



SAFETY DATA SHEET

This Safety Data Sheet complies with the Canadian Hazardous Product Regulations, the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910 (OSHA HCS), and the European Union Directives.

1. Product and Supplier Identification

1.1 **Product:** Coghlan's Nickel Cadmium Batteries

1.2 **Other Means of Identification:** #0813

1.3 **Product Use:** Batteries

1.4 **Restrictions on Use:** None known

1.5 **Producer:** Coghlan's Ltd.,
121 Irene Street,
Winnipeg, Manitoba
Canada, R3T 4C7

Telephone: +1(204) 284-9550

Facsimile: +1(204) 475-4127

Email: info@coghlans.com

Supplier: As above

1.6 **Emergencies:** +1(877) 264-4526

2. Hazards Identification

2.1 **Classification of product or mixture**

Note to reader: This product in an untested mixture and GHS classification is based on the classification of the ingredients and their concentrations. Proprietary ingredients, if any, do NOT exhibit any health effects not listed in this SDS.

GHS Classification: No classification

2.2 **GHS Label Elements, including precautionary statements**

Pictogram: None

Signal Word: None

GHS Hazard Statements: None

GHS Precautionary Statements:

Prevention:	None
Response:	None
Storage:	None
Disposal:	None

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS: None

2.4 Additional Information

Primary Routes of Entry:

Skin Contact:	No
Skin Adsorption:	No
Eye Contact:	No
Ingestion:	No
Inhalation:	No

Emergency Overview: Although composed of chemical that have the health effects listed in Section 3 Composition, all chemicals are sealed in a durable metal form and unless severely damaged, will not be a concern for exposure. The main concern for health and safety is when a battery vents. Leaking material from a venting battery may cause respiratory irritation and irritation to the eyes and skin. Batteries are small and may be accidentally swallowed by infants and children.

Effects of Short-Term (Acute) Exposure:

Inhalation: Inhalation of vapours from a venting battery may cause respiratory irritation.

Skin Contact: The only risk of skin contact is exposure to chemicals in the unlikely case of a battery venting. Skin irritation may occur in such an event.

Eye Contact: The only risk of eye contact is exposure to chemicals in the unlikely case of a battery venting. Eye irritation may occur in such an event.

Ingestion: Ingestion is unlikely. Batteries are of sufficient size to make swallowing unlikely. If a battery is accidentally swallowed, seek immediate medical attention.

Effects of Long-Term (Chronic) Exposure: None expected or anticipated.

Medical Conditions Aggravated By Exposure: None known

3. Composition

3.1 Mixture composition

Component	% (w/w)	GHS Classification
Cadmium Oxide CAS No 1306-19-0 EINECS No	18.0 – 25.0	Acute Toxicity, Inhalation, Category 2 Germ Cell Mutagenicity, Category 2 Carcinogenicity, Category 1B Reproductive Toxicity, Category 2 Specific Target Organ Toxicity- Repeat Exposure, Category 1 Acute Aquatic Toxicity, Category 1 Chronic Aquatic Toxicity, Category 1
Nickel Hydroxide CAS No 12054-48-7 EINECS No	16.0 – 25.0	Acute Toxicity, Oral, Category 4 Acute Toxicity, Inhalation, Category 4 Skin Irritation, Category 2 Respiratory Sensitization, Category 1 Skin Sensitization, Category 1 Germ Cell Mutagenicity, Category 2 Carcinogenicity, Category 1A Reproductive Toxicity, Category 1B Specific Target Organ Toxicity- Repeat Exposure, Category 1 (inhalation) Acute Aquatic Toxicity, Category 1 Chronic Aquatic Toxicity, Category 1
Cadmium CAS No 7440-43-9 EINECS No 231-152-8	13.0 – 18.0	Carcinogenicity, Category 1B Mutagenicity, Category 2 Reproductive Toxicity, Category 2 Acute Toxicity, Inhalation, Category 2 STOT-RE, Liver, kidneys, Category 1 Acute Aquatic Toxicity, Category 1 Chronic Aquatic Toxicity, Category 1
Nickel CAS No 7440-02-0 EINECS No	11.0 – 18.0	Skin Sensitization, Category 1 Carcinogenicity, Category 2 Specific Target Organ Toxicity- Repeat Exposure, Category 1 (inhalation) Acute Aquatic Toxicity, Category 1 Chronic Aquatic Toxicity, Category 1
Potassium Hydroxide CAS No 1310-58-3 EINECS No 231-119-8	4.5 – 8.0	Acute Toxicity, Oral, Category 4 Skin Corrosion, Category 1A
Cobalt (II) Oxide CAS No 1307-96-6 EINECS No 215-154-6	1.0 – 1.5	Acute Toxicity, Oral, Category 3 Acute Toxicity, Inhalation, Category 2 Respiratory Sensitization, Category 1B Skin Sensitization, Category 1 Carcinogenicity, Category 2 Acute Aquatic Toxicity, Category 1 Chronic Aquatic Toxicity, Category 1
Packaging		
Steel	25 - 35	No Classification
Polypropylene diaphragm CAS No 9003-07-0 EINECS No Not Known	2.0 – 3.0	No classification

