in the Lithium ion battery, Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
<b>Skin contact</b>	No harm at the normal use. If contact the Electrolyte liquid in the Lithium ion battery, Remove contaminated clothes and rinse skin with plenty of water or shower for 15 minutes. Get medical aid.
<b>Ingestion</b>	If swallowed, obtain medical attention immediately.
<b>Inhalation</b>	It will not cause harm to health under normal conditions.
<b>Protecting of first-aiders</b>	Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination.

### **Most important symptoms/effects, acute and delayed**

- |   |                        |
|---|------------------------|
| 1 | Please see section 11. |
|---|------------------------|

### **Indication of any immediate medical attention and special treatment needed**

- |   |                          |
|---|--------------------------|
| 1 | Treat symptomatically.   |
| 2 | Symptoms may be delayed. |

## **5 Fire-fighting measures**

### **Extinguishing media**

<b>Suitable extinguishing media</b>	Dry powder, carbon dioxide, alcohol resistant foam.
<b>Unsuitable extinguishing media</b>	Avoid using too strong water vapor to extinguish the fire, as it may cause the flames to spread and disperse.

### **Specific hazards arising from the substance or mixture**

- |   |   |
|---|---|
| 1 | Development of hazardous combustion gases or vapor possible in the event of fire.                   |
| 2 | May expansion or decompose explosively when heated or involved in fire.                             |
| 3 | In the event of a fire, carbon monoxide (CO) and carbon dioxide (CO <sub>2</sub> ) can be released. |

### **Special protective equipment and precautions for fire-fighters**

- |   |   |
|---|---|
| 1 | As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear. |
| 2 | Fight fire from a safe distance, with adequate cover.   |
| 3 | Prevent fire extinguishing water from contaminating surface water or the ground water system.                         |

## **6 Accidental release measures**

### **Personal precautions, protective equipment and emergency procedures**

- |   |   |
|---|---|
| 1 | Use personal protective equipment, do not breathe gas/mist/vapour/spray.  |
| 2 | Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges.                                 |
| 3 | Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.   |
| 4 | Avoid direct contact with eyes. Confirm that the cleaning work is carried out by trained personnel. Wear appropriate personal protective equipment. |

### **Environmental precautions**

- |   |   |
|---|---|
| 1 | Prevent further leakage or spillage if safe to do so. |
| 2 | Discharge into the environment must be avoided.       |

### **Methods and materials for containment and cleaning up**

- |   |  |
|---|--|
| 1 | Cut off the source of the leak as much as possible.  |
| 2 | Keep leaks in a ventilated place.  |
| 3 | Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding. |

4	Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.
5	Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container.
6	If the electrolyte leaks, it should be adsorbed with soil, sand, or other non combustible materials. The leaked battery and contaminated adsorbent should be placed in a metal container.

## 7 Handling and storage

### Precautions for safe handling

1	Handling is performed in a well ventilated place.
2	Wear suitable protective equipment.
3	Avoid contact with skin and eyes.
4	Keep away from heat/sparks/open flames/ hot surfaces.

### Conditions for safe storage, including any incompatibilities

1	Keep containers tightly closed.
2	Keep containers in a dry, cool and well-ventilated place.
3	Keep away from heat/sparks/open flames/hot surfaces.
4	Store away from incompatible materials and foodstuff containers.

## 8 Exposure controls/personal protection

### Control parameters

Component	Country/Region	Limit value - Eight hours		Limit value - Short term	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
All components	USA - OSHA	-	-	-	-
	South Korea	-	-	-	-
	Ireland	-	-	-	-
	Germany (DFG)	-	-	-	-
	Belgium	-	-	-	-
	Australia	-	-	-	-

### Engineering controls

1	No engineering controls are required for handling batteries that have not been damaged. Personal protective equipments for damaged batteries should include chemical resistant gloves and safety glasses.
---	---

### Personal protection equipment

General requirement	Under normal circumstances, no protective measures are required.
Eye protection	Not necessary under normal conditions, Wear safety glasses if handling an open or leaking battery.
Hand protection	Not necessary under normal conditions, Wear neoprene or nitrile rubber

	gloves if handling an open or leaking battery.
<b>Respiratory protection</b>	In general situation, respiratory protection is not needed. If exposure limits are exceeded or if irritation or other symptoms are experienced, wear dust proof mask or gas defence mask.
<b>Skin and body protection</b>	In general situation, skin and body protection are not needed.

