

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

### 1.1 Product identifier

**Trade name: CODI Standard 1.0 Battery**

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

**Application of the substance / the mixture** Rechargeable Li-ion battery

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

**Manufacturer/Supplier:**

COLOP Stempelerzeugung Skopek GmbH & Co. KG

Dr.-Arming-Straße 5

A-4600 Wels

Austria

T: +43 7242 66 104

**Further information obtainable from:** 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.

**Call the national emergency number!**

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification according to Regulation (EC) No 1272/2008**

The product is not classified, according to the CLP regulation.

**Additional information:**

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

**Labelling according to Regulation (EC) No 1272/2008** Void

**Hazard pictograms** Void

**Signal word** Void

**Hazard statements** Void

**Additional information:**

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.

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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 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.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**\* SECTION 3: Composition/information on ingredients**

**3.2 Mixtures**






**Description:**

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)

**Dangerous components:**

CAS: 12190-79-3 EINECS: 235-362-0	Lithium-Cobalt(III)-oxid  Repr. 1B, H360	≤ 45%
CAS: 7782-42-5 EINECS: 231-955-3	Graphite substance with a Community workplace exposure limit	25 – 35%
CAS: 623-53-0 ELINCS: 433-480-9	Ethylmethylcarbonat  Flam. Liq. 2, H225	0 – 18%
CAS: 21324-40-3 EINECS: 244-334-7	Lithiumhexafluorophosphat(1-)  Acute Tox. 3, H301  STOT RE 1, H372  Skin Corr. 1A, H314	0 – 18%
CAS: 1333-86-4 EINECS: 215-609-9	Carbon black substance with a Community workplace exposure limit	0.5 – 3%
CAS: 24937-79-9 EC number: 607-458-6	Polyvinylidenfluorid (PVDF)	≤ 2%

**Additional information:** For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures**

**4.1 Description of first aid measures**

**General information:**

In normal cases no specific measures needed.

It always applies:

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In case of discomfort or doubt, seek medical advice.  
If unconscious, use a stable lateral position and do not administer anything through mouth.

The following measures apply to contact with the contents of a damaged battery:

**After inhalation:**

Supply fresh air; consult doctor in case of complaints.  
In case of unconsciousness place patient stably in side position for transportation.

**After skin contact:**

Immediately wash with water and soap and rinse thoroughly.  
Take off contaminated clothing and wash it before reuse.  
Seek medical treatment in case of complaints.

**After eye contact:**

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.

**After swallowing:**

Rinse mouth thoroughly with cold water. Do not induce vomiting. If the patient is fully conscious, give one or two glass of water to drink. Get medical attention immediately.

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

No further relevant 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 agents:**

Use fire extinguishing methods suitable to surrounding conditions.  
CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

**For safety reasons unsuitable extinguishing agents:** Water with full jet

**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**

**Protective equipment:**

Wear self-contained respiratory protective device.  
Wear fully protective suit.

**Additional information**

Remove container from fire, if possible without risk.  
Cool endangered receptacles with water spray.  
Ensure adequate ventilation.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Restricted access to the affected area until cleaning work is completed.  
Wear protective equipment. Keep unprotected persons away.

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Ensure adequate ventilation

Avoid skin and eye contact with damaged batteries.

**6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

**6.3 Methods and material for containment and cleaning up:**

Cover leaked material with inert absorbent material (sand or soil) and dispose of in suitable containers.  
Clean again.

**6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

In any case, the warnings on batteries and the instructions for use of devices and other applications must be carefully observed.

Use only the recommended battery types.

Lithium-ion batteries should preferably be stored at room temperature and dry (max. 40°C), large temperature fluctuations should be avoided. (e.g. do not store near heaters, do not permanently expose to sunlight).

Never open, mechanically damage or burn the battery!

Observe protective measures and safety instructions.

**Information about fire - and explosion protection:**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**7.2 Conditions for safe storage, including any incompatibilities**

**Storage:**

**Requirements to be met by storerooms and receptacles:**

Store in dry conditions.

Store in a cool location.

Protect from heat and direct sunlight.

Store in accordance with local/regional/national/international regulations.

**Information about storage in one common storage facility:**

Store away from oxidising agents.

Do not store together with acids.

**Further information about storage conditions:**

Recharge at regular intervals during prolonged storage.

Store in original container.

