

# LITHIUM JUMP STARTER

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878  
Issue date: 1/20/2021 Revision date: 1/20/2021 Version: 1.0

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

#### 1.1. Product identifier

Product form : Article  
Trade name : LITHIUM JUMP STARTER

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

##### 1.2.1. Relevant identified uses

Recommended Use : Chemical Power

##### 1.2.2. Uses advised against

Restrictions on use : No information available

#### 1.3. Details of the supplier of the safety data sheet

##### Supplier

Ningbo Carstel Manufacturing Co.Ltd.  
Room 1501, No.2 Building, Shangdong Plaza,1926 Canghai Road,  
Ningbo, China  
315000  
T +86-574-87937213 - F +86-574-87937218  
[Jessica@carstel.com](mailto:Jessica@carstel.com)

##### Importer

#### 1.4. Emergency telephone number

Emergency number : +86-574-87937213

### 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) : Not applicable.  
Precautionary statements (CLP) : Not applicable.  
EUH-statements : EUH210

#### 2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII  
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

#### Component

Phosphoric acid, iron(2+) lithium salt (1:1:1) (15365-14-7)	PBT: not yet assessed vPvB: not yet assessed
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The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

Component	
Phosphoric acid, iron(2+) lithium salt (1:1:1)(15365-14-7)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
Phosphate(1-), hexafluoro-, lithium(21324-40-3)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
Copper(7440-50-8)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
Aluminum(7429-90-5)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

## 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]
Phosphoric acid, iron(2+) lithium salt (1:1:1)	CAS-No.: 15365-14-7 EC-No.: 476-700-9;604-917-2	30 – 50	Not classified
Graphite	CAS-No.: 7782-42-5 EC-No.: 231-955-3	15 – 25	Not classified
Phosphate(1-), hexafluoro-, lithium	CAS-No.: 21324-40-3 EC-No.: 244-334-7	10 – 20	Not classified
Copper	CAS-No.: 7440-50-8 EC-No.: 231-159-6	7 – 14	Not classified
Aluminum	CAS-No.: 7429-90-5 EC-No.: 231-072-3 EC Index-No.: 013-002-00-1	3 – 10	Flam. Sol. 1, H228 Water-react. 2, H261
1,1-Difluoroethylene polymer	CAS-No.: 24937-79-9 EC-No.: 607-458-6	3 – 8	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 : Remove contaminated clothing and shoes. If symptoms persist, call a physician.  
First-aid measures after inhalation : Not an expected route of exposure. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

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First-aid measures after skin contact	: Wash hands thoroughly after handling.
First-aid measures after eye contact	: Not an expected route of exposure.
First-aid measures after ingestion	: Not an expected route of exposure. IF swallowed, call a poison control center or physician immediately

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

Symptoms/effects : No 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 measures that are appropriate to local circumstances and the surrounding environment.

### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Thermal decomposition can lead to release of irritating and toxic gases and vapors.

### 5.3. Advice for firefighters

Firefighting instructions : Eliminate all ignition sources if safe to do so. Do not allow run-off from fire fighting to enter drains or water courses.  
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 : Evacuate personnel to a safe area. Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition. Use personal protective equipment as required.

#### 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

Methods for cleaning up : Pick up and transfer to properly labelled containers.  
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 : Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Avoid creating or spreading dust. Wash hands thoroughly after handling. Wear personal protective equipment.

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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

Technical measures : Keep containers tightly closed in a dry, cool and well-ventilated place  
Keep away from heat  
Protect from sunlight.  
Keep locked up and out of reach of children  
Keep away from food, drink and animal feeding stuffs  
Store in accordance with local regulations.

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

Incompatible materials : Strong acids. Strong bases. Strong oxidizing agents.

