SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

LED Battery Bonnet Lamp (BGS 9757)
Article number: 9757

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

1.2.1 Relevant uses

See product designation

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

BGS technic KG
Bandwirkerstr. 3
42929 Wermelskirchen / GERMANY
Phone +49 (0)2196 72048-0
Fax +49 (0)2196 72048-20
Homepage www.bgstechnic.com
E-mail mail@bgs-technic.de

Address enquiries to

Technical information mail@bgs-technic.de

Safety Data Sheet sdb@chemiebuero.de (No dispatch of safety data sheets)

Safety data sheets are available from the supplier.

1.4 Emergency telephone number

Advisory body +49 (0)89-19240 (24h) (English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

Skin Corr. 1A: H314 Causes severe skin burns and eye damage.
Eye Dam. 1: H318 Causes serious eye damage.
Skin Sens. 1: H317 May cause an allergic skin reaction.
Repr. 1B: H360FD May damage fertility. May damage the unborn child.
Carc. 2: H351 Suspected of causing cancer.
STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure.
Acute Tox. 4: H302 Harmful if swallowed.

2.2 Label elements

This product is an article and therefore it does not require labelling according to regulations REACH/CLP.

2.3 Other hazards

Physico-chemical hazards When cell is exposed to an external short-circuit, it will cause heat generation and ignition. The chemicals are contained within a sealed housing. There is only a risk of exposure if the battery is subject to mechanical or electrical misuse.

Human health dangers Contains no ingredients with endocrine-disrupting properties.

Environmental hazards Does not contain any PBT or vPvB substances.

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is an article.

Range [%]	Substance
≤ 40	Cobalt lithium dioxide
	CAS: 12190-79-3, EINECS/ELINCS: 235-362-0
	GHS/CLP: Repr. 1B: H360FD
≤ 18	Lithium hexafluorophosphate
	CAS: 21324-40-3, EINECS/ELINCS: 244-334-7
	GHS/CLP: Acute Tox. 3: H301 - Skin Corr. 1A: H314 - Eye Dam. 1: H318 - STOT RE 1: H372
≤ 1	Nickel
	CAS: 7440-02-0, EINECS/ELINCS: 231-111-4, EU-INDEX: 028-002-00-7
	GHS/CLP: Carc. 2: H351 - STOT RE 1: H372 - Skin Sens. 1: H317

Comment on component parts For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Measures are only needed for damaged cells.

Inhalation Remove the victim into fresh air and keep him calm.
In the event of symptoms seek medical treatment.

Skin contact In case of contact with skin wash off immediately with soap and water.
Immediate medical treatment necessary, as untreated burns can result in slow-healing wounds.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Consult a doctor immediately.

Ingestion Consult a doctor immediately.
Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Product is caustic.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Bursting batteries can be forcibly projected from a fire.
Reactions with water with formation of hydrogen.

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

In the case of the release of large quantities:

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

The data of the manufacturer concerning the loading and unloading parameters and the recommended temperature ranges are to be considered.
The contents of an open battery, including a vented battery, when exposed to water, may result in a fire and / or
explosion. Crushed or damaged batteries may result in a fire.

7.2 Conditions for safe storage, including any incompatibilities

Prevent penetration into the ground.

Do not store together with food and animal food/diet.

Store in a dry place.
Protect from heat/overheating.
Storage: 20 - 30°C

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored EU (2004/37/EG)

Substance / EC LIMIT VALUES
Lithium hexafluorophosphate
CAS: 21324-40-3, EINECS/ELINCS: 244-334-7
Eight hours: 2,5 mg/m³, F

8.2 Exposure controls

Additional advice on system design	Measures apply only to the damaged product. Ensure adequate ventilation on workstation.
Eye protection	safety glasses (EN 166:2001)
Hand protection	0.7 mm; Butyl rubber, >480 min (EN 374-1/-2/-3).
Skin protection	Protective clothing (EN 340)
Other	Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	If workplace limit values are exceeded or if there is insufficient ventilation: Short term: filter apparatus, combination filter A-P1. (DIN EN 14387)
Thermal hazards	none
Delimitation and monitoring of the environmental exposition	Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	solid
Form	Battery
Color	green
Odor	odourless
Odour threshold	not applicable
pH-value	not applicable
pH-value [1%]	not applicable
Boiling point [°C]	not applicable
Flash point [°C]	not applicable
Flammability	not applicable
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	not applicable
Density [g/cm³]	not determined
Relative density	not determined
Bulk density [kg/m³]	not applicable
Solubility in water	not applicable
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	not applicable
Kinematic viscosity	not applicable
Relative vapour density	not applicable
Evaporation speed	not applicable
Melting point [°C]	not determined
Auto-ignition temperature [°C]	130
Decomposition temperature [°C]	not determined
Particle characteristics	not applicable