**Recommended storage temperature:** 0 °C - +35 °C

**Storage class:** 6.1 C

**7.3 Specific end use(s)** No further relevant information available.

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**SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**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
VLEP (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
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**CAS: 1333-86-4 Carbon black**

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

**Regulatory information**

MAK (Austria): GKV 2018, 254. Verordnung, 24.9.2018, Teil II  
AGW (Germany): TRGS 900  
LEP (Spain): Límites de exposición profesional para agentes químicos  
VLEP (France): ED 1487 12.2020  
TWA (Italy): Valori Limite di Soglia  
WEL (Great Britain): EH40/2020

**DNELs**

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

Oral	Long-term exposure - systemic effects	813 mg/kg bw/d (consumer)
Inhalative	Long-term exposure - systemic effects	1.2 mg/m <sup>3</sup> (workers)
	Long-term exposure - local effects	0.3 mg/m <sup>3</sup> (consumer)
		1.2 mg/m <sup>3</sup> (workers)

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<b>CAS: 1333-86-4 Carbon black</b>		
Inhalative	Long-term exposure - local effects	0.5 mg/m <sup>3</sup> (workers) Source: European Chemical Agency ECHA, <a href="http://echa.eu">http://echa.eu</a>
<b>PNECs</b>		
<b>CAS: 1333-86-4 Carbon black</b>		
fresh water	1 mg/l Source: European Chemical Agency ECHA, <a href="http://echa.eu">http://echa.eu</a>	
sea water	0.1 mg/l Source: European Chemical Agency ECHA, <a href="http://echa.eu">http://echa.eu</a>	

**Additional information:** The lists valid during the making were used as basis.

## 8.2 Exposure controls

### Appropriate engineering controls

No further data; see item 7.

Technical measures and the use of suitable working methods take priority over the use of personal protective equipment.

### Individual protection measures, such as personal protective equipment

#### General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Do not eat or drink while working.

Avoid skin and eye contact with damaged batteries.

Avoid inhalation of spilled material.

Take off contaminated clothing and wash it before reuse.

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.

Eye wash bottles and emergency showers should be provided in the immediate area near 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.

EN 374

#### Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

#### Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

#### Eye/face protection

Not required when handling undamaged batteries.

Wear protective goggles if batteries are damaged.

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**Body protection:** Not required when handling undamaged batteries.

**Environmental exposure controls** Do not allow to enter sewers/ surface or ground water.

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

**9.1 Information on basic physical and chemical properties**

**General Information**

<b>Physical state</b>	Solid
<b>Colour:</b>	Black
<b>Odour:</b>	Odourless
<b>Odour threshold:</b>	No information available.
<b>Melting point/freezing point:</b>	No information available.
<b>Boiling point or initial boiling point and boiling range</b>	No information available.
<b>Flammability</b>	Not determined.
<b>Lower and upper explosion limit</b>	
<b>Lower:</b>	No information available.
<b>Upper:</b>	No information available.
<b>Flash point:</b>	Not applicable.
<b>Auto-ignition temperature:</b>	130 °C
<b>Decomposition temperature:</b>	No information available.
<b>pH</b>	Not applicable.
<b>Viscosity:</b>	
<b>Kinematic viscosity</b>	Not applicable.
<b>Dynamic:</b>	Not applicable.
<b>Solubility</b>	
<b>water:</b>	Insoluble.
<b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
<b>Vapour pressure:</b>	Not applicable.
<b>Density and/or relative density</b>	
<b>Density:</b>	No information available.
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not applicable.
<b>Particle characteristics</b>	See item 3.

**9.2 Other information**

**Appearance:**

**Form:** Solid

**Important information on protection of health and environment, and on safety.**

**Explosive properties:** Product does not present an explosion hazard.

**Change in condition**

**Softening point/range**

**Oxidising properties** No information available.

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**Evaporation rate** Not applicable.

**Information with regard to physical hazard classes**

<b>Explosives</b>	Void
<b>Flammable gases</b>	Void
<b>Aerosols</b>	Void
<b>Oxidising gases</b>	Void
<b>Gases under pressure</b>	Void
<b>Flammable liquids</b>	Void
<b>Flammable solids</b>	Void
<b>Self-reactive substances and mixtures</b>	Void
<b>Pyrophoric liquids</b>	Void
<b>Pyrophoric solids</b>	Void
<b>Self-heating substances and mixtures</b>	Void
<b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
<b>Oxidising liquids</b>	Void
<b>Oxidising solids</b>	Void
<b>Organic peroxides</b>	Void
<b>Corrosive to metals</b>	Void
<b>Desensitised explosives</b>	Void

**SECTION 10: Stability and reactivity**

**10.1 Reactivity** No hazardous reactions known if stored and used as prescribed.

**10.2 Chemical stability** No decomposition if used and stored according to specifications.

**10.3 Possibility of hazardous reactions** No further relevant information available.

**10.4 Conditions to avoid**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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 further relevant information available.

**10.6 Hazardous decomposition products:**

No decomposition if used and stored according to specifications.

**\* SECTION 11: Toxicological information**

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

**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

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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 an article and is not subject to the CLP classification and labelling requirements. There is no danger from the undamaged battery.

**Acute toxicity** Based on available data, the classification criteria are not met.

**Skin corrosion/irritation** Based on available data, the classification criteria are not met.

**Serious eye damage/irritation** Based on available data, the classification criteria are not met.

**Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

**Germ cell mutagenicity** Based on available data, the classification criteria are not met.

**Carcinogenicity** Based on available data, the classification criteria are not met.

**Reproductive toxicity** Based on available data, the classification criteria are not met.

**STOT-single exposure** Based on available data, the classification criteria are not met.

**STOT-repeated exposure** Based on available data, the classification criteria are not met.

**Aspiration hazard** Based on available data, the classification criteria are not met.

**11.2 Information on other hazards**

**Endocrine disrupting properties**

The product contains substances, which damage development, growth and / or fertility.

\* **SECTION 12: Ecological information**

**12.1 Toxicity**

**Aquatic toxicity:** No further relevant information available.

**12.2 Persistence and degradability** No further relevant information available.

**12.3 Bioaccumulative potential** No further relevant information available.

**12.4 Mobility in soil** No further relevant information available.

**12.5 Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.

**12.7 Other adverse effects**

**Additional ecological information:**

**General notes:**

Avoid release to the environment.

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

\* **SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Only dispose of product residues via authorised companies according to local legislation.

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**European waste catalogue**

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.

**Uncleaned packaging:**

**Recommendation:**

Dispose of packaging according to regulations on the disposal of packagings.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

**SECTION 14: Transport information**

**14.1 UN number or ID number**

ADR/RID/ADN, IMDG, IATA

UN3480

**14.2 UN proper shipping name**

ADR/RID/ADN

3480 LITHIUM ION BATTERIES

IMDG, IATA

LITHIUM ION BATTERIES

**14.3 Transport hazard class(es)**

ADR/RID/ADN, IMDG, IATA



**Class**

9 Miscellaneous dangerous substances and articles.

**Label**

9A

**14.4 Packing group**

ADR/RID/ADN, IMDG, IATA

not regulated

**14.5 Environmental hazards:**

Not applicable.

**14.6 Special precautions for user**

Warning: Miscellaneous dangerous substances and articles.

**Hazard identification number (Kemler code):**

-

**EMS Number:**

F-A,S-I

**Stowage Category**

A

**Stowage Code**

SW19 For batteries transported in accordance with SP 376 or SP 377 Category C, unless transported on a short international voyage.

**14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

**Transport/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.

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**ADR/RID/ADN**

Limited quantities (LQ)	0
Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
Transport category	2
Tunnel restriction code	E

**IMDG**

Limited quantities (LQ)	0
Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
UN "Model Regulation":	UN 3480 LITHIUM ION BATTERIES

\* **SECTION 15: Regulatory information**

**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture  
Labelling according to Regulation (EC) No 1272/2008**

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.

**Directive 2012/18/EU**

**Named dangerous substances - ANNEX I** None of the ingredients is listed.

**DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

**REGULATION (EU) 2019/1148**

**Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

**Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

**National regulations:**

**Other regulations, limitations and prohibitive regulations**

**Substances of very high concern (SVHC) according to REACH, Article 57**

Does not contain SVHC substances  $\geq 0.1$  %. (Status: Feb. 2021)

**15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

\* **SECTION 16: Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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**Relevant phrases**

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.

**Training hints**

Regular training of staff involved in the transport of dangerous goods (in accordance with Chapter 1.3 ADR).

**Department issuing SDS:**

UmEnA GmbH

<http://umena.at>

**Date of previous version:** 18.03.2019

**Version number of previous version:** 1.0

**Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

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

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

**\* Data compared to the previous version altered.**