

SAFETY DATA SHEET

Regulation (EC) No 1907/2006 (REACH) &
COMMISSION REGULATION (EU) 2015/830

Version 1
Product name Backpack type battery pack
Report No: 6006325

Issue date 04-Apr-2017
Revision date 04-Apr-2017

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

1.1. Product identifier

Product name Backpack type battery pack
REACH registration number No information available

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

Recommended use Provide power to the DC tool
Uses advised against No information available

1.3. Details of the supplier of the safety data sheet

Supplier EGO Europe GmbH
Address Wahlwiesenstrasse 1, D-71711 Steinheim an der Murr Deutschland
Postal code
Phone 0044 1494 957 514
FAX 07144 8875497
E-mail Joerg.bauerle@egopowerplus.eu

Importer
Address
Postal code
Phone
FAX
E-mail

1.4. Emergency telephone number

0044 1235 239670

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]
Not classified.

2.2. Label elements

Symbols/Pictograms None
Signal word None
Hazard statements Not applicable
Precautionary statements Not applicable
EU Specific Hazard Statements None.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Article

Chemical name	EC No	CAS No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Nylon-6	607-506-6	25038-54-4	40 - 50	Not classified

ABS resin	618-371-8	9003-56-9		Not classified
Carbon	231-153-3	7440-44-0	5 - 15	Not classified
Iron	231-096-4	7439-89-6	5 - 15	Not classified
Nickel	231-111-4	7440-02-0		Skin Sens. 1 (H317) Carc. 2 (H351) STOT RE 1 (H372) Aquatic Chronic 3 (H412)
Copper	231-159-6	7440-50-8		Not classified
Aluminum	231-072-3	7429-90-5		Flam. Sol. 1 (H228) Water-react. 2 (H261)
Cobalt(II) oxide	215-154-6	1307-96-6	1 - 15	Acute Tox. 4* (H302) Skin Sens. 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Manganese dioxide	215-202-6	1313-13-9	1 - 15	Acute Tox. 4 (H302) Acute Tox. 4 (H332)
Nickel oxide (Ni2O3)	215-217-8	1314-06-3	1 - 15	Skin Sens. 1 (H317) Carc. 1A (H350i) STOT RE 1 (H372) Aquatic Chronic 4 (H413)
Organic electrolyte	-	-	2 - 10	Not classified

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Inhalation

Not an expected route of exposure. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin contact

Wash hands thoroughly after handling.

Eye contact

Not an expected route of exposure. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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

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.

Unsuitable extinguishing media

No information available.

5.2. Special hazards arising from the substance or mixture

No information available.

5.3. Advice for firefighters

Evacuate personnel to safe areas. Move containers from fire area if you can do it without risk. Cool drums with water spray. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Stay upwind. Ensure adequate ventilation, especially in confined areas.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition. Avoid contact with eyes. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Pick up and transfer to properly labeled containers.

6.4. Reference to other sections

See Section 7 for more information

See section 8 for more information

See section 13 for more information

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition. Avoid contact with eyes. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat. Keep locked up and out of reach of children. Store in accordance with local regulations.

7.3. Specific end use(s)

Apart from the uses mentioned in SECTION 1.2 no other specific uses are stipulated.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Chemical name	Australia	Austria	Belgium	Denmark	European Union
Carbon (CAS #: 7440-44-0)	-	TWA: 5 mg/m ³	-	-	-
Nickel (CAS #: 7440-02-0)	1 mg/m ³	-	-	TWA: 0.05 mg/m ³	-
Copper (CAS #: 7440-50-8)	1 mg/m ³ 0.2 mg/m ³	STEL 4 mg/m ³ STEL 0.4 mg/m ³ TWA: 1 mg/m ³ TWA: 0.1 mg/m ³	-	TWA: 1.0 mg/m ³ TWA: 0.1 mg/m ³	-
Aluminum (CAS #: 7429-90-5)	10 mg/m ³ 5 mg/m ³	STEL 20 mg/m ³ TWA: 10 mg/m ³	-	TWA: 5 mg/m ³ TWA: 2 mg/m ³	-
Cobalt(II) oxide (CAS #: 1307-96-6)	-	Skin	-	TWA: 0.01 mg/m ³	-
Manganese dioxide (CAS #: 1313-13-9)	1 mg/m ³	STEL 2 mg/m ³ TWA: 0.5 mg/m ³	-	TWA: 0.2 mg/m ³	-
Nickel oxide (Ni2O3) (CAS #: 1314-06-3)	-	-	-	TWA: 0.05 mg/m ³	-

Chemical name	Latvia	France	Finland	Germany	Italy

Nylon-6 (CAS #: 25038-54-4)	TWA: 5 mg/m ³	-	-	-	-
Nickel (CAS #: 7440-02-0)	TWA: 0.05 mg/m ³	TWA: 1 mg/m ³	TWA: 1 mg/m ³ TWA: 0.1 mg/m ³	Skin	-
Copper (CAS #: 7440-50-8)	TWA: 0.5 mg/m ³ STEL: 1 mg/m ³	TWA: 0.2 mg/m ³ TWA: 1 mg/m ³ STEL: 2 mg/m ³	TWA: 1 mg/m ³ TWA: 0.1 mg/m ³	TWA: 0.01 mg/m ³ Ceiling / Peak: 0.02 mg/m ³ Ceiling / Peak: 0.2 mg/m ³	-
Aluminum (CAS #: 7429-90-5)	TWA: 2 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³	TWA: 1.5 mg/m ³	TWA: 4 mg/m ³ TWA: 1.5 mg/m ³	-
Cobalt(II) oxide (CAS #: 1307-96-6)	TWA: 0.5 mg/m ³	-	TWA: 0.02 mg/m ³	Skin	-
Manganese dioxide (CAS #: 1313-13-9)	TWA: 0.3 mg/m ³	-	TWA: 0.2 mg/m ³ TWA: 0.1 mg/m ³	TWA: 0.2 mg/m ³ TWA: 0.02 mg/m ³ Ceiling / Peak: 1.6 mg/m ³ Ceiling / Peak: 0.16 mg/m ³ TWA: 0.5 mg/m ³	-
Nickel oxide (Ni2O3) (CAS #: 1314-06-3)	TWA: 0.05 mg/m ³	TWA: 1 mg/m ³	TWA: 0.1 mg/m ³	Skin	-

Chemical name	Poland	Portugal	Spain	Switzerland	Netherlands
Nickel (CAS #: 7440-02-0)	TWA: 0.25 mg/m ³	TWA: 1.5 mg/m ³	TWA: 1 mg/m ³	TWA: 0.5 mg/m ³	-
Copper (CAS #: 7440-50-8)	-	-	-	-	TWA: 0.1 mg/m ³
Aluminum (CAS #: 7429-90-5)	TWA: 2.5 mg/m ³ TWA: 1.2 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³	TWA: 10 mg/m ³ TWA: 5 mg/m ³	TWA: 3 mg/m ³	-
Cobalt(II) oxide (CAS #: 1307-96-6)	TWA: 0.02 mg/m ³	TWA: 0.02 mg/m ³	TWA: 0.02 mg/m ³	Skin TWA: 0.05 mg/m ³	-
Manganese dioxide (CAS #: 1313-13-9)	TWA: 0.3 mg/m ³	TWA: 0.2 mg/m ³	TWA: 0.2 mg/m ³	TWA: 0.5 mg/m ³	-
Nickel oxide (Ni2O3) (CAS #: 1314-06-3)	TWA: 0.25 mg/m ³	TWA: 0.2 mg/m ³	TWA: 0.1 mg/m ³ TWA: 0.2 mg/m ³	TWA: 0.05 mg/m ³	-

Chemical name	Norway	United Kingdom	ACGIH TLV	OSHA PEL	NIOSH IDLH
Nickel (CAS #: 7440-02-0)	TWA: 0.05 mg/m ³ STEL: 0.05 mg/m ³	STEL: 1.5 mg/m ³ TWA: 0.5 mg/m ³	TWA: 1.5 mg/m ³ inhalable fraction	TWA: 1 mg/m ³ (vacated) TWA: 1 mg/m ³	IDLH: 10 mg/m ³ IDLH: 10 mg/m ³ Ni TWA: 0.015 mg/m ³ TWA: 0.015 mg/m ³ except Nickel carbonyl Ni
Copper (CAS #: 7440-50-8)	TWA: 0.1 mg/m ³ TWA: 1 mg/m ³ STEL: 0.1 mg/m ³ STEL: 1 mg/m ³	-	TWA: 0.2 mg/m ³ fume TWA: 1 mg/m ³ Cu dust and mist	-	IDLH: 100 mg/m ³ dust, fume and mist IDLH: 100 mg/m ³ Cu dust and mist TWA: 1 mg/m ³ dust and mist TWA: 0.1 mg/m ³ fume TWA: 1 mg/m ³ Cu dust and mist
Aluminum (CAS #: 7429-90-5)	TWA: 5 mg/m ³ STEL: 5 mg/m ³	STEL: 30 mg/m ³ STEL: 12 mg/m ³ TWA: 10 mg/m ³ TWA: 4 mg/m ³	TWA: 1 mg/m ³ respirable fraction	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ Al Aluminum	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust TWA: 5 mg/m ³ Al
Cobalt(II) oxide (CAS #: 1307-96-6)	TWA: 0.02 mg/m ³ STEL: 0.02 mg/m ³ STEL: 0.06 mg/m ³	TWA: 0.1 mg/m ³	TWA: 0.02 mg/m ³ Co	-	-
Manganese dioxide (CAS #: 1313-13-9)	TWA: 1 mg/m ³ TWA: 0.1 mg/m ³ STEL: 1 ppm STEL: 0.1 mg/m ³	TWA: 0.5 mg/m ³	TWA: 0.02 mg/m ³ Mn TWA: 0.1 mg/m ³ Mn	(vacated) Ceiling: 5 mg/m ³ Ceiling: 5 mg/m ³ Mn	IDLH: 500 mg/m ³ Mn TWA: 1 mg/m ³ Mn STEL: 3 mg/m ³ Mn

