

# Safety Data Sheet

according to regulation (EC) No 1907/2006 (REACH)

Trade name: **CODI Standard 1.0 Battery**  
Print date: 19.03.2019  
Revision date: 18.03.2019

Version 1.0

replaces version

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

- 1.1 Product identifier **CODI Standard 1.0 Battery**
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
- Identified uses Rechargeable Li-ion battery
- 1.3 Supplier COLOP Stempelerzeugung Skopek GmbH & Co. KG  
Dr.-Arming-Straße 5  
A-4600 Wels  
T: +43 7242 66 104  
Email: [sds@colop.co.at](mailto:sds@colop.co.at)
- Competent person Email: [sds@colop.co.at](mailto:sds@colop.co.at)
- 1.4 Emergency telephone number +43 7242 66 104  
Available during office hours:  
Mo-Th 8 a.m. – 4 p.m.  
Fr 8 a.m. – 12 a.m.
- Please contact your regional poison center or emergency call.
- Austrian toxicity information center Vienna:**  
+43 1 406 43 43  
Available 24 hours



## SECTION 2: Hazards identification

- 2.1 Classification of the substance or mixture
- According to regulation (EC) No. 1272/2008
- Not applicable.  
The product itself is declared as an **article** and is not subject to the provisions of classification in sense of the regulation (EC) No. 1272/2008.
- 2.2 Label elements
- According to regulation (EC) No. 1272/2008
- Not applicable.
- The product itself is declared as an **article** and is not subject to the provisions of labeling in sense of the regulation (EC) No. 1272/2008.
- 2.3 Other hazards
- Lithium-ion batteries are gas-tight and harmless if the manufacturer's instructions are observed during use and handling.  
Never use chargers that are not suitable for the type of battery with rechargeable batteries. The limits for maximum current load, charging and discharging voltage must be strictly adhered to!  
Do not short-circuit. Do not damage mechanically (pierce, deform, disassemble, etc.).  
Do not heat or burn above the permissible temperature. Keep batteries away from small children.  
Always store batteries in a dry and cool place.
- Lithium-ion batteries are safe to use when used properly and within the parameters specified by the manufacturer. Incorrect handling or circumstances resulting in improper operation may result in

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leakage of battery contents and decomposition products, resulting in severe reactions hazardous to health and the environment.

In principle, contact with leaked battery components can pose a risk to health and the environment. Sufficient body and respiratory protection is therefore required in contact with conspicuous batteries (leakage of contents, deformation, discoloration, dents, etc.). Lithium-ion batteries can react very violently in combination with fire, for example. Battery components with considerable energy can be emitted.

As with other batteries, lithium batteries can continue to be a source of danger even when they are supposedly discharged.



## SECTION 3: Composition/information on ingredients

### Chemical characterization

Rechargeable lithium-ion batteries are articles from which no substance is released when used properly.

Nominal voltage: 11.1 V

Typical capacity: 600 mAh (6.66 Wh)

### Hazardous ingredients

| Chemical name                          | CAS # /<br>EC # /<br>Index # | %-w/w   | Classification acc. to<br>(EC) No. 1272/2008* |                      |
|--|------------------------------|---------|---|----------------------|
| <b>cobalt lithium dioxide</b>          | 12190-79-3 /<br>235-362-0    | ≤ 45    | Repr. 1B                                      | H360                 |
| <b>poly(vinylidene fluoride)</b>       | 24937-79-9 /<br>607-458-6    | ≤ 2     | ---   | ---                  |
| <b>graphite</b>                        | 7782-42-5 /<br>231-955-3     | 25 - 35 | ---   | ---                  |
| <b>Ethyl methyl carbonat</b>           | 623-53-0 /<br>433-480-9      | 10 - 18 | Flam. Liq. 2                                  | H225                 |
| <b>Lithium hexafluorophosphate(1-)</b> | 21324-40-3 /<br>244-334-7    |         | Acute Tox. 3<br>Skin Corr. 1A<br>STOT RE 1    | H301<br>H314<br>H372 |
| <b>Carbon Black</b>                    | 1333-86-4 /<br>215-609-9     | 0,5 - 3 | ---   | ---                  |

\* Full text of Hazard statements and hazard categories: see section 1.6.