## 9 Physical and chemical properties and safety characteristics

### Physical and chemical properties

<b>Appearance (physical state, color, etc.)</b>	Silver Solid
<b>Odor</b>	If leaking, smells of medical ether
<b>Odor threshold</b>	No information available
<b>pH</b>	No information available
<b>Melting point/freezing point(°C)</b>	No information available
<b>Initial boiling point and boiling range(°C)</b>	No information available
<b>Flash point(Closed cup, °C)</b>	No information available
<b>Evaporation rate</b>	No information available
<b>Flammability</b>	No information available
<b>Upper/lower explosive limits[% (v/v)]</b>	No information available
<b>Vapor pressure</b>	No information available
<b>Vapor density(Air = 1)</b>	No information available
<b>Relative density(Water=1)</b>	No information available
<b>Solubility</b>	No information available
<b>n-octanol/water partition coefficient</b>	No information available
<b>Auto-ignition temperature(°C)</b>	No information available
<b>Decomposition temperature(°C)</b>	No information available
<b>Kinematic viscosity</b>	No information available

## 10 Stability and reactivity

### Stability and reactivity

<b>Reactivity</b>	Contact with incompatible substances can cause decomposition or other chemical reactions.
<b>Chemical stability</b>	Stable under proper operation and storage conditions.
<b>Possibility of hazardous reactions</b>	In contact with oxidants causes severe reactions, and may cause a fire or explosion. In contact with active metals (alkali metals, Na, Ca etc.) causes a reaction and release hydrogen.

<b>Conditions to avoid</b>	Flames, sparks, and other sources of ignition, incompatible materials.
<b>Incompatible materials</b>	Oxidizing agents, acid, base.
<b>Hazardous decomposition products</b>	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11 Toxicological information

### | Acute toxicity

Component	LD <sub>50</sub> (oral)	LD <sub>50</sub> (dermal)	LC <sub>50</sub> (inhalation,4h)
<b>All components</b>	No information available	No information available	No information available

### | Carcinogenicity

Component	List of carcinogens by the IARC Monographs	Report on Carcinogens by NTP	OSHA Carcinogen List
<b>Plastic ABS</b>	Not Listed	Not Listed	Not Listed
<b>Plastic PC</b>	Not Listed	Not Listed	Not Listed
<b>Plastic PP</b>	Not Listed	Not Listed	Not Listed
<b>Plastic PVC</b>	Not Listed	Not Listed	Not Listed
<b>Plastic AS</b>	Not Listed	Not Listed	Not Listed
<b>Epoxy resin</b>	Not Listed	Not Listed	Not Listed
<b>Lithium (III, IV) permanganate</b>	Not Listed	Not Listed	Not Listed
<b>Screw stainless steel, iron</b>	Not Listed	Not Listed	Not Listed
<b>Circuit board</b>	Not Listed	Not Listed	Not Listed
<b>Silicone O-ring, button</b>	Not Listed	Not Listed	Not Listed

### | Others

#### #1146 Bionic Floodlight Elite (Built in lithium-ion battery)

<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met
<b>Serious eye damage/irritation</b>	Based on available data, the classification criteria are not met
<b>Skin sensitization</b>	Based on available data, the classification criteria are not met
<b>Respiratory sensitization</b>	Based on available data, the classification criteria are not met
<b>Reproductive toxicity</b>	Based on available data, the classification criteria are not met
<b>STOT-single exposure</b>	Based on available data, the classification criteria are not met
<b>STOT-repeated exposure</b>	Based on available data, the classification criteria are not met
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met
<b>Germ cell mutagenicity</b>	Based on available data, the classification criteria are not met
<b>Reproductive toxicity(additional)</b>	Based on available data, the classification criteria are not met

## 12 Ecological information

### Acute aquatic toxicity

Component	Fish	Crustaceans	Algae
All components	No information available	No information available	No information available

### Chronic aquatic toxicity

Component	Fish	Crustaceans	Algae
All components	No information available	No information available	No information available

### Persistence and degradability

Component	Persistence (water/soil)	Persistence (air)
All components	No information available	No information available

### Bioaccumulative potential

Component	Bioaccumulative potential	Comments
All components	No information available	No information available

### Mobility in soil

Component	Mobility in soil	Soil Organic Carbon-Water Partitioning Coefficient (Koc)
All components	No information available	No information available

### Results of PBT and vPvB assessment

Component	Results of PBT and vPvB assessment [according to (EC) No 1907/2006]
Plastic ABS	Not PBT/vPvB
Plastic PC	Not PBT/vPvB
Plastic PP	Not PBT/vPvB
Plastic PVC	Not PBT/vPvB
Plastic AS	Not PBT/vPvB
Epoxy resin	Not PBT/vPvB
Lithium (III, IV) permanganate	Not PBT/vPvB
Screw stainless steel, iron	Not PBT/vPvB
Circuit board	Not PBT/vPvB

<b>Silicone O-ring, button</b>	<b>Not PBT/vPvB</b>
--------------------------------	---------------------


### 13 Disposal considerations

#### Disposal considerations

<b>Waste chemicals</b>	Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.
<b>Contaminated packaging</b>	Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible.
<b>Disposal recommendations</b>	Refer to section waste chemicals and contaminated packaging.

### 14 Transport information

#### Label and Mark

<b>Transporting Label</b>	
---------------------------	---

#### IMDG-CODE

<b>UN number</b>	3481
<b>UN proper shipping name</b>	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT
<b>Hazard category</b>	9
<b>Packing group</b>	III
<b>Marine pollutants (Yes/No)</b>	No
<b>Note</b>	The batteries are not restricted to IMDG Code 2022 Edition (Amdt 41-22) according to special provision 188.

