1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Ni-Cad Batteries and Battery Packs

Other means of identification

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Nickel-cadmium battery

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Name Stanley Black & Decker

Supplier Address 2501 SW Aviation Drive
Bentonville
AR
72712
US

Supplier Phone Number Phone: 479-271-8812
Fax: 479-271-9798

Supplier Email mellody.fletcher@bdk.com

Emergency telephone number

Company Emergency Phone Number 479-254-3404

2. HAZARDS IDENTIFICATION

Classification

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is an article which is a sealed battery and as such does not require an MSDS per the OSHA hazard communication standard unless ruptured. The hazards indicated are for a ruptured battery.

<table>
<thead>
<tr>
<th>Acute toxicity - Oral</th>
<th>Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Inhalation (Vapors)</td>
<td>Category 2</td>
</tr>
</tbody>
</table>
**Acute toxicity - Inhalation (Dusts/Mists)** | Category 2
---|---
**Skin corrosion/irritation** | Category 1 Sub-category A
**Serious eye damage/eye irritation** | Category 1
**Respiratory sensitization** | Category 1
**Skin sensitization** | Category 1
**Germ cell mutagenicity** | Category 2
**Carcinogenicity** | Category 1A
**Reproductive Toxicity** | Category 2
**Specific target organ toxicity (repeated exposure)** | Category 1

**GHS Label elements, including precautionary statements**

**Emergency Overview**

**Signal word** | Danger
---|---
**Hazard Statements**
Harmful if swallowed
Fatal if inhaled
Causes severe skin burns and eye damage
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
Suspected of causing genetic defects
May cause cancer
Suspected of damaging fertility or the unborn child
Causes damage to organs through prolonged or repeated exposure

This product is an article which contains a chemical substance. Safety information is given for exposure to the article as sold. Intended use of the product should not result in exposure to the chemical substance. This is a battery. In case of rupture: the above hazards exist.

| Appearance | Multiple Colors | Physical state | Solid | Odor | None |
---|---|---|---|---|

**Precautionary Statements - Prevention**
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Do not breathe dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Wear respiratory protection
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

**Precautionary Statements - Response**
Specific treatment is urgent (see supplemental first aid instructions on this label)
Immediately call a POISON CENTER or doctor/physician
Specific treatment (see supplemental first aid instructions on this label)
Eyes
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician

Skin
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Wash contaminated clothing before reuse
If skin irritation or rash occurs: Get medical advice/attention

Inhalation
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician

Ingestion
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Do NOT induce vomiting

Precautionary Statements - Storage
Store locked up
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)
Not applicable

Unknown Toxicity
1 % of the mixture consists of ingredient(s) of unknown toxicity

Other information
May be harmful in contact with skin
Very toxic to aquatic life with long lasting effects
Repeated or prolonged skin contact may cause allergic reactions with susceptible persons

Interactions with Other Chemicals
No information available.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron</td>
<td>7439-89-6</td>
<td>40 - 70</td>
<td>*</td>
</tr>
<tr>
<td>Nickel</td>
<td>7440-02-0</td>
<td>30 - 60</td>
<td>*</td>
</tr>
<tr>
<td>Cadmium and compounds (as Cd)</td>
<td>7440-43-9</td>
<td>30 - 60</td>
<td>*</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>1310-73-2</td>
<td>3 - 7</td>
<td>*</td>
</tr>
<tr>
<td>Potassium hydroxide</td>
<td>1310-58-3</td>
<td>3 - 7</td>
<td>*</td>
</tr>
<tr>
<td>Lithium hydroxide</td>
<td>1310-65-2</td>
<td>3 - 7</td>
<td>*</td>
</tr>
<tr>
<td>Cobalt</td>
<td>7440-48-4</td>
<td>1 - 5</td>
<td>*</td>
</tr>
<tr>
<td>Carbon black</td>
<td>1333-86-4</td>
<td>1 - 5</td>
<td>*</td>
</tr>
</tbody>
</table>

*The exact percentage (concentration) of composition has been withheld as a trade secret
4. FIRST AID MEASURES

First aid measures

General Advice
First aid is upon rupture of sealed battery.