\*\* Substance with an occupational exposure limit value (see section 8)



## SECTION 4: First aid measures

### 4.1 Description of first aid measures

Normally no special measures necessary.

It always applies:

Seek medical advice if symptoms occur.

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Never give anything by mouth to an unconscious person or a person with cramps.

 In case of inhalation of contents of a damaged battery

Provide fresh air. Consult a physician.

If unconscious place in recovery position and seek medical advice.

 In case of skin contact of contents of a damaged battery

After contact with skin, wash immediately with plenty of water and soap. Rinse well.

Change contaminated, saturated clothing – wash before reuse.

Consult a physician if symptoms occur.

 In case of eye contact of contents of a damaged battery

Rinse opened eye for several minutes under running water.

Remove contact lenses, if present and easy to do. Continue rinsing.

Consult an ophthalmologist or eye clinic immediately.

 In case of ingestion of contents of a damaged battery

Rinse mouth with cold water. DO NOT induce vomiting! If the patient is conscious, drink 1-2 glasses of water. Seek medical attention immediately.

4.2 Most important symptoms and effects, both acute and delayed

No further information available.

4.3 Indication of any immediate medical attention and special treatment needed

Depending on the condition of the patients, the doctor must assess the symptoms and the overall general condition.



## **SECTION 5: Firefighting measures**

5.1 Extinguishing media

 Suitable extinguishing media

Use fire extinguishing methods suitable to surrounding conditions.

CO<sub>2</sub>, extinguishing powder, Water spray

Fight larger fires with water jet or alcohol-resistant foam.

 Extinguishing media which must not be used for safety reasons

Waterjet

5.2 Special hazards arising from the substance or mixture

Batteries may burst at high temperatures, which may result in flammable, toxic and/or corrosive vapours.

5.3 Advice for firefighters

Special protective equipment:

Wear a self-contained breathing apparatus and chemical protective clothing.

Cool endangered batteries with water spray jet.

Ensure adequate ventilation.



## **SECTION 6: Accidental release measures**

6.1 Personal precautions, protective equipment and emergency procedures



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**Ingredients with limit values that require monitoring at the workplace:**

**CAS: 7782-42-5 Graphite**

**MAK (Austria):** Short-term value: 10 A mg/m<sup>3</sup>

Long-term value: 5 A mg/m<sup>3</sup>

(Alveolarstaub mit <1%Quartz)

**AGW (Germany)** Long-term value: 1.25\* 10\*\* mg/m<sup>3</sup>

2(II);\*alveolengängig\*\*einatembar; AGS, DFG

**LEP (Spain)** Long-term value: 2 mg/m<sup>3</sup>

polvo, fracción respirable; d

**VME (France)** Long-term value: 2 mg/m<sup>3</sup>

pour la fraction alvéolaire

**TWA (Italy)** Long-term value: 2 mg/m<sup>3</sup>

Tutte le forme, escluso le fibre di grafite (j)

**CAS: 21324-40-3 Lithiumhexafluorophosphat(1-)**

**AGW (Germany)** Long-term value: 0.2 E mg/m<sup>3</sup>

1(I);Y, 10, DFG, als Li

CAS: 1333-86-4 Carbon black

**LEP (Spain)** Long-term value: 3.5 mg/m<sup>3</sup>

**VME (France)** Long-term value: 3.5 mg/m<sup>3</sup>

**WEL (Great Britain)** Short-term value: 7 mg/m<sup>3</sup>

Long-term value: 3.5 mg/m<sup>3</sup>

**TWA (Italy)** Long-term value: 3 mg/m<sup>3</sup>

A3

**DNEL-values (derived no-effect level)**

No data available.

**PNEC- Werte (Predicted no effect concentration)**

No data available.

8.2 Exposure control

 General protection and hygiene measures

When handling with chemical substances observe usual precautionary measures.

Keep away from foods and drinks.

When using do not eat, drink, smoke.

Wash hands after working with product.

Avoid skin and eye contact with damaged batteries. Avoid inhalation of spilled material.