4. First Aid Measures

4.1 Description of First Aid Measures

General advice: The following First Aid advice pertains to inadvertent exposure to a venting battery. Normal contact with these cells when handling is not likely to cause any adverse health effects.

In case of eye contact: Seek medical attention. Flush affected eye(s) for at least 15 minutes under running warm water. Hold eyelids open. Remove contact lenses, if easy to do.

In case of skin contact: Remove contaminated clothing and wash affected skin area with soap and water. Do not use contaminated clothing until thoroughly washed with soap and water. Seek immediate medical advice.

If inhalation: Remove from further exposure. Seek immediate medical attention. If breathing has stopped, assist ventilation with a mechanical device. Give oxygen, if available.

If ingestion: Seek immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Effects of Short-Term (Acute) Exposure:

Inhalation: Inhalation of vapours from a venting battery may cause respiratory irritation.

Skin Contact: The only risk of skin contact is exposure to chemicals in the unlikely case of a battery venting. Skin irritation may occur in such an event.

Eye Contact: The only risk of eye contact is exposure to chemicals in the unlikely case of a battery venting. Eye irritation may occur in such an event.

Ingestion: Ingestion is unlikely. Batteries are of sufficient size to make swallowing unlikely. If a battery is accidentally swallowed, seek immediate medical attention.

Effects of Long-Term (Chronic) Exposure: None expected or anticipated.

Medical Conditions Aggravated By Exposure: None known

4.3 Indication of any immediate medical attention and special treatment needed

No data available.

5. Fire Fighting Measures

5.1 Extinguishing Media

Suitable extinguishing media: Use of water spray, dry chemical or carbon dioxide.

5.2 Special hazards arising from mixture:

In a fire, batteries may rupture releasing toxic components. Do not allow runoff to enter waterways or sewers.

Advice for firefighters: In any fire situation, firefighters should wear full protective clothing including self contained breathing apparatus. Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Use water spray to cool fire exposed containers.

5.3 Further Information:

Sensitivity to Impact: No
Sensitivity to Static Discharge: No

HAZARDOUS MATERIALS INFORMATION SYSTEM (HMIS) HAZARD INDEX:

HEALTH: 0

FLAMMABILITY: 0

REACTIVITY: 0

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

If a battery ruptures, use skin protection to prevent contact with battery components.

Respiratory Protection: No specific requirement for respiratory protection. Do not breathe vapours from a venting battery.

Skin protection: Wear suitable protective equipment to prevent skin contact. Nitrile gloves may be used. Wear sufficient clothing to prevent skin exposure.

Eye and Face Protection: Wear chemical goggles or full face protection for large cleanups. Do not allow contact face or eyes.

Footwear: No specific recommendation.

Other: None

6.2 Environmental precautions

Do not let this product escape into the environment. Ensure that spilled material does not enter sewers or natural waterways.

Methods and materials for containment and cleanup

Clean up spills immediately. Scoop into plastic bag and place into a metal container (clean paint can) for disposal. Once the spill has been remediated, arrange for disposal of the containers. Properly label containers to identify contents.

Remedial Measures: Do not use unprotected hands to collect spilled material. Ensure proper protective equipment is used to prevent contact with skin and eyes.

Large Spills: Not applicable.

Small Spills: Scoop into plastic bag and place into a metal container (clean paint can) for disposal.

6.3 Reference to other sections

For disposal, see Section 13.

7. Handling and Storage

7.1 Precautions for safe handling

Handling Procedures: Handle with care when replacing batteries in electronic equipment. Take precautions to prevent damage to the integrity of the cell containment. Prevent contact that may cause the battery to short circuit. Accidental short circuits for a few seconds will not cause battery damage, but a prolonged short circuit will quickly drain the battery and create the possibility for excess heat to be generated causing a venting event to occur.