### 7.3. Specific end use(s)

SDS section 1.2.1

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1. National occupational exposure and biological limit values

Graphite (7782-42-5)	
<b>Austria - Occupational Exposure Limits</b>	
MAK (OEL TWA)	5 mg/m <sup>3</sup> (alveolar dust with <1% Quartz, respirable fraction)
MAK (OEL STEL)	10 mg/m <sup>3</sup> (alveolar dust with <1% Quartz, respirable fraction)
<b>Belgium - Occupational Exposure Limits</b>	
OEL TWA	2 mg/m <sup>3</sup> (except fibers-alveolar fraction)
<b>Bulgaria - Occupational Exposure Limits</b>	
OEL TWA	5 mg/m <sup>3</sup> (inhalable fraction)
<b>Croatia - Occupational Exposure Limits</b>	
GVI (OEL TWA) [1]	4 mg/m <sup>3</sup> (respirable dust) 10 mg/m <sup>3</sup> (total dust)
<b>Czech Republic - Occupational Exposure Limits</b>	
PEL (OEL TWA)	2 mg/m <sup>3</sup> (dust)
<b>Denmark - Occupational Exposure Limits</b>	
OEL TWA [1]	2.5 mg/m <sup>3</sup> (natural-respirable)
<b>Estonia - Occupational Exposure Limits</b>	
OEL TWA	5 mg/m <sup>3</sup> (total dust)
<b>Finland - Occupational Exposure Limits</b>	
HTP (OEL TWA) [1]	2 mg/m <sup>3</sup>
<b>France - Occupational Exposure Limits</b>	
VME (OEL TWA)	2 mg/m <sup>3</sup> (alveolar fraction)
<b>Greece - Occupational Exposure Limits</b>	
OEL TWA	10 mg/m <sup>3</sup> (inhalable fraction) 5 mg/m <sup>3</sup> (respirable fraction)
<b>Ireland - Occupational Exposure Limits</b>	
OEL TWA [1]	2 mg/m <sup>3</sup> (all forms except fibres; respirable fraction)

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<b>Graphite (7782-42-5)</b>	
OEL STEL	6 mg/m <sup>3</sup> (calculated-all forms except fibres; respirable fraction)
<b>Latvia - Occupational Exposure Limits</b>	
OEL TWA	2 mg/m <sup>3</sup>
<b>Lithuania - Occupational Exposure Limits</b>	
IPRV (OEL TWA)	5 mg/m <sup>3</sup> (dust)
<b>Poland - Occupational Exposure Limits</b>	
NDS (OEL TWA)	4 mg/m <sup>3</sup> (natural-inhalable fraction) 1 mg/m <sup>3</sup> (natural-respirable fraction)
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA	2 mg/m <sup>3</sup> (all forms except Graphite fibers-respirable fraction)
<b>Romania - Occupational Exposure Limits</b>	
OEL TWA	2 mg/m <sup>3</sup> (Quartz <=5%-dust, respirable fraction)
<b>Spain - Occupational Exposure Limits</b>	
VLA-ED (OEL TWA) [1]	2 mg/m <sup>3</sup> (see UNE EN 481:1995 on workplace atmospheres-dust; respirable fraction)
<b>United Kingdom - Occupational Exposure Limits</b>	
WEL TWA (OEL TWA) [1]	10 mg/m <sup>3</sup> (inhalable dust) 4 mg/m <sup>3</sup> (respirable dust)
WEL STEL (OEL STEL)	30 mg/m <sup>3</sup> (calculated-inhalable dust) 12 mg/m <sup>3</sup> (calculated-respirable dust)
<b>Norway - Occupational Exposure Limits</b>	
Grenseverdi (OEL TWA) [1]	5 mg/m <sup>3</sup> (natural-total dust) 2 mg/m <sup>3</sup> (natural-respirable dust) 10 mg/m <sup>3</sup> (synthetic-total dust) 4 mg/m <sup>3</sup> (synthetic-respirable dust)
Korttidsverdi (OEL STEL)	10 mg/m <sup>3</sup> (natural-total dust) 4 mg/m <sup>3</sup> (natural-respirable dust) 15 mg/m <sup>3</sup> (synthetic-total dust) 8 mg/m <sup>3</sup> (synthetic-respirable dust)
<b>Switzerland - Occupational Exposure Limits</b>	
MAK (OEL TWA) [1]	2.5 mg/m <sup>3</sup> (natural-respirable dust) 5 mg/m <sup>3</sup> (natural-inhalable dust)
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA	2 mg/m <sup>3</sup> (all forms except graphite fibers-respirable particulate matter)
<b>Copper (7440-50-8)</b>	
<b>EU - Indicative Occupational Exposure Limit (IOEL)</b>	
Local name	Copper
IOEL TWA	0.01 mg/m <sup>3</sup> (respirable fraction)
Notes	(Year of adoption 2014)
Regulatory reference	SCOEL Recommendations
<b>Austria - Occupational Exposure Limits</b>	
MAK (OEL TWA)	1 mg/m <sup>3</sup> (inhalable fraction) 0.1 mg/m <sup>3</sup> (respirable fraction, smoke)