Change contaminated clothes and wash before reuse.

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Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Provide eye wash bottles and emergency showers in the immediate vicinity of the workplace.

 Respiratory protection

Not required when handling undamaged batteries.

 Hand protection

Not required when handling undamaged batteries.

Wear protective gloves made of chloroprene or rubber if batteries are damaged.

 Eye protection

Not required when handling undamaged batteries.

Wear protective goggles if batteries are damaged.

 Body protection

Not required when handling undamaged batteries.

 Environmental exposure controls

Do not allow to enter into surface water, ground water, drains or soil.



## **SECTION 9: Physical and chemical properties**

### 9.1 Information on basic physical and chemical properties

|  |                           |
|--|---------------------------|
|  Physical state / Appearance                | solid                     |
|  Colour                                     | black                     |
|  Odour                                      | odourless                 |
|  Odour threshold                            | No information available. |
|  pH value                                   | n. a.                     |
|  Melting point/range                        | No information available. |
|  Boiling point/range                        | No information available. |
|  Flash point                                | No information available. |
|  Evaporation rate                           | No information available. |
|  Flammability (solid, gas)                  | No information available. |
|  Upper/lower explosive limits               | No information available. |
|  Vapour pressure (27 °C)                    | n. a.                     |
|  Density (20 °C)                            | No information available. |
|  Solubility in water (20 °C)                | insoluble                 |
|  Partition coefficient:<br>n-octanol/water; | No information available. |
|  Auto-ignition temperature                  | 130 °C                    |
|  Decomposition temperature                  | No information available. |

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- |  |                           |
|--|---------------------------|
|  Viscosity            | n. a.                     |
|  Explosion properties | No information available. |
|  Oxidising properties | No information available. |

## 9.2 Other information

None.



## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No hazardous reactions known if stored and used as prescribed.

### 10.2 Chemical stability

Stable when used and stored as prescribed.

### 10.3 Possibility of hazardous reactions

No data available.

### 10.4 Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. - Do not smoke.  
Do not expose the rechargeable Li-Ion battery to mechanical shock.  
Do not disassemble, crush, short-circuit, or connect with incorrect polarity. Avoid mechanical or electrical abuse.

### 10.5 Incompatible materials

No data available.

### 10.6 Hazardous decomposition products

No decomposition if used as prescribed.



## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

*Inhalation:* No probable route of exposure of the product itself. Inhalation of substances leaked from damaged batteries may irritate the respiratory tract and damage organs during prolonged or repeated exposure.

*Skin contact:* Contact with the undamaged battery does not present a hazard.  
Skin contact with damaged batteries may cause burns.

*Eye contact:* Contact with the undamaged battery does not constitute a hazard. Eye contact with spills from the damaged battery may cause burns.

*Ingestion:* No probable route of exposure of the product itself. Ingestion of spills may cause burns to the esophagus and stomach. Harmful if swallowed.

The product is declared as a product and is not subject to the CLP classification and labelling requirements.

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There is no danger from the undamaged battery.

 Skin corrosion/irritation

There is no danger from the undamaged battery.

 Serious eye damage/irritation

There is no danger from the undamaged battery.

 Skin sensitisation

There is no danger from the undamaged battery.

 Germ cell mutagenicity

There is no danger from the undamaged battery.

 Cancerogenicity

There is no danger from the undamaged battery.

 Reproductive toxicity

There is no danger from the undamaged battery.

 Specific target organ toxicity – single exposure

There is no danger from the undamaged battery.

 Specific target organ toxicity – repeated exposure

There is no danger from the undamaged battery.

 Aspiration hazard

There is no danger from the undamaged battery.

 Other information

The product is declared as a product and is not subject to the CLP classification and labelling requirements.



## SECTION 12: Ecological information

### 12.1 Toxicity

No other relevant information available.

### 12.2 Persistence and degradability

No other relevant information available.

### 12.3 Bioaccumulative potential

No other relevant information available.

### 12.4 Mobility in soil

No other relevant information available.

### 12.5 Results of PBT and vPvB assessment

No other relevant information available.