#### IATA-DGR

<b>UN number</b>	3481
<b>UN proper shipping name</b>	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT
<b>Hazard category</b>	9
<b>Packing group</b>	III
<b>Note</b>	Can be shipped by air in accordance with International Civil Aviation Organization (ICAO), TI or International Air Transport Association (IATA), DGR Packing Instruction 965 Section IB, 966~967 Section II appropriate of IATA DGR 65th (2024 Edition) for transportation.

#### UN-ADR

<b>UN number</b>	3481
<b>UN proper shipping name</b>	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT
<b>Hazard category</b>	9
<b>Packing group</b>	III

<b>Note</b>	<p>1. The batteries are not subject to the provisions of United Nations Economic Commission for Europe (UNECE) ADR/ADN if they meet the requirements of special provision 188 of Chapter 3.3. Applicable as from 1 January 2023.</p> <p>2. In addition, to be permitted in transport each lithium cell and battery types must have passed the applicable tests set out in Subsection 38.3 of the UN Manual of Tests and Criteria.</p>
-------------	---

## 15 Regulatory information

### International chemical inventory

Component	EC inventory	TSCA	DSL	IECS C	NZIoC	PICCS	KECI	AIIC	ENC S
Plastic ABS	×	√	√	√	√	√	√	√	√
Plastic PC	×	√	√	√	√	√	√	√	√
Plastic PP	×	√	√	√	√	√	√	√	√
Plastic PVC	×	√	√	√	√	√	√	√	√
Plastic AS	×	√	√	√	√	√	√	√	√
Epoxy resin	×	×	×	×	×	×	×	×	×
Lithium (III, IV) permanganate	×	√	×	√	√	×	√	×	×
Screw stainless steel, iron	×	×	×	√	×	×	×	×	×
Circuit board	×	×	×	×	×	×	×	×	×
Silicone O-ring, button	×	×	√	√	√	√	√	√	×

[EC inventory]	European Inventory of Existing Commercial Chemical Substances
[TSCA]	United States Toxic Substances Control Act Inventory
[DSL]	Canadian Domestic Substances List
[IECSC]	China Inventory of Existing Chemical Substances
[NZIoC]	New Zealand Inventory of Chemicals
[PICCS]	Philippines Inventory of Chemicals and Chemical Substances
[KECI]	Korea Existing Chemicals Inventory
[AIIC]	Australian. Inventory of Industrial Chemical (AIIC)
[ENC S]	Japan Inventory of Existing & New Chemical Substances

## 16 Other information

### Information on revision

Creation Date	2024/09/19
Revision Date	2024/09/23
Reason for revision	-

### Reference

- [1] IPCS: The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>,  
 [2] IARC, website: <http://www.iarc.fr/>,  
 [3] OECD: The Global Portal to Information on Chemical Substances, website: <https://www.echemportal.org/echemportal>,  
 [4] CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>,  
 [5] NLM: ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>,  
 [6] EPA: Integrated Risk Information System, website: <http://cfpub.epa.gov/iris/>,  
 [7] U.S. Department of Transportation: ERG, website: <http://www.phmsa.dot.gov/hazmat/library/erg>,  
 [8] Germany GESTIS-database on hazard substance, website: <http://gestis-en.itrust.de/>.

## Abbreviations and acronyms

CAS	Chemical Abstracts Service	UN	The United Nations
PC-STEL	Short term exposure limit	OECD	Organization for Economic Co-operation and Development
PC-TWA	Time Weighted Average	IMDG-CODE	International Maritime Dangerous Goods CODE
MAC	Maximum Allowable Concentration	IARC	International Agency for Research on Cancer
DNEL	Derived No Effect Level	ICAO	International Civil Aviation Organization
PNEC	Predicted No Effect Concentration	IATA	International Air Transportation Association
NOEC	No Observed Effect Concentration	ACGIH	American Conference of Governmental Industrial Hygienists
LC <sub>50</sub>	Lethal Concentration 50%	NFPA	National Fire Protection Association
LD <sub>50</sub>	Lethal Dose 50%	NTP	National Toxicology Program
EC <sub>50</sub>	Effective Concentration 50%	PBT	Persistent, Bioaccumulative, Toxic
EC <sub>x</sub>	Effective Concentration X%	vPvB	very Persistent, very Bioaccumulative
P <sub>OW</sub>	Partition coefficient Octanol: Water	CMR	Carcinogens, mutagens or substances toxic to reproduction
BCF	Bioconcentration factor	RPE	Respiratory Protective Equipment
ED	Endocrine disruptor	HCS	Hazard Communication Standard

## Disclaimer

This Safety Data Sheet (SDS) was prepared according to US OSHA HCS-2012. The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.

\*\*\*End of SDS\*\*\*