Eye contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Seek immediate medical attention/advice.

Skin contact
Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. May cause an allergic skin reaction. Seek immediate medical attention/advice.

Inhalation
Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. Get medical attention immediately if symptoms occur. Do not breathe dust. May cause allergic respiratory reaction. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Ingestion
Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. May produce an allergic reaction. If an allergic reaction occurs, stop use and seek medical help right away.

Self-protection of the first aider
Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8). Do not breathe dust. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms and effects, both acute and delayed

Most Important Symptoms and Effects
Burning sensation. Coughing and/or wheezing. Difficulty in breathing. Itching. Rashes. Hives. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Indication of any immediate medical attention and special treatment needed

Notes to Physician
Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause sensitization in susceptible persons. Treat symptomatically.
5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media
CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by skin contact. May cause sensitization by inhalation and skin contact.

Explosion Data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions
Attention! Corrosive material. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid generation of dust. Do not breathe dust.

Other Information
Refer to protective measures listed in Sections 7 and 8.

Environmental precautions

Environmental precautions
Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not allow to enter into soil/subsoil. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment
Prevent further leakage or spillage if safe to do so. Cover powder spill with plastic sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up
Pick up and transfer to properly labeled containers.
7. HANDLING AND STORAGE

Precautions for safe handling

Handling

In case of rupture: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Use only with adequate ventilation and in closed systems. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

Conditions for safe storage, including any incompatibilities

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store locked up. Keep out of the reach of children. Store away from other materials.

Incompatible Products


8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel 7440-02-0</td>
<td>TWA: 1.5 mg/m³</td>
<td>TWA: 1 mg/m³ (vacated) TWA: 1 mg/m³</td>
<td>IDLH: 10 mg/m³</td>
</tr>
<tr>
<td>Cadmium and compounds (as Cd) 7440-43-9</td>
<td>TWA: 0.01 mg/m³</td>
<td>TWA: 0.002 mg/m³ (vacated) TWA: 0.002 mg/m³ Cd TWA: 0.002 mg/m³ Cd respirable particulate matter</td>
<td>IDLH: 9 mg/m³ dust</td>
</tr>
<tr>
<td>Sodium hydroxide 1310-73-2</td>
<td>Ceiling: 2 mg/m³</td>
<td>TWA: 2 mg/m³ (vacated) Ceiling: 2 mg/m³</td>
<td>IDLH: 10 mg/m³</td>
</tr>
<tr>
<td>Potassium hydroxide 1310-58-3</td>
<td>Ceiling: 2 mg/m³</td>
<td>(vacated) Ceiling: 2 mg/m³</td>
<td>Ceiling: 2 mg/m³</td>
</tr>
<tr>
<td>Cobalt 7440-48-4</td>
<td>TWA: 0.02 mg/m³</td>
<td>TWA: 0.1 mg/m³ dust and fume (vacated) TWA: 0.05 mg/m³ dust and fume</td>
<td>IDLH: 20 mg/m³ dust and fume TWA: 0.05 mg/m³ dust and fume</td>
</tr>
<tr>
<td>Carbon black</td>
<td>TWA: 3 mg/m³ inhalable particulate</td>
<td>TWA: 3.5 mg/m³</td>
<td>IDLH: 1750 mg/m³</td>
</tr>
</tbody>
</table>
Other Exposure Guidelines
Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992)

Appropriate engineering controls

Engineering Measures
Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection
Face protection shield.

Skin and body protection
Wear protective gloves and protective clothing. Long sleeved clothing. Chemical resistant apron. Impervious gloves.

Respiratory protection
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Take off contaminated clothing and wash before reuse. For environmental protection, remove and wash all contaminated protective equipment before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Multiple Colors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Melting / freezing point</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No data available</td>
<td>None known</td>
<td></td>
</tr>
</tbody>
</table>
Specific Gravity: No data available
Water Solubility: No information available
Solubility in other solvents: No data available
Partition coefficient: n-octanol/water: No data available
Autoignition temperature: No data available
Decomposition temperature: No data available
Kinematic viscosity: No data available
Dynamic viscosity: No data available
Explosive properties: No data available
Oxidizing properties: No data available

Other Information:

Softening Point: No data available
VOC Content (%): No data available
Particle Size: No data available
Particle Size Distribution: No data available

10. STABILITY AND REACTIVITY

Reactivity:
No data available.