Nickel oxide (Ni2O3) (CAS #: 1314-06-3)	TWA: 0.05 mg/m ³ STEL: 0.05 mg/m ³	TWA: 0.5 mg/m ³	TWA: 0.2 mg/m ³ Ni inhalable fraction	TWA: 1 mg/m ³ Ni (vacated) TWA: 1 mg/m ³ Ni	IDLH: 10 mg/m ³ Ni TWA: 0.015 mg/m ³ except Nickel carbonyl Ni
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Derived No Effect Level (DNEL)

No information available

Predicted No Effect Concentration (PNEC)

No information available

8.2. Exposure controls**Engineering controls**

Ensure adequate ventilation, especially in confined areas. Remove all sources of ignition.

Personal protective equipment

Eye/face protection Avoid contact with eyes.

Hand protection Wear protective gloves.

Skin and body protection No special technical protective measures are necessary.

Respiratory protection Ensure adequate ventilation, especially in confined areas.

Environmental exposure controls

Avoid release to the environment.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	Solid
Color	No information available
Odor	Odorless, non-toxic
Odor threshold	Not determined
pH	Not determined
Melting point/freezing point	Not determined
Boiling point / boiling range	Not determined
Flash point	Not applicable
Evaporation rate	Not determined
Flammability (solid, gas)	Not flammable
Flammability limit in air	Not applicable
Vapor pressure	Not determined
Vapor density	Not applicable
Density	Not determined
Relative density	Not determined
Water solubility	Not determined
Partition coefficient (LogPow)	Not determined
Autoignition temperature	Not applicable
Decomposition temperature	Not determined
Kinematic viscosity	Not determined
Dynamic viscosity	Not determined
Explosive properties	Not an explosive
Oxidizing properties	Not determined

9.2. Other information

No information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

No information available.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4. Conditions to avoid

Heat, flames and sparks.

10.5. Incompatible materials

None known based on information supplied.

10.6. Hazardous decomposition products

None under normal use conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Carbon (CAS #: 7440-44-0)	> 10000 mg/kg (Rat)	-	-
Iron (CAS #: 7439-89-6)	98.6 g/kg bw (rat)	-	-
Nickel (CAS #: 7440-02-0)	> 9000 mg/kg (Rat)	-	-
Copper (CAS #: 7440-50-8)	> 2500 mg/kg bw(rat)	> 2000 mg/kg bw(rat)	=1.03 mg/L/4 h(rat)
Aluminum (CAS #: 7429-90-5)	LD50> 15900 mg/kg bw(rat)	-	LC50> 0.888 mg/L/4 h(rat)
Cobalt(II) oxide (CAS #: 1307-96-6)	= 159 mg/kg (Rat) = 202 mg/kg (Rat)	-	-

Skin corrosion/irritation

Non-irritating to the skin.

Serious eye damage/eye irritation

No eye irritation.

Sensitization

No sensitization responses were observed.

Germ cell mutagenicity

No information available.

Carcinogenicity

Chemical name	European Union	IARC
Nylon-6 (CAS #: 25038-54-4)	-	Group 3
Nickel (CAS #: 7440-02-0)	Carc. 2	Group 2B

Reproductive toxicity

No information available.

STOT - single exposure

No information available.

STOT - repeated exposure

No information available.

Aspiration hazard

No information available.

SECTION 12: Ecological information**12.1. Toxicity**

Chemical name	Algae/Aquatic plants EC50	Fish LC50	Crustacea EC50
Iron (CAS #: 7439-89-6)	-	13.6: 96 h <i>Morone saxatilis</i> mg/L LC50 static	> 100 mg/L/48h (<i>Daphnia magna</i>)
Nickel (CAS #: 7440-02-0)	-	100 mg/L/96h <i>Brachydanio rerio</i> 10.4 mg/L/96h <i>Cyprinus carpio</i> static	100 mg/L/48h <i>Daphnia magna</i>
Copper (CAS #: 7440-50-8)	-	1.25: 96 h <i>Lepomis macrochirus</i> mg/L LC50 static	-
Aluminum (CAS #: 7429-90-5)	-	> 50 mg/L/96h	-
Manganese dioxide (CAS #: 1313-13-9)	> 100 other: v/v saturated solution 72h <i>Desmodesmus subspicatus</i>	> 100 other: % v/v saturated solution 96h <i>Oncorhynchus mykiss</i>	> 100 other: % v/v saturated solution 48h <i>Daphnia magna</i>

12.2. Persistence and degradability

No information available.

12.3. Bioaccumulative potential

Chemical name	Partition coefficient (LogPow)
Manganese dioxide (CAS #: 1313-13-9)	<0

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

PBT/vPvB assessment information is not available as chemical safety assessment not conducted.

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Waste from residues/unused products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14: Transport information

14.1. UN number	3480
14.2. UN proper shipping name	LITHIUM ION BATTERIES (including lithium ion polymer batteries)
14.3. Transport hazard class(es)	9
14.4. Packing group	II
14.5. Environmental hazards	Non-marine pollutant
14.6. Special precautions for user	No information available

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code Not applicable

SECTION 15: Regulatory information

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

European Union

Component	EINECS/ELINCS	SVHC candidates	RESTRICTIONS - REACH TITLE VIII
Carbon 7440-44-0	X	-	-
Iron 7439-89-6	X	-	-
Nickel 7440-02-0	X	-	-
Copper 7440-50-8	X	-	-
Aluminum 7429-90-5	X	-	-
Cobalt(II) oxide 1307-96-6	X	-	-
Manganese dioxide 1313-13-9	X	-	-
Nickel oxide (Ni ₂ O ₃) 1314-06-3	X	-	-

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Take note of Directive 94/33/EC on the protection of young people at work

Take note of Directive 92/85/EC on the protection of pregnant and breastfeeding women at work

International inventories

Component	TSCA	DSL/NDL	ENCS	IECSC	KECL	PICCS	AICS
Nylon-6 25038-54-4	X	X	X	X	X	X	X
ABS resin 9003-56-9	X	X	X	X	X	X	X
Carbon 7440-44-0	X	X	Exempt	X	X	X	X
Iron 7439-89-6	X	X	Exempt	X	X	X	X
Nickel 7440-02-0	X	X	Exempt	X	X	X	X
Copper 7440-50-8	X	X	Exempt	X	X	X	X
Aluminum 7429-90-5	X	X	Exempt	X	X	X	X
Cobalt(II) oxide 1307-96-6	X	X	X	X	X	X	X
Manganese dioxide 1313-13-9	X	X	X	X	X	X	X
Nickel oxide (Ni ₂ O ₃) 1314-06-3	X	X	X	X	X	-	X

"-" Not Listed

"X" Listed

15.2. Chemical safety assessment

No information available.

SECTION 16: Other information

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Issue date 04-Apr-2017
Revision date 04-Apr-2017
Revision note Not applicable

Key or legend to abbreviations and acronyms used in the safety data sheet

TWA - TWA (Time Weighted Average)

STEL - STEL (Short Term Exposure Limit)

Ceiling - Maximum limit value

TSCA - Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial chemical Substances/European List of Notified Chemical Substances

ENCS - Japanese Existing and New Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korea Existing Chemicals List

PICCS - The Philippine Inventory of Chemicals and Chemical Substances

AICS - The Australian Inventory of Chemical Substances

Key literature references and sources for data

ECHA: <http://echa.europa.eu/>

IFA GESTIS: [http://gestis-en.itrust.de/nxt/gateway.dll?f=templates\\$fn=default.htm\\$vid=gestiseng:sdbeng](http://gestis-en.itrust.de/nxt/gateway.dll?f=templates$fn=default.htm$vid=gestiseng:sdbeng)

HSDB: <http://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

ICSC: <http://www.ilo.org/dyn/icsc/showcard.home>

eChemPortal: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en

NITE-CHRIP: http://www.nite.go.jp/en/chem/chrp/chrp_search/srhInput

Full text of H-Statements referred to under section 3

H228 - Flammable solid

H261 - In contact with water releases flammable gases

H302 - Harmful if swallowed

H332 - Harmful if inhaled

H317 - May cause an allergic skin reaction

H350i - May cause cancer by inhalation

H351 - Suspected of causing cancer

H372 - Causes damage to organs through prolonged or repeated exposure

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

H412 - Harmful to aquatic life with long lasting effects

H413 - May cause long lasting harmful effects to aquatic life

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

----- End of Safety Data Sheet -----