

Batterypack

Safety Data Sheet

According to Regulation (EU) 2015/830 (REACH Annex II)
Date of issue: 1/13/2020 Revision date: 1/13/2020 Version: 1.0

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

1.1. Product identifier

Product form : Rechargeable Li-Ion battery pack
Trade name : BP 18 Li 4,0 HPC-AS / BP 18 Li 4,0 HPC-ASI

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

1.2.1. Relevant identified uses

Used for charging/discharging

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer:
Nanjing Chervon Industry Co., Ltd.
No 529 Jiang-jun Rd., Jiangning Economic & Technical Development Zone
210006
T +86-25-52788301
F -
cherry.y.yan@chervon.com.cn

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) : None
Signal word (CLP) : None
Hazard statements (CLP) : No information available.
Precautionary statements (CLP) : No information available.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Electrolyte	(CAS-No.) - (EC-No.) -	-	Not classified

Batterypack

Safety Data Sheet

According to Regulation (EU) 2015/830 (REACH Annex II)

Phosphate(1-), hexafluoro-, lithium	(CAS-No.) 21324-40-3 (EC-No.) 244-334-7	-	Not classified
Ethylene carbonate	(CAS-No.) 96-49-1 (EC-No.) 202-510-0	-	Not classified
Propylene carbonate	(CAS-No.) 108-32-7 (EC-No.) 203-572-1 (EC Index-No.) 607-194-00-1	-	Eye Irrit. 2, H319
Diethyl carbonate	(CAS-No.) 105-58-8 (EC-No.) 203-311-1	-	Not classified
Ethyl propionate	(CAS-No.) 105-37-3 (EC-No.) 203-291-4 (EC Index-No.) 607-028-00-8	-	Flam. Liq. 2, H225
1,1-Difluoroethylene polymer	(CAS-No.) 24937-79-9 (EC-No.) 607-458-6	-	Not classified
Copper	(CAS-No.) 7440-50-8 (EC-No.) 231-159-6	-	Not classified
Aluminum	(CAS-No.) 7429-90-5 (EC-No.) 231-072-3 (EC Index-No.) 013-002-00-1	-	Flam. Sol. 1, H228 Water-react. 2, H261
Cobaltate (CoO21-), lithium	(CAS-No.) 12190-79-3 (EC-No.) 235-362-0	-	Not classified
Graphite	(CAS-No.) 7782-42-5 (EC-No.) 231-955-3	-	Not classified
Iron	(CAS-No.) 7439-89-6 (EC-No.) 215-168-2;231-096-4	-	Not classified
Nickel	(CAS-No.) 7440-02-0 (EC-No.) 231-111-4 (EC Index-No.) 028-002-00-7	-	Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372
Inert components	(CAS-No.) - (EC-No.) -	-	Not classified

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

No additional information available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: No information available.

Batterypack

Safety Data Sheet

According to Regulation (EU) 2015/830 (REACH Annex II)

5.2. Special hazards arising from the substance or mixture

Fire hazard : No information available.
Explosion hazard : No information available.
Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Mechanically recover the product.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Copper (7440-50-8)

Austria - Occupational Exposure Limits

MAK (mg/m ³)	1 mg/m ³ (inhalable fraction) 0.1 mg/m ³ (respirable fraction, smoke)
MAK Short time value (mg/m ³)	4 mg/m ³ (inhalable fraction) 0.4 mg/m ³ (respirable fraction, smoke)

Batterypack

Safety Data Sheet

According to Regulation (EU) 2015/830 (REACH Annex II)

Aluminum (7429-90-5)

Austria - Occupational Exposure Limits

MAK (mg/m ³)	10 mg/m ³ (inhalable fraction)
MAK Short time value (mg/m ³)	20 mg/m ³ (inhalable fraction)

Graphite (7782-42-5)

Austria - Occupational Exposure Limits

MAK (mg/m ³)	5 mg/m ³ (alveolar dust with <1% Quartz, respirable fraction)
MAK Short time value (mg/m ³)	10 mg/m ³ (alveolar dust with <1% Quartz, respirable fraction)

Nickel (7440-02-0)

Austria - Occupational Exposure Limits

TEL TRK (mg/m ³)	0.5 mg/m ³ (dust, inhalable fraction)
OEL chemical category (AT)	Group A1 Carcinogen dust/aerosol, Respiratory sensitizer dust, Skin sensitizer

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available

Batterypack

Safety Data Sheet

According to Regulation (EU) 2015/830 (REACH Annex II)

Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: Propylene carbonate (108-32-7): 0.48 (at 25 °C)
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Phosphate(1-), hexafluoro-, lithium (21324-40-3)

LD50 oral rat	50 – 300 mg/kg
---------------	----------------

Ethylene carbonate (96-49-1)

LD50 oral rat	10 g/kg
---------------	---------

Propylene carbonate (108-32-7)

LD50 oral rat	29000 mg/kg
LD50 dermal rabbit	> 3000 mg/kg

Batterypack

Safety Data Sheet

According to Regulation (EU) 2015/830 (REACH Annex II)

Ethyl propionate (105-37-3)

LD50 oral rat	8732 mg/kg
---------------	------------

Iron (7439-89-6)

LD50 oral rat	30 g/kg
---------------	---------

Nickel (7440-02-0)

LD50 oral rat	> 9000 mg/kg
LC50 inhalation rat (mg/l)	> 10.2 mg/l (Exposure time: 1 h)

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Nickel (7440-02-0)

IARC group	2B - Possibly carcinogenic to humans
------------	--------------------------------------

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

Propylene carbonate (108-32-7)

LC50 fish 1	> 1000 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static])
EC50 Daphnia 1	> 500 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 72h algae (1)	> 500 mg/l (Species: Desmodesmus subspicatus)

Copper (7440-50-8)

LC50 fish 1	0.0068 – 0.0156 mg/l (Exposure time: 96 h - Species: Pimephales promelas)
LC50 fish 2	< 0.3 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 Daphnia 1	0.03 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 72h algae (1)	0.0426 – 0.0535 mg/l (Species: Pseudokirchneriella subcapitata [static])
EC50 96h algae (1)	0.031 – 0.054 mg/l (Species: Pseudokirchneriella subcapitata [static])

Batterypack

Safety Data Sheet

According to Regulation (EU) 2015/830 (REACH Annex II)

Nickel (7440-02-0)

LC50 fish 1	> 100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)
LC50 fish 2	1.3 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [semi-static])
EC50 Daphnia 1	> 100 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 Daphnia 2	1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static])
EC50 72h algae (1)	0.18 mg/l (Species: Pseudokirchneriella subcapitata)
EC50 96h algae (1)	0.174 – 0.311 mg/l (Species: Pseudokirchneriella subcapitata [static])

12.2. Persistence and degradability

12.3. Bioaccumulative potential

Propylene carbonate (108-32-7)

Partition coefficient n-octanol/water (Log Pow)	0.48 (at 25 °C)
---	-----------------

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available






SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 3480	UN 3480	UN 3480	UN 3480	UN 3480
14.2. UN proper shipping name				
LITHIUM ION BATTERIES	LITHIUM ION BATTERIES	Lithium ion batteries	LITHIUM ION BATTERIES	LITHIUM ION BATTERIES
Transport document description				
UN 3480 LITHIUM ION BATTERIES, 9, (E)	UN 3480 LITHIUM ION BATTERIES, 9	UN 3480 Lithium ion batteries, 9	UN 3480 LITHIUM ION BATTERIES, 9	UN 3480 LITHIUM ION BATTERIES, 9
14.3. Transport hazard class(es)				
9	9	9	9	9
				

Batterypack

Safety Data Sheet

According to Regulation (EU) 2015/830 (REACH Annex II)

14.4. Packing group

Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
----------------	----------------	----------------	----------------	----------------

14.5. Environmental hazards

Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
------------------------------------	---	------------------------------------	------------------------------------	------------------------------------

No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: M4
Special provisions (ADR)	: 188, 230, 310, 348, 376, 377, 387, 636
Limited quantities (ADR)	: 0
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P903, P908, P909, P910, LP903, LP904
Transport category (ADR)	: 2
Tunnel restriction code (ADR)	: E

Transport by sea

Special provisions (IMDG)	: 188, 230, 310, 348, 376, 377, 384
Packing instructions (IMDG)	: P903, P908, P909, P910, LP903, LP904
EmS-No. (Fire)	: F-A
EmS-No. (Spillage)	: S-I
Stowage category (IMDG)	: A
Stowage and handling (IMDG)	: SW19
Properties and observations (IMDG)	: Electrical batteries containing lithium ion encased in a rigid metallic body. Lithium ion batteries may also be shipped in, or packed with, equipment. Electrical lithium batteries may cause fire due to an explosive rupture of the body caused by improper construction or reaction with contaminants.

Air transport

PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Forbidden
PCA limited quantity max net quantity (IATA)	: Forbidden
PCA packing instructions (IATA)	: Forbidden
PCA max net quantity (IATA)	: Forbidden
CAO packing instructions (IATA)	: See 965
CAO max net quantity (IATA)	: See 965
Special provisions (IATA)	: A88, A99, A154, A164, A183, A201, A206, A213, A331, A334, A802
ERG code (IATA)	: 12FZ

Inland waterway transport

Classification code (ADN)	: M4
Special provisions (ADN)	: 188, 230, 310, 348, 376, 377, 387, 636
Limited quantities (ADN)	: 0
Excepted quantities (ADN)	: E0
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: M4
Special provisions (RID)	: 188, 230, 310, 348, _376, 377, 387, 636
Limited quantities (RID)	: 0
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P903, 908, 909, P910, P911, LP903, LP904, LP905, LP906
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE2
Hazard identification number (RID)	: 90

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

Batterypack

Safety Data Sheet

According to Regulation (EU) 2015/830 (REACH Annex II)

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no substance on the REACH candidate list

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative

Batterypack

Safety Data Sheet

According to Regulation (EU) 2015/830 (REACH Annex II)

Data sources

ECHA reference. Loli.

Training advice

Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of H- and EUH-statements:

H225	Highly flammable liquid and vapour.
H228	Flammable solid.
H261	In contact with water releases flammable gases.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.