Chemical stability:
Stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None under normal processing.

Conditions to avoid:
Exposure to air or moisture over prolonged periods. Excessive heat.

Incompatible materials:

Hazardous Decomposition Products:
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Product Information:
Product does not present an acute toxicity hazard based on known or supplied information. In case of rupture:

Inhalation:
Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. May cause irritation of respiratory tract. Fatal if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause sensitization in susceptible persons.
Eye contact

Specific test data for the substance or mixture is not available. Causes burns. (based on components). Corrosive to the eyes and may cause severe damage including blindness. Causes serious eye damage. May cause irreversible damage to eyes.

Skin contact

Specific test data for the substance or mixture is not available. Corrosive. (based on components). Causes burns. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion

Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause irritation to mucous membranes. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Harmful if swallowed. May cause additional affects as listed under "Inhalation".

Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron 7439-89-6</td>
<td>= 984 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nickel 7440-02-0</td>
<td>&gt; 9000 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Cadmium and compounds as Cd 7440-43-9</td>
<td>= 1140 mg/kg (Rat)</td>
<td>-</td>
<td>= 25 mg/m³ (Rat) 30 min</td>
</tr>
<tr>
<td>Sodium hydroxide 1310-73-2</td>
<td>-</td>
<td>= 1350 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>Potassium hydroxide 1310-58-3</td>
<td>= 284 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Lithium hydroxide 1310-65-2</td>
<td>= 210 mg/kg (Rat)</td>
<td>-</td>
<td>= 960 mg/m³ (Rat) 4 h</td>
</tr>
<tr>
<td>Cobalt 7440-48-4</td>
<td>= 6171 mg/kg (Rat)</td>
<td>-</td>
<td>&gt; 10 mg/L (Rat) 1 h</td>
</tr>
<tr>
<td>Carbon black 1333-86-4</td>
<td>&gt; 15400 mg/kg (Rat)</td>
<td>&gt; 3 g/kg (Rabbit)</td>
<td>-</td>
</tr>
</tbody>
</table>

Information on toxicological effects

Symptoms

Erythema (skin redness). Burning. May cause blindness. Coughing and/or wheezing. Difficulty in breathing. Itching. Rashes. Hives. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain, or flushing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization

May cause sensitization in susceptible persons. May cause sensitization by skin contact. May cause sensitization by inhalation.

Mutagenic Effects

Contains a known or suspected mutagen.

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel 7440-02-0</td>
<td></td>
<td>Group 2B</td>
<td>Reasonably Anticipated</td>
<td>X</td>
</tr>
</tbody>
</table>
Cadmium and compounds (as Cd) 7440-43-9  A2  Group 1  Known  X
Cobalt 7440-48-4  A3  Group 2B  Reasonably Anticipated  X
Carbon black 1333-86-4  A3  Group 2B  X

ACGIH (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
NTP (National Toxicology Program)
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Reproductive toxicity Contains a known or suspected reproductive toxin.

STOT - single exposure No information available.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure. Based on classification criteria from the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200), this product has been determined to cause systemic target organ toxicity from chronic or repeated exposure. (STOT RE).

Chronic Toxicity Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Effects from this product caused by acute exposure may cause permanent damage to target organs and/or may cause chronic conditions. Prolonged exposure may cause chronic effects. Repeated contact may cause allergic reactions in very susceptible persons. Contains a known or suspected mutagen. Possible risk of irreversible effects. Contains a known or suspected carcinogen. Contains a known or suspected reproductive toxin. Avoid repeated exposure. May cause adverse effects on the bone marrow and blood-forming system.


Aspiration Hazard No information available.