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<b>Copper (7440-50-8)</b>	
MAK (OEL STEL)	4 mg/m <sup>3</sup> (inhalable fraction) 0.4 mg/m <sup>3</sup> (respirable fraction, smoke)
<b>Belgium - Occupational Exposure Limits</b>	
OEL TWA	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
<b>Bulgaria - Occupational Exposure Limits</b>	
OEL TWA	0.1 mg/m <sup>3</sup> (metal vapor)
<b>Croatia - Occupational Exposure Limits</b>	
GVI (OEL TWA) [1]	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust)
KGVI (OEL STEL)	2 mg/m <sup>3</sup> (fume and dust)
<b>Czech Republic - Occupational Exposure Limits</b>	
PEL (OEL TWA)	1 mg/m <sup>3</sup> (dust) 0.1 mg/m <sup>3</sup> (fume)
<b>Denmark - Occupational Exposure Limits</b>	
OEL TWA [1]	1 mg/m <sup>3</sup> (dust and powder) 0.1 mg/m <sup>3</sup> (fume)
<b>Estonia - Occupational Exposure Limits</b>	
OEL TWA	1 mg/m <sup>3</sup> (total dust) 0.2 mg/m <sup>3</sup> (respirable dust)
<b>Finland - Occupational Exposure Limits</b>	
HTP (OEL TWA) [1]	0.02 mg/m <sup>3</sup> (respirable dust)
<b>France - Occupational Exposure Limits</b>	
VME (OEL TWA)	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust)
VLE (OEL C/STEL)	2 mg/m <sup>3</sup> (dust)
<b>Greece - Occupational Exposure Limits</b>	
OEL TWA	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust)
OEL STEL	2 mg/m <sup>3</sup> (dust)
<b>Hungary - Occupational Exposure Limits</b>	
AK (OEL TWA)	1 mg/m <sup>3</sup> 0.1 mg/m <sup>3</sup> (fume)
CK (OEL STEL)	4 mg/m <sup>3</sup> 0.4 mg/m <sup>3</sup> (fume)
<b>Ireland - Occupational Exposure Limits</b>	
OEL TWA [1]	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dusts and mists)
OEL STEL	2 mg/m <sup>3</sup> (dusts and mists) 0.6 mg/m <sup>3</sup> (calculated-fume)
<b>Latvia - Occupational Exposure Limits</b>	
OEL TWA	0.5 mg/m <sup>3</sup>

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<b>Copper (7440-50-8)</b>	
<b>Lithuania - Occupational Exposure Limits</b>	
IPRV (OEL TWA)	1 mg/m <sup>3</sup> (inhalable fraction) 0.2 mg/m <sup>3</sup> (respirable fraction)
<b>Netherlands - Occupational Exposure Limits</b>	
MAC-TGG (OEL TWA)	0.1 mg/m <sup>3</sup> (inhalable fraction)
<b>Poland - Occupational Exposure Limits</b>	
NDS (OEL TWA)	0.2 mg/m <sup>3</sup>
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
<b>Romania - Occupational Exposure Limits</b>	
OEL TWA	0.5 mg/m <sup>3</sup> (powder)
OEL STEL	0.2 mg/m <sup>3</sup> (fume) 1.5 mg/m <sup>3</sup> (dust)
<b>Slovakia - Occupational Exposure Limits</b>	
NPHV (OEL TWA) [1]	1 mg/m <sup>3</sup> (inhalable fraction) 0.2 mg/m <sup>3</sup> (respirable fraction)
<b>Slovenia - Occupational Exposure Limits</b>	
OEL TWA	1 mg/m <sup>3</sup> (inhalable fraction) 0.1 mg/m <sup>3</sup> (respirable fraction, fume)
OEL STEL	4 mg/m <sup>3</sup> (inhalable fraction) 0.4 mg/m <sup>3</sup> (respirable fraction, fume)
<b>Spain - Occupational Exposure Limits</b>	
VLA-ED (OEL TWA) [1]	0.2 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust and mist)
<b>Sweden - Occupational Exposure Limits</b>	
NGV (OEL TWA)	0.01 mg/m <sup>3</sup> (respirable dust)
<b>United Kingdom - Occupational Exposure Limits</b>	
WEL TWA (OEL TWA) [1]	1 mg/m <sup>3</sup> (dust and mists) 0.2 mg/m <sup>3</sup> (fume)
WEL STEL (OEL STEL)	0.6 mg/m <sup>3</sup> (calculated-fume) 2 mg/m <sup>3</sup> (dust and mist)
<b>Norway - Occupational Exposure Limits</b>	
Grenseverdi (OEL TWA) [1]	0.1 mg/m <sup>3</sup> (fume) 1 mg/m <sup>3</sup> (dust)
Korttidsverdi (OEL STEL)	0.3 mg/m <sup>3</sup> (value calculated-fume) 2 mg/m <sup>3</sup> (value calculated-dust)
<b>Switzerland - Occupational Exposure Limits</b>	
MAK (OEL TWA) [1]	0.1 mg/m <sup>3</sup> (inhalable dust)
KZGW (OEL STEL)	0.2 mg/m <sup>3</sup> (inhalable dust)
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA	0.2 mg/m <sup>3</sup> (fume)