7.2 Conditions for safe storage, including incompatibilities

Storage: Keep out of reach of children and animals. Store in a cool, well-ventilated area. Elevated temperature may result in reduced battery life. Do not store in high humidity areas.

7.3 Specific end use(s)

No other uses except those mentioned in Section 1.3

8. Exposure Controls, Personal Protection

8.1 Control parameters

Components with workplace control parameters

<i>Nickel Powder</i> , CAS 7440-02-0	1.5 mg/m ³ , ACGIH TLV-TWA
<i>Nickel Hydroxide</i> , CAS No 12054-48-7	0.2 mg/m ³ , ACGIH TLV-TWA
<i>Cadmium</i> CAS No 7440-43-9	0.01 mg/m ³ , ACGIH TLV-TWA
<i>Cadmium Oxide</i> , CAS No 1306-19-0	0.01 mg/m ³ , ACGIH TLV-TWA
<i>Cobalt (II) Oxide</i> , CAS No 1307-96-6	0.02 mg/m ³ , ACGIH TLV-TWA
<i>Potassium Hydroxide</i> , CAS No 1310-58-3	2 mg/m ³ , ACGIH TLV-TWA

* ACGIH: American Conference of Governmental Industrial Hygienists. Exposure limits may vary from time to time and from one jurisdiction to another. Check with local regulatory agency for the exposure limits in your area.

8.2 Exposure Controls

Respiratory Protection: No specific requirement for respiratory protection. Do not breathe vapours from a venting battery.

Skin protection: Wear suitable protective equipment to prevent skin contact. Nitrile gloves may be used. Wear sufficient clothing to prevent skin exposure.

Eye and Face Protection: Wear chemical goggles or full face protection for large cleanups. Do not allow contact face or eyes.

Footwear: No specific recommendation.

Other: None

Control of environmental exposure

Do not let this product escape into the environment. Ensure that spilled material does not enter sewers or natural waterways.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:	Sealed battery
Odour:	None
Odour Threshold:	Not applicable
pH:	Not applicable
Melting Point/Freezing Point:	Not determined
Initial Boiling Point (range):	Not determined
Flash Point:	Not determined
Evaporation Rate:	Not determined
Flammability:	Not determined
Upper Explosion Limit:	Not determined
Lower Explosion Limit:	Not determined
Vapour Pressure:	Not determined

Vapour Density (air = 1):	Not determined
Relative Density:	Not determined
Solubility in Water:	Not determined
Partition Coefficient:	Not determined
Autoignition Temperature:	Not determined
Decomposition Temperature:	Not determined
Viscosity:	Not determined
Explosive Properties:	Not determined
Oxidizing Properties:	Not determined
Percent Volatiles:	Not determined
Pour Point:	Not determined

9.2 Other safety information: None

10. Stability and Reactivity

- 10.1 Reactivity**
No dangerous reactions known under conditions of normal use and storage.
- 10.2 Chemical Stability**
Stable under recommended storage conditions.
- 10.3 Possibility of hazardous reactions**
No dangerous reactions known under conditions of normal use and storage.
- 10.4 Conditions to avoid**
Avoid heat and flame. High humidity storage.
- 10.5 Incompatible materials**
None known.
- 10.6 Hazardous decomposition products**
Irritating and possible toxic gases may be generated by thermal decomposition or combustion.

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

No GHS classification

Skin corrosion/irritation

No GHS classification

Serious eye damage/eye irritation

No GHS classification

Respiratory or skin sensitization

No GHS classification

Germ Cell Mutagenicity

No GHS classification

Carcinogenicity

No GHS classification.

Reproductive toxicity

No GHS classification

Specific Target Organ Toxicity – Single exposure

No GHS classification

Specific Target Organ Toxicity – Repeated exposure

No GHS classification

Aspiration Hazard

No GHS classification

Aquatic Toxicity

No GHS classification

Additional information

Component	LD ₅₀	LC ₅₀
<i>Cadmium Oxide</i> CAS No 1306-19-0	Not available	0.056 mg/l (inhalation/rat, 4hr)
<i>Nickel Hydroxide</i> CAS No 12054-48-7	1540 mg/kg (oral/rat) >2000 mg/kg (dermal/rat)	1200 mg/m ³ (inhalation/rat, 4 hr)
<i>Nickel Powder</i> CAS No 7440-02-0	>9000 mg/kg (oral/rat)	Not available
<i>Potassium Hydroxide</i> CAS No 1310-58-3	333 mg/kg (oral/rat)	Not available
<i>Cadmium</i> CAS No 7440-43-9	2330 mg/kg (oral/rat)	Not available
<i>Cobalt (II) Oxide</i> CAS No 1307-96-6	202 mg/kg (oral/rat)	0.06 mg/l (inhalation/rat, 4 hr)

12. Ecological Information

12.1 Toxicity

Cadmium Oxide:

Toxicity to fish, No data

Toxicity to daphnia and other aquatic invertebrates, Static test EC₅₀, Daphnia Magna (Water Flea) – 0.75 mg/l, 48 hours

Toxicity to algae, Static test, EC₅₀ Pseudokirchneriella Subcapita 0.018 mg/l, 72 hours

Cobalt (II) Oxide

Toxicity to fish, Static test NOEC – Danio Rerio (Zebra Fish), >136 mg/l, 96 hours

Toxicity to daphnia and other aquatic invertebrates, Static test NOEC, Daphnia Magna (Water Flea) – 136 mg/l, 48 hours

Toxicity to algae, Static test EC₅₀ Pseudokirchneriella Subcapita 80 mg/l, 69 hours

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Not conducted

12.6 Other adverse effects

No data available

13. Disposal Considerations

13.1 Waste treatment methods

Product:

If batteries are damaged or leaking, Place into a durable plastic bags and then into a metal container such as a clean paint can. Properly label container. Check with all applicable local, state (provincial), and federal regulations before disposing.

Contaminated Packaging:

As above

14. Transport Information

Transport of Dangerous Goods (TDG and CLR): Not regulated

United States Department of Transport (49CFR): Not regulated

International Air Transport Association (IATA): Not regulated

International Maritime Organization (IMO): Not regulated

15. Regulatory Information

CANADIAN FEDERAL REGULATIONS:

CEPA, DOMESTIC SUBSTANCES LIST: Listed

AMERICAN FEDERAL REGULATIONS:

TSCA (Toxic Substance Control Act): Listed

SARA 302 Extremely hazardous substance: Not available

SARA 311/312 Hazardous chemical: No

SARA 313 (TRI reporting): Not available

Other State Regulations:

Massachusetts Right to Know Components:

Cadmium, CAS No 7440-43-9	Rev Date 2007-07-01
Cadmium Oxide, CAS No 1306-19-0	Rev Date 1993-04-24
Nickel Powder, CAS No 7440-02-0	Rev Date 2007-07-01
Nickel (II) Hydroxide, CAS No 12054-48-7	Rev Date 1993-04-24

Pennsylvania Right to Know Components:

Cadmium, CAS No 7440-43-9	Rev Date 2007-07-01
Cadmium Oxide, CAS No 1306-19-0	Rev Date 1993-04-24
Nickel Powder, CAS No 7440-02-0	Rev Date 2007-07-01
Cobalt (II) Oxide, CAS No 1307-96-6	Rev Date 2009-07-17
Nickel (II) Hydroxide, CAS No 12054-48-7	Rev Date 1993-04-24

New Jersey Right to Know Components:

Cadmium, CAS No 7440-43-9	Rev Date 2007-07-01
Cadmium Oxide, CAS No 1306-19-0	Rev Date 1993-04-24
Nickel Powder, CAS No 7440-02-0	Rev Date 2007-07-01
Cobalt (II) Oxide, CAS No 1307-96-6	Rev Date 2009-07-17
Nickel (II) Hydroxide, CAS No 12054-48-7	Rev Date 1993-04-24

California Prop 65 Components: This product does contain a chemical known to the State of California to cause cancer, birth defects, or any other reproductive harm.

Nickel (II) Hydroxide, CAS No 12054-48-7, December 20, 2013
Cobalt (II) Oxide, CAS No 1307-96-6, September 28, 2007
Cadmium, CAS No 7440-43-9, October 1, 1987
Cadmium Oxide, CAS No 1306-19-0, October 1, 1987
Nickel Powder, CAS No 7440-02-0, September 28, 2007

OTHER:

None

16. Other Information

Original Preparation Date: March 29, 2018

Prepared by: Technical Department, Coghlan's Ltd.

Disclaimer: This Safety Data Sheet (SDS) was prepared using information provided by CCINFO, ingredient supplier SDS and other relevant sources. This product has been classified using weight of evidence, expert judgment and previous testing as per Part 1.3 of the Seventh Edition of The Globally Harmonized System of Classification and Labelling of Chemicals (GHS). The information in this SDS is offered for your consideration and guidance when exposed to this product. Coghlan's Ltd expressly disclaims all expressed or implied warranties and assumes no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of Coghlan's Ltd.

Revisions: None