Numerical measures of toxicity  Product Information
The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 822.00 mg/kg
ATEmix (dermal) 2,496.00 mg/kg
ATEmix (inhalation-gas) 250.02 ppm
ATEmix (inhalation-dust/mist) 0.12 mg/l
ATEmix (inhalation-vapor) 1.25 ATEmix
12. ECOLOGICAL INFORMATION

This product contains a chemical which is listed as a severe marine pollutant according to DOT

**Ecotoxicity**

Very toxic to aquatic life with long lasting effects.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Toxicity to Algae</th>
<th>Toxicity to Fish</th>
<th>Toxicity to Microorganisms</th>
<th>Daphnia Magna (Water Flea)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron</td>
<td>96h LC50: = 13.6 mg/L (Morone saxatilis)</td>
<td>96h LC50: &gt; 100 mg/L (Brachydanio rerio)</td>
<td>48h EC50: &gt; 100 mg/L 48h EC50: = 1 mg/L</td>
<td></td>
</tr>
<tr>
<td>Nickel 7440-02-0</td>
<td>72h EC50: = 0.18 mg/L (Pseudokirchneriella subcapitata) 96h EC50: = 0.174 - 0.311 mg/L (Pseudokirchneriella subcapitata)</td>
<td>96h LC50: = 1.3 mg/L (Cyprinus carpio) 96h LC50: = 10.4 mg/L (Cyprinus carpio)</td>
<td>48h EC50: = 0.0244 mg/L</td>
<td></td>
</tr>
<tr>
<td>Cadmium and compounds (as Cd) 7440-43-9</td>
<td>96h LC50: = 0.003 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.006 mg/L (Oncorhynchus mykiss) 96h LC50: = 0.002 mg/L (Cyprinus carpio) 96h LC50: = 4.26 mg/L (Cyprinus carpio) 96h LC50: = 0.24 mg/L (Cyprinus carpio) 96h LC50: = 0.016 mg/L (Oryzias latipes) 96h LC50: = 21.1 mg/L (Lepomis macrochirus) 96h LC50: = 0.0004 - 0.003 mg/L (Pimephales promelas)</td>
<td>48h EC50: = 0.0244 mg/L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium hydroxide 1310-73-2</td>
<td>96h LC50: = 45.4 mg/L (Oncorhynchus mykiss)</td>
<td>96h LC50: &gt; 80 mg/L (Gambusia affinis)</td>
<td>24h EC50: &gt; 5600 mg/L</td>
<td></td>
</tr>
<tr>
<td>Potassium hydroxide 1310-58-3</td>
<td>96h LC50: = 80 mg/L (Gambusia affinis)</td>
<td>96h LC50: &gt; 100 mg/L (Brachydanio rerio)</td>
<td>24h EC50: &gt; 5600 mg/L</td>
<td></td>
</tr>
<tr>
<td>Cobalt 7440-48-4</td>
<td>96h LC50: &gt; 100 mg/L (Brachydanio rerio)</td>
<td>96h LC50: &gt; 100 mg/L (Brachydanio rerio)</td>
<td>24h EC50: &gt; 5600 mg/L</td>
<td></td>
</tr>
<tr>
<td>Carbon black 1333-86-4</td>
<td>24h EC50: &gt; 5600 mg/L</td>
<td>24h EC50: &gt; 5600 mg/L</td>
<td>24h EC50: &gt; 5600 mg/L</td>
<td></td>
</tr>
</tbody>
</table>

**Persistence and Degradability**

No information available.

**Bioaccumulation**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>0.83</td>
</tr>
<tr>
<td>Potassium hydroxide</td>
<td></td>
</tr>
</tbody>
</table>

**Other adverse effects**

No information available.
13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal methods This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

Contaminated Packaging Do not reuse empty containers.

US EPA Waste Number D006

California Hazardous Waste Codes 141

This product contains one or more substances that are listed with the State of California as a hazardous waste.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>California Hazardous Waste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel 7440-02-0</td>
<td>Toxic powder</td>
</tr>
<tr>
<td>Sodium hydroxide 1310-73-2</td>
<td>Toxic Corrosive</td>
</tr>
<tr>
<td>Potassium hydroxide 1310-58-3</td>
<td>Toxic Corrosive</td>
</tr>
<tr>
<td>Cobalt 7440-48-4</td>
<td>Toxic powder Ignitable powder Toxic</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name NOT REGULATED
Hazard Class N/A
Marine Pollutant This product contains a chemical which is listed as a severe marine pollutant according to DOT

TDG

Marine Pollutant Not regulated

This product contains a chemical which is listed as a severe marine pollutant according to TDG.