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<b>Aluminum (7429-90-5)</b>	
<b>Austria - Occupational Exposure Limits</b>	
MAK (OEL TWA)	10 mg/m <sup>3</sup> (inhalable fraction)
MAK (OEL STEL)	20 mg/m <sup>3</sup> (inhalable fraction)
<b>Belgium - Occupational Exposure Limits</b>	
OEL TWA	1 mg/m <sup>3</sup>
<b>Bulgaria - Occupational Exposure Limits</b>	
OEL TWA	10 mg/m <sup>3</sup> (metal dust) 1.5 mg/m <sup>3</sup> (respirable fraction)
<b>Croatia - Occupational Exposure Limits</b>	
GVI (OEL TWA) [1]	10 mg/m <sup>3</sup> (total dust) 4 mg/m <sup>3</sup> (respirable dust)
<b>Croatia - Biological limit values</b>	
BLV	200 mg/l Parameter: Aluminum - Medium: urine - Sampling time: at the end of the work shift
<b>Czech Republic - Occupational Exposure Limits</b>	
PEL (OEL TWA)	10 mg/m <sup>3</sup> (dust)
<b>Denmark - Occupational Exposure Limits</b>	
OEL TWA [1]	5 mg/m <sup>3</sup> (dust, fume and powder, total) 2 mg/m <sup>3</sup> (dust and powder, respirable)
<b>Estonia - Occupational Exposure Limits</b>	
OEL TWA	10 mg/m <sup>3</sup> (total dust) 4 mg/m <sup>3</sup> (respirable dust)
<b>France - Occupational Exposure Limits</b>	
VME (OEL TWA)	10 mg/m <sup>3</sup> (metal) 5 mg/m <sup>3</sup> (dust)
<b>Greece - Occupational Exposure Limits</b>	
OEL TWA	10 mg/m <sup>3</sup> (inhalable fraction) 5 mg/m <sup>3</sup> (respirable fraction)
<b>Hungary - Occupational Exposure Limits</b>	
AK (OEL TWA)	6 mg/m <sup>3</sup> (respirable dust)
<b>Ireland - Occupational Exposure Limits</b>	
OEL TWA [1]	1 mg/m <sup>3</sup> (respirable fraction)
OEL STEL	3 mg/m <sup>3</sup> (calculated-respirable dust)
<b>Latvia - Occupational Exposure Limits</b>	
OEL TWA	2 mg/m <sup>3</sup>
<b>Lithuania - Occupational Exposure Limits</b>	
IPRV (OEL TWA)	5 mg/m <sup>3</sup> (inhalable fraction) 2 mg/m <sup>3</sup> (respirable fraction) 1 mg/m <sup>3</sup>
<b>Poland - Occupational Exposure Limits</b>	
NDS (OEL TWA)	2.5 mg/m <sup>3</sup> (non-stabilized-inhalable fraction) 1.2 mg/m <sup>3</sup> (non-stabilized-respirable fraction)



