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
4600 Wels
Austria
Phone: +43 7242 66 104

Further information obtainable from: Email: colop@colop.com

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 in sense of REACH (EC) No. 1907/2006 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 in sense of REACH (EC) No. 1907/2006 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.

(Contd. on page 2)

Trade name: CODI Standard 1.0 Battery

(Contd. of page 1)

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	Lithuim-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 RTECS: FF 5150100	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.

(Contd. on page 3)

(Contd. of page 2)

It always applies:
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.
CO2, 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 good 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.

(Contd. on page 4)

(Contd. of page 3)

Wear protective equipment. Keep unprotected persons away.
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.

(Contd. on page 5)

(Contd. of page 4)

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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/m³ Long-term value: 5 A mg/m³ (Alveolarstaub mit <1%Quartz)
AGW (Germany)	Long-term value: 1.25* 10** mg/m³ 2(II);*alveolengängig**einatembar; AGS, DFG, Y
LEP (Spain)	Long-term value: 2 mg/m³ polvo, fracción respirable; d
VLEP (France)	Long-term value: 2 mg/m³ pour la fraction alvéolaire
TWA (Italy)	Long-term value: 2 mg/m³ Tutte le forme, escluso le fibre di grafite (j)
CAS: 21324-40-3 Lithiumhexafluorophosphat(1-)	
AGW (Germany)	Long-term value: 0.2 E mg/m³ 1(I);Y, 10, DFG, als Li
CAS: 1333-86-4 Carbon black	
LEP (Spain)	Long-term value: 3.5 mg/m³
VLEP (France)	Long-term value: 3.5 mg/m³
WEL (Great Britain)	Short-term value: 7 mg/m³ Long-term value: 3.5 mg/m³
TWA (Italy)	Long-term value: 3 mg/m³ A3

Regulatory information
MAK (Austria): GKV 2020, 156. Verordnung, 09.04.2021, Teil II
AGW (Germany): TRGS 900
LEP (Spain): Límites de exposición profesional para agentes químicos
VLEP (France): ED 1487 05.2021
TWA (Italy): Valori Limite di Soglia
WEL (Great Britain): EH40/2020
DNELs No data available.
PNECs No data available.
Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls
Appropriate engineering controls
No further data; see section 7.
Technical measures and the use of suitable working methods take priority over the use of personal protective equipment.

(Contd. on page 6)

(Contd. of page 5)

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.
EN 166
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

Physical state	Solid
Colour:	Black
Odour:	Odourless
Odour threshold:	No information available.
Melting point/freezing point:	No information available.
Boiling point or initial boiling point and boiling range	No information available.
Flammability	Not determined.
Lower and upper explosion limit	
Lower:	No information available.

(Contd. on page 7)

(Contd. of page 6)

Upper:	No information available.
Flash point:	Not applicable.
Decomposition temperature:	No information available.
pH	Not applicable.
Viscosity:	
Kinematic viscosity	Not applicable.
Dynamic:	Not applicable.
Solubility	
water:	Insoluble.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not applicable.
Vapour pressure:	
Density and/or relative density	
Density:	No information available.
Relative density	Not determined.
Vapour density	Not applicable.
Particle characteristics	See section 3.

9.2 Other information

Appearance:	
Form:	Solid
Important information on protection of health and environment, and on safety.	
Ignition temperature:	130 °C
Explosive properties:	Product does not present an explosion hazard.
Change in condition	
Softening point/range	
Oxidising properties	No information available.
Evaporation rate	Not applicable.

Information with regard to physical hazard classes

Explosives	void
Flammable gases	void
Aerosols	void
Oxidising gases	void
Gases under pressure	void
Flammable liquids	void
Flammable solids	void
Self-reactive substances and mixtures	void
Pyrophoric liquids	void
Pyrophoric solids	void
Self-heating substances and mixtures	void
Substances and mixtures, which emit flammable gases in contact with water	void
Oxidising liquids	void
Oxidising solids	void

(Contd. on page 8)

(Contd. of page 7)

Organic peroxides	void
Corrosive to metals	void
Desensitised explosives	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.

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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 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.

LD/LC50 values relevant for classification:		
CAS: 1333-86-4 Carbon black		
Oral	LD50	> 10,000 mg/kg (rat)

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.

(Contd. on page 9)

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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
None of the ingredients is listed.

Other information 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.
The product does not contain substances with endocrine disrupting properties.
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.
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.

16 06 05	other batteries and accumulators

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.

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SECTION 14: Transport information

14.1 UN number or ID number
ADR/RID/ADN, IMDG, IATA UN3481
14.2 UN proper shipping name
ADR/RID/ADN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT
IMDG, IATA LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT
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.

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

(Contd. on page 11)

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IMDG

Limited quantities (LQ)	0
Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
UN "Model Regulation":	UN 3481 LITHIUM ION BATTERIES CONTAINED IN EQUIPMENT

* 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.

Regulation (EC) No 273/2004 on drug precursors
None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug 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 ≥ 0.1 %. (Status: 03/2023)

Global Automotive Declarable Substance List (GADSL):

CAS: 12190-79-3	Lithuim-Cobalt(III)-oxid	D(FI)

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

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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.

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
Email: office@umena.at

Date of previous version: 19.03.2021
Version number of previous version: 1.2

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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
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.**