9.2 Other information

3.7 V; 2000 mA; 7.4 Wh

SECTION 10: Stability and reactivity

10.1 Reactivity

No dangerous reactions known if used as directed.

10.2 Chemical stability

The product is stable under standard conditions.

10.3 Possibility of hazardous reactions

When cell is exposed to an external short-circuit, it will cause heat generation and ignition.
Heating leads to a risk of bursting and of electrolyte fluid escaping.
Avoid mechanical and electrical misuse.

10.4 Conditions to avoid

May rupture violently when heated or when charged.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

No hazardous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity

Product
ATE-mix, oral, 277 - 1666 mg/kg

Substance
Lithium hexafluorophosphate, CAS: 21324-40-3
LD50, oral, Rat, > 50 - 300 mg/kg (Lit.)
ATE, oral, 100 mg/kg (category 3)
Cobalt lithium dioxide, CAS: 12190-79-3
LD50, oral, Rat, > 5000 mg/kg
Nickel, CAS: 7440-02-0
LD50, oral, Rat, > 9000 mg/kg (IUCLID)

Acute dermal toxicity

Product
dermal, Based on the available information, the classification criteria are not fulfilled.

Substance
Cobalt lithium dioxide, CAS: 12190-79-3
LD50, dermal, Rat, > 2000 mg/kg

Acute inhalational toxicity

Product
inhalative, Based on the available information, the classification criteria are not fulfilled.

Substance
Cobalt lithium dioxide, CAS: 12190-79-3
LC50, inhalativ (dust), Rat, > 5.05 mg/l, 4h

Serious eye damage/irritation

Risk of serious damage to eyes.
Based on the available information, the classification criteria are fulfilled.
Calculation method

Substance
Lithium hexafluorophosphate, CAS: 21324-40-3
Eye, Causes serious eye damage.

Skin corrosion/irritation

Product is caustic.
Based on the available information, the classification criteria are fulfilled.
Calculation method

Substance
Lithium hexafluorophosphate, CAS: 21324-40-3
dermal, corrosive

Respiratory or skin sensitisation

May cause an allergic skin reaction.
Based on the available information, the classification criteria are fulfilled.
Calculation method

Substance

Lithium hexafluorophosphate, CAS: 21324-40-3
dermal, non-sensitizing
Nickel, CAS: 7440-02-0
dermal, sensitising

Specific target organ toxicity — single exposure
Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure
Causes damage to organs through prolonged or repeated exposure if inhaled.
Based on the available information, the classification criteria are fulfilled.
Calculation method

Substance
Lithium hexafluorophosphate, CAS: 21324-40-3
NOAEL, oral, Human, 0.133 mg/kg bw/day, The effects observed are not sufficient for classification.
NOAEC, inhalative, Human, 2 mg/m³, The effects observed are not sufficient for classification.

Mutagenicity
Based on the available information, the classification criteria are not fulfilled.

Reproduction toxicity
May damage fertility.
May damage the unborn child.
Based on the available information, the classification criteria are fulfilled.
Calculation method

Carcinogenicity
Suspected of causing cancer.
Based on the available information, the classification criteria are fulfilled.
Calculation method

Aspiration hazard
Based on the available information, the classification criteria are not fulfilled.

General remarks
Toxicological data of complete product are not available.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties
Contains no ingredients with endocrine-disrupting properties.

11.2.2 Other information
none

SECTION 12: Ecological information

12.1 Toxicity

Substance
Lithium hexafluorophosphate, CAS: 21324-40-3
EC50, (3h), Activated sludge, > 1000 mg/l (Lit.)
EC50, (72h), Pseudokirchneriella subcapitata, > 100 mg/l (Lit.)
EC50, (48h), Daphnia magna, > 100 mg/l (Lit.)
Nickel, CAS: 7440-02-0
LC50, (96h), Brachidanio rerio, > 100 mg/l (OECD 203)
EC50, (48h), Pseudomonas fluorescens, 250 mg/l (Lit.)
EC50, (48h), Daphnia magna, > 100 mg/l (OECD 202)
IC50, (72h), Selenastrum capricornutum, 100 mg/l (OECD 201)

12.2 Persistence and degradability

Behaviour in environment compartments
No information available.

Behaviour in sewage plant
No information available.

Biological degradability
not applicable

12.3 Bioaccumulative potential

Accumulation in organisms is not expected.

12.4 Mobility in soil

not determined

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Endocrine disrupting properties

Contains no ingredients with endocrine-disrupting properties.

12.7 Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

For recycling, consult manufacturer.

Waste no. (recommended) 200134

Contaminated packaging

Uncontaminated packaging may be taken for recycling.

Waste no. (recommended) 150102

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID	3481
Inland navigation (ADN)	3481
Marine transport in accordance with IMDG	3481
Air transport in accordance with IATA	3481

14.2 UN proper shipping name

Transport by land according to ADR/RID	Lithium Ion Batteries contained in equipment (Not subject of ADR in accordance to special provisions 188)
- Classification Code	M4
- ADR LQ	0 kg
- ADR 1.1.3.6 (8.6)	Transport category (tunnel restriction code) 2 (E)
Inland navigation (ADN)	Lithium Ion Batteries contained in equipment (Not subject of ADR in accordance to special provisions 188)
- Classification Code	M4
Marine transport in accordance with IMDG	Lithium Ion Batteries contained in equipment (Not subject of IMDG in accordance to special provisions 188)
- EMS	F-A, S-I
- Label	
- IMDG LQ	0 l
Air transport in accordance with IATA	Lithium Ion Batteries contained in equipment (PI 967 Part 1)
- Label	

14.3 Transport hazard class(es)

Transport by land according to ADR/RID	9
Inland navigation (ADN)	9
Marine transport in accordance with IMDG	9
Air transport in accordance with IATA	9

14.4 Packing group

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	II
Air transport in accordance with IATA	II

14.5 Environmental hazards

Transport by land according to ADR/RID	no
Inland navigation (ADN)	no
Marine transport in accordance with IMDG	no
Air transport in accordance with IATA	no

14.6 Special precautions for user

The Lithium batteries and cells were tested according the UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria 38.3 Lithium batteries.

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EC 2000/532/EC); 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014; (EU) 2019/1148
- Comment on component parts	Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
- Annex I (REACH)	The product is not subject to Annex I restrictions.
- Annex XIV (REACH)	According to Annex XIV of Regulation (EC) 1907/2006 (REACH) the product does not contain any substances ≥ 0.1% that are subject to authorisation.
- Annex XVII (REACH)	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product contains ≥ 0.1% of substances with the following restrictions. 27, 75
	According to Annex XVII of Regulation (EC) 1907/2006 (REACH) the product is not subject to any restrictions.
TRANSPORT-REGULATIONS	ADR (2023); IMDG-Code (2023, 41. Amdt.); IATA-DGR (2023)
NATIONAL REGULATIONS (EU):	
- Observe employment restrictions for people	none
- VOC (2010/75/CE)	0 %

15.2 Chemical safety assessment

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.

H372 Causes damage to organs through prolonged or repeated exposure.
H318 Causes serious eye damage.
H314 Causes severe skin burns and eye damage.
H301 Toxic if swallowed.
H360FD May damage fertility. May damage the unborn child.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

This document does not comply with Regulation (EC) No 1907/2006, article 31 (5) and may be used for internal purposes only.

Classification procedure

Skin Corr. 1A: H314 Causes severe skin burns and eye damage. (Calculation method)
Eye Dam. 1: H318 Causes serious eye damage. (Calculation method)
Skin Sens. 1: H317 May cause an allergic skin reaction. (Calculation method)
Repr. 1B: H360FD May damage fertility. May damage the unborn child. (Calculation method)
Carc. 2: H351 Suspected of causing cancer. (Calculation method)
STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure. (Calculation method)
Acute Tox. 4: H302 Harmful if swallowed. (Calculation method)

Modified position

none

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