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<b>Aluminum (7429-90-5)</b>	
<b>Portugal - Occupational Exposure Limits</b>	
OEL TWA	10 mg/m <sup>3</sup> (metal dust)
<b>Romania - Occupational Exposure Limits</b>	
OEL TWA	3 mg/m <sup>3</sup> (dust) 1 mg/m <sup>3</sup> (fume)
OEL STEL	10 mg/m <sup>3</sup> (dust) 3 mg/m <sup>3</sup> (fume)
<b>Romania - Biological limit values</b>	
BLV	200 µg/l Parameter: Aluminum - Medium: urine - Sampling time: end of shift
<b>Slovakia - Biological limit values</b>	
BLV	60 µg/g creatinine Parameter: Aluminum - Medium: urine - Sampling time: not critical
<b>Spain - Occupational Exposure Limits</b>	
VLA-ED (OEL TWA) [1]	10 mg/m <sup>3</sup> (dust)
<b>Sweden - Occupational Exposure Limits</b>	
NGV (OEL TWA)	5 mg/m <sup>3</sup> (total dust) 2 mg/m <sup>3</sup> (respirable dust)
<b>United Kingdom - Occupational Exposure Limits</b>	
WEL TWA (OEL TWA) [1]	10 mg/m <sup>3</sup> (inhalable dust) 4 mg/m <sup>3</sup> (respirable dust)
WEL STEL (OEL STEL)	30 mg/m <sup>3</sup> (calculated-inhalable dust) 12 mg/m <sup>3</sup> (calculated-respirable dust)
<b>Norway - Occupational Exposure Limits</b>	
Grenseverdi (OEL TWA) [1]	5 mg/m <sup>3</sup> (pyrotechnical-powder)
Korttidsverdi (OEL STEL)	10 mg/m <sup>3</sup> (pyrotechnical-powder)
<b>Switzerland - Occupational Exposure Limits</b>	
MAK (OEL TWA) [1]	3 mg/m <sup>3</sup> (respirable dust)
<b>Switzerland - Biological limit values</b>	
BAT	60 µg/g creatinine Parameter: Aluminum - Medium: urine - Sampling time: no restrictions
<b>USA - ACGIH - Occupational Exposure Limits</b>	
ACGIH OEL TWA	1 mg/m <sup>3</sup> (respirable particulate matter)
ACGIH chemical category	Not Classifiable as a Human Carcinogen

### 8.1.2. Recommended monitoring procedures

No additional information available

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

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### 8.2. Exposure controls

#### 8.2.1. Appropriate engineering controls

**Appropriate engineering controls:**

Ensure adequate ventilation, especially in confined areas.

#### 8.2.2. Personal protection equipment

##### 8.2.2.1. Eye and face protection

**Eye protection:**

No special technical protective measures are necessary

##### 8.2.2.2. Skin protection

**Skin and body protection:**

Wear suitable protective clothing

**Hand protection:**

Wear protective gloves.

##### 8.2.2.3. Respiratory protection

**Respiratory protection:**

In case of insufficient ventilation, wear suitable respiratory equipment

##### 8.2.2.4. Thermal hazards

**Thermal hazard protection:**

None under normal processing.

#### 8.2.3. Environmental exposure controls

**Environmental exposure controls:**

Do not allow into any sewer, on the ground or into any body of water.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: No data available.
Appearance	: Solid.
Odour	: Odourless.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not applicable
Boiling point	: Not available
Flammability	: Non flammable.
Explosive properties	: Not explosive.
Oxidising properties	: No data available.
Explosive limits	: Not applicable
Lower explosive limit (LEL)	: Not applicable
Upper explosive limit (UEL)	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20 °C	: Not applicable

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

Particle size	: Not available
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available
Particle specific surface area	: Not available
Particle dustiness	: Not available

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

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

Avoid high temperatures. Heat and ignition sources. Incompatible materials.

### 10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents.

### 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 hazard classes as defined in Regulation (EC) No 1272/2008

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

<b>Graphite (7782-42-5)</b>	
LD50 oral rat	> 2000 mg/kg
LC50 Inhalation - Rat	> 2000 mg/m <sup>3</sup> /4h
<b>Coppr (7440-50-8)</b>	
LD50 oral rat	> 2500 mg/kg bw
LD50 oral dermal	> 2000 mg/kg bw
LC50 Inhalation - Rat	1.03 mg/m <sup>3</sup> /4h

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

LD50 oral rat	50 – 300 mg/kg
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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
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified

### 11.2. Information on other hazards

No additional information available

## 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

### Graphite (7782-42-5)

LC50 - Fish [1]	> 100 mg/l Danio rerio, OECD 203, CSR
EC50 - Crustacea [1]	> 100 mg/l Daphnia magna, OECD 202, CSR
EC50 72h - Algae [1]	> 100 mg/l Pseudokirchneriella subcapitata, OECD 201, CSR

### 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 - Crustacea [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])

### 12.2. Persistence and degradability

No additional information available

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

#### Component

Phosphoric acid, iron(2+) lithium salt (1:1:1) (15365-14-7)	PBT: not yet assessed vPvB: not yet assessed
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### 12.6. Endocrine disrupting properties

No additional information available

### 12.7. 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. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
- Contaminated packaging : Dispose of contents/container in accordance with licensed collector's sorting instructions. Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.

## SECTION 14: Transport information

According to PACKING INSTRUCTION of IATA DGR 61rd Edition for transportation, the special provision 188 of IMDG. The batteries should be securely packed and protected against short-circuits. Examine whether the package of the containers are integrate and tighten closed before transport. Take in a cargo of them without falling, dropping, and breakage. Prevent collapse of cargo piles. Don't put the goods together with oxidizer and chief food chemicals. The transport vehicle and ship must be cleaned and sterilized otherwise it is not allowed to assemble articles. During transport, the vehicle should prevent exposure, rain and high temperature. For stopovers, the vehicle should be away from fire and heat sources. When transported by sea, the assemble place should keep away from bedroom and kitchen, and isolated from the engine room, power and fire source. Under the condition of Road Transportation, the driver should drive in accordance with regulated route, don't stop over in the residential area and congested area. Forbid to use wooden, cement for bulk transport.

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

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
UN 3481	UN 3481	UN 3481	UN 3481	UN 3481
<b>14.2. UN proper shipping name</b>				
LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT	Lithium ion batteries contained in equipment	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT	LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT
<b>14.3. Transport hazard class(es)</b>				
9	9	9	9A	9
				
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
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

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### 14.6. Special precautions for user

#### Overland transport

Not regulated (The article is not subject to other provisions of ADR according to special provision 188).

#### Transport by sea

Not regulated (The article is not subject to other provisions of IMDG Code according to special provision 188).

#### Inland waterway transport

Not regulated (The article is not subject to other provisions of ADN according to special provision 188).

#### Rail transport

Not regulated (The article is not subject to other provisions of RID according to special provision 188).

### 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

#### 15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

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

##### France

##### Occupational diseases

Code	Description
RG 25	Diseases resulting from the inhalation of mineral dust containing crystalline silica (quartz, cristobalite, tridymite), crystalline silicates (kaolin, talc), graphite or coal.

##### Germany

Employment restrictions : Observe restrictions according Act on the Protection of Working Mothers (MuSchG)  
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting : None of the components are listed

giftige stoffen – Borstvoeding

NIET-limitatieve lijst van voor de voortplanting : None of the components are listed

giftige stoffen – Vruchtbaarheid

NIET-limitatieve lijst van voor de voortplanting : None of the components are listed

giftige stoffen – Ontwikkeling

##### Denmark

Danish National Regulations : Pregnant/breastfeeding women working with the product must not be in direct contact with the product

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

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### SECTION 16: Other information

#### Indication of changes:

Not applicable.

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
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
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
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

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Version	: 1.0
Issue date	: 1/20/2021
Revision date	: 1/20/2021
Data sources	: Loli. ECHA reference.
Training advice	: Normal use of this product shall imply use in accordance with the instructions on the packaging.
Other information	: No information available.

### Full text of H- and EUH-statements

Flam. Sol. 1	Flammable solids, Category 1
Water-react. 2	Substances and Mixtures which, in contact with water, emit flammable gases, Category 2
H228	Flammable solid.
H261	In contact with water releases flammable gases.
EUH210	Safety data sheet available on request.

Safety Data Sheet (SDS), EU

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.