### 12.6 Other adverse effects

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Do not allow to enter groundwater, water bodies or sewage system.  
Avoid release into the environment.  
WGK 2 - clearly hazardous to water



## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Any disposal practice must be in compliance with all local and national laws and regulations. Customers are advised to check their local legislation governing the disposal of waste materials. If this preparation becomes a waste, the final user must define and assign the appropriate European Waste Catalogue code. Use only authorized contractors. Do not dispose of together with household waste. Do not empty into drains.

 European waste catalogue

16 06 05 - other batteries and accumulators

Notes: The European Waste Catalogue (EWC) classifies waste materials and categorises them according to what they are and how they were produced. This may cause other classifications. The final decision belongs to the last user.



## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: UN 3481

IMDG: : UN 3481

### 14.2 UN proper shipping name

ADR/RID/IMDG: LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT or LITHIUM ION BATTERIES PACKED WITH EQUIPMENT

### 14.3 Transport hazard class(es)

9



### 14.4 Packing group

Not applicable.

### 14.5 Environmental hazards

Not applicable.

### 14.6 Special precautions for user

Not applicable.

### 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

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Additional information:

**Special provision 188:**

The transport of Li-Ion batteries is not subject to the provisions of ADR/RID/IMDG if the requirements specified therein are fulfilled.

The product has been tested according to the UN Manual of Tests and Criteria, Part III, Section 38.3.

**SECTION 15: Regulatory information**

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

According to REACH, the product is an article and therefore not subject to classification and labelling according to CLP Regulation (EC) No. 1272/2008.

There is no obligation to prepare safety data sheets for articles. This data sheet describes the safety requirements and is based on the safety data sheet according to REACH Regulation (EC) No. 1907/2006.

**Information obligation according to REACH Article 33:**

Does not contain SVHC substances  $\geq 0.1$  %. (Status: March 2019)

**national law:**

Germany:

 Water hazard class acc. to AwSV of 18.04.2017  
WGK 2 (clearly hazardous for water)

15.2 Chemical safety assessment

Not applicable.

**SECTION 16: Other information**

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

All materials may present unknown hazards and should be used with caution and only for identified uses described in section 1. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. No liability can be accepted for damage during handling or contact with the product. The mixture was classified on the basis of the calculation procedure of the CLP- Regulation (EC) 1272/2008 (Annex 1). The classification of ingredients is based on manufacturer's data and CLP Regulation Annex VI completed by data of the European Chemical Agency (ECHA).

 Relevant Hazard Statements

|      |   |
|------|---|
| H225 | Highly flammable liquid and vapour                              |
| H301 | Toxic if swallowed.   |
| H314 | Causes severe skin burns and eye damage.                        |
| H360 | May damage fertility or the unborn child.                       |
| H372 | Causes damage to organs through prolonged or repeated exposure. |

 Relevant hazard categories

|               |   |
|---------------|---|
| Flam. Liq. 2  | Flammable liquids – Category 2          |
| Acute Tox. 3  | Acute toxicity – Category 3             |
| Skin Corr. 1A | Skin corrosion/irritation – Category 1A |
| Repr. 1B      | Reproductive toxicity – Category 1B     |

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|   |  |
|---|--|
| STOT RE 1   | STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1   |
|  Version       | Version No. 1.0  |
|  Created by    | UmEnA GmbH<br><a href="mailto:office@umena.at">office@umena.at</a>   |
|  Abbreviations | ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)<br>IMDG: International Maritime Code for Dangerous Goods<br>IATA: International Air Transport Association<br>GHS: Globally Harmonised System of Classification and Labelling of Chemicals<br>EINECS: European Inventory of Existing Commercial Chemical Substances<br>ELINCS: European List of Notified Chemical Substances<br>CAS: Chemical Abstracts Service (division of the American Chemical Society)<br>DNEL: Derived No-Effect Level (REACH)<br>PNEC: Predicted No-Effect Concentration (REACH)<br>LC50: Lethal concentration, 50 percent<br>LD50: Lethal dose, 50 percent<br>PBT: Persistent, Bioaccumulative and Toxic<br>vPvB: very Persistent and very Bioaccumulative |