MEX

Not regulated

ICAO

Not regulated

IATA

Proper Shipping Name Not regulated
Hazard Class N/A

IMDG/IMO

Hazard Class N/A
Marine Pollutant Product is a marine pollutant according to the criteria set by IMDG/IMO

RID

Not regulated

ADR

Not regulated

ADN

Not regulated
15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL All components are listed either on the DSL or NDSL.

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel - 7440-02-0</td>
<td>7440-02-0</td>
<td>30 - 60</td>
<td>0.1</td>
</tr>
<tr>
<td>Cadmium and compounds (as Cd) - 7440-43-9</td>
<td>7440-43-9</td>
<td>30 - 60</td>
<td>0.1</td>
</tr>
<tr>
<td>Cobalt - 7440-48-4</td>
<td>7440-48-4</td>
<td>1 - 5</td>
<td>0.1</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

Acute Health Hazard No
Chronic Health Hazard No
Fire Hazard No
Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act)
This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel 7440-02-0</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium and compounds (as Cd) 7440-43-9</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sodium hydroxide 1310-73-2</td>
<td>1000 lb</td>
<td></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Potassium hydroxide 1310-58-3</td>
<td>1000 lb</td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

CERCLA
This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Hazardous Substances RQs</th>
<th>Extremely Hazardous Substances RQs</th>
<th>RQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel 7440-02-0</td>
<td>100 lb</td>
<td>RQ 100 lb final RQ</td>
<td></td>
</tr>
<tr>
<td>Cadmium and compounds (as Cd) 7440-43-9</td>
<td>10 lb</td>
<td>RQ 10 lb final RQ</td>
<td></td>
</tr>
<tr>
<td>Sodium hydroxide 1310-73-2</td>
<td>1000 lb</td>
<td>RQ 1000 lb final RQ</td>
<td></td>
</tr>
<tr>
<td>Potassium hydroxide 1310-58-3</td>
<td>1000 lb</td>
<td>RQ 1000 lb final RQ</td>
<td></td>
</tr>
</tbody>
</table>

US State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals.
### Chemical name

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium hydroxide (Cd(OH)(_2)) - 21041-95-2</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>Cadmium and compounds (as Cd) - 7440-43-9</td>
<td>Carcinogen, Developmental</td>
</tr>
<tr>
<td>Nickel - 7440-02-0</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>Nickel hydroxide - 12054-48-7</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

### U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
<th>Rhode Island</th>
<th>Illinois</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cadmium hydroxide (Cd(OH)(_2)) - 21041-95-2</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cadmium and compounds (as Cd) - 7440-43-9</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Nickel - 7404-02-0</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Nickel hydroxide - 12054-48-7</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Potassium hydroxide - 1310-58-3</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
</tbody>
</table>

### International Regulations

#### Mexico

**National occupational exposure limits**

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Carcinogen Status</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nickel</td>
<td>A1</td>
<td>Mexico; TWA 1 mg/m(^3)</td>
</tr>
<tr>
<td>Cadmium and compounds (as Cd) - 7440-43-9</td>
<td>A2</td>
<td>Mexico: TWA 0.01 mg/m(^3)</td>
</tr>
<tr>
<td>Sodium hydroxide</td>
<td>A2</td>
<td>Mexico: TWA 0.002 mg/m(^3)</td>
</tr>
<tr>
<td>Cobalt</td>
<td>A3</td>
<td>Mexico: Ceiling 2 mg/m(^3)</td>
</tr>
<tr>
<td>Carbon black</td>
<td>A3</td>
<td>Mexico: TWA 0.1 mg/m(^3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: TWA 3.5 mg/m(^3)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mexico: STEL 7 mg/m(^3)</td>
</tr>
</tbody>
</table>

Mexico - Occupational Exposure Limits - Carcinogens

#### Canada

**WHMIS Hazard Class**

Non-controlled

### 16. OTHER INFORMATION

**NFPA**

- Health Hazards: 1
- