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

1.1 Product identifier
Trade name
Li-ion Battery Pack Model Number: 18650

1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses of the substance or mixture
battery
Uses advised against
No data available.

1.3 Details of the supplier of the safety data sheet
Address
Eppendorf AG
Barkhausenweg 1
D-22339 Hamburg
Telephone no. +49 40 53801-0
Information provided by / telephone
Eppendorf Application-Hotline
Tel.: +49 1803 66 67 89
Fax: +49 4053 99 01 25
email: support@eppendorf.com
Advice on Safety Data Sheet
sdb_info@umco.de

1.4 Emergency telephone number
For medical advice (in German and English):
+49 (0)551 192 40 (Giftinformationszentrum Nord)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification information
This product is in the sense of article 3 of the Regulation (EC) 1907/2006 (REACH) an article and not subject to the labelling obligations according to:
To provide a safety data sheet is not mandatory for articles according to art. 31 of the Regulation (EC) 1907/2006 (REACH) and is done on a voluntary basis.

2.2 Label elements
Not relevant

2.3 Other hazards
No data available.

SECTION 3: Composition/information on ingredients

3.1 Substances
Not applicable. The product is not a substance.

3.2 Mixtures
Hazardous ingredients
This product does not contain substances to be mentioned according to EU Regulation No 1907/2006 (REACH), annex II.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information
No special measures necessary. The first aid information refers to the electrolyte solution and is only relevant for leaking batteries.

After inhalation
Ensure supply of fresh air. In case of persisting adverse effects consult a physician.

After skin contact
In case of contact with skin wash off with water. Get medical attention if pain still persists.

After eye contact
Remove contact lenses. Rinse eye thoroughly under running water keeping eyelids wide open and protecting the unaffected eye (at least 10 to 15 minutes). In case of irritation consult an ophthalmologist.

After ingestion
Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Do not induce vomiting. Call a doctor.

4.2 Most important symptoms and effects, both acute and delayed
No data available.

4.3 Indication of any immediate medical attention and special treatment needed
No data available.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing media
Carbon dioxide; Dry chemical extinguisher; Water spray jet; Water mist

Unsuitable extinguishing media
High power water jet

5.2 Special hazards arising from the substance or mixture
May explode if exposed to heat.

5.3 Advice for firefighters
Use self-contained breathing apparatus. Wear protective clothing.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
For non-emergency personnel
Refer to protective measures listed in sections 7 and 8. Ensure adequate ventilation.

For emergency responders
No data available. Personal protective equipment (PPE) - see Section 8.

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. Send in suitable containers for recovery or disposal.

6.4 Reference to other sections
Information regarding safe handling, see chapter 7. Information regarding personal protective measures, see chapter 8. Information regarding waste disposal, see chapter 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling
Ensure adequate ventilation. When charging the battery, use dedicated charges and follow the specified conditions. Improper charging may cause the battery to flame. Do not disassemble or modify the battery.

General protective and hygiene measures
Do not eat, drink or smoke during work time. Keep away from foodstuffs and beverages. Wash soiled clothing. Wash hands before breaks and after work.

Advice on protection against fire and explosion
No special measures necessary.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions
Protect from heat and direct sunlight. Protect against humidity

Recommended storage temperature
Value: 15 - 25 °C

Requirements for storage rooms and vessels
Keep only in the original container.

Incompatible products
Do not store together with: combustible materials

7.3 Specific end use(s)
No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
No parameters available for monitoring.

8.2 Exposure controls
Appropriate engineering controls
No data available.

Personal protective equipment
Respiratory protection
No special measures required.

Eye / face protection
No special measures required.

Hand protection
No special measures required.

Other
No special measures required.

Environmental exposure controls
No data available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form/Colour</td>
<td>solid</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH value</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point / melting range</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition point / decomposition range</td>
<td>No data available</td>
</tr>
</tbody>
</table>
**EC safety data sheet**

**Trade name:** Li-ion Battery Pack Model Number: 18650

**Current version:** 3.0.0, issued: 09.07.2019  
**Replaced version:** 2.0.0, issued: 16.02.2018  
**Region:** GB

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper flammability or explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>No data available</td>
</tr>
</tbody>
</table>
| Solubility in water               | Source: supplier  
Comments: insoluble |
| Solubility(ies)                   | No data available            |
| Partition coefficient: n-octanol/water | No data available          |
| Viscosity                         | No data available            |

**Other information**

- **Nominal Voltage:** 3.7 V  
- **Nominal Capacity:** 24 Ah, 88.8 W  
- **Weight:** 416.58 g

**SECTION 10: Stability and reactivity**

10.1 **Reactivity**

No data available.

10.2 **Chemical stability**

Stable under recommended storage and handling conditions (See section 7).

10.3 **Possibility of hazardous reactions**

Dangerous reactions are not to be expected when handling product according to its intended use.

10.4 **Conditions to avoid**
Moisture. Heat; Temperatures > 60°C

10.5 Incompatible materials
none, if handled according to order

10.6 Hazardous decomposition products
None if stored, handled and transported properly.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

<table>
<thead>
<tr>
<th>Toxicity Type</th>
<th>Data Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute oral toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Acute dermal toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Acute inhalational toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>No data available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Reproduction toxicity</td>
<td>No data available</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT - single exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>STOT - repeated exposure</td>
<td>No data available</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>No data available</td>
</tr>
</tbody>
</table>

SECTION 12: Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Toxicity Type</th>
<th>Data Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxicity to fish (acute)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to fish (chronic)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to Daphnia (acute)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to Daphnia (chronic)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to algae (acute)</td>
<td>No data available</td>
</tr>
<tr>
<td>Toxicity to algae (chronic)</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Bacteria toxicity

No data available

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Allocation of a waste code number, according to the European Waste Catalogue, should be carried out in agreement with the regional waste disposal company.

Packaging
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of in agreement with the regional waste disposal company.

SECTION 14: Transport information

14.1 Transport ADR/RID/ADN

Class 9
Classification code M4
UN number UN3481
Proper shipping name LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT
Tunnel restriction code E
Label 9A
Comments on
Class 9
Classification code M4
UN number UN3480
Proper shipping name LITHIUM ION BATTERIES
Tunnel restriction code E
Label 9A

14.2 Transport IMDG

Class 9
UN number UN3481
Proper shipping name LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT
EmS F-A, S-I
Label 9
Comments or
Class 9
UN number UN3480
Proper shipping name LITHIUM ION BATTERIES
EmS F-A, S-I
Label 9

14.3 Transport ICAO-TI / IATA

Class 9
UN number UN3481
Proper shipping name Lithium ion batteries contained in equipment
Label 9
Class 9
EC safety data sheet

Trade name: Li-ion Battery Pack Model Number: 18650

Current version: 3.0.0, issued: 09.07.2019
Replaced version: 2.0.0, issued: 16.02.2018
Region: GB

UN number: UN3480
Proper shipping name: Lithium ion batteries
Label: 9

14.4 Other information
No data available.

14.5 Environmental hazards
Information on environmental hazards, if relevant, please see 14.1 - 14.3.

14.6 Special precautions for user
No data available.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code
Not relevant

SECTION 15: Regulatory information

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

EU regulations

Regulation (EC) No 1907/2006 (REACH) Annex XIV (List of substances subject to authorisation)
According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances considered as substances requiring authorisation as listed on Annex XIV of the REACH regulation (EC) 1907/2006.

REACH candidate list of substances of very high concern (SVHC) for authorisation
According to available data and the information provided by preliminary suppliers, the article does not contain substances that are considered substances meeting the criteria for inclusion in annex XIV (List of Substances Subject to Authorisation) as laid down in Article 57 and article 59 of REACH (EC) 1907/2006.

According to the data available and/or specifications supplied by upstream suppliers, this product does not contain any substances requiring authorisation as listed on Annex XVII of the REACH regulation (EC) 1907/2006.

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances
This product is not subject to Part 1 or 2 of Annex I.

Other regulations
Adhere to the national sanitary and occupational safety regulations when using this product.

15.2 Chemical safety assessment
Not required.

SECTION 16: Other information

Sources of key data used to compile the data sheet:
National Threshold Limit Values of the corresponding countries as amended in each case.
Transport regulations according to ADR, RID, IMDG, IATA as amended in each case.
The data sources used to determine physical, toxic and ecotoxic data, are indicated directly in the corresponding chapter.

Department issuing safety data sheet
UMCO GmbH
Georg-Wilhelm-Str. 187, D-21107 Hamburg
Tel.: +49 40 / 555 546 300  Fax: +49 40 / 555 546 357  e-mail: umco@umco.de
This information is based on our present knowledge and experience.
The safety data sheet describes products with a view to safety requirements.
It does not however, constitute a guarantee for any specific product properties and shall not establish a legally valid contractual relationship.
Alterations/supplements:
Alterations to the previous edition are marked in the left-hand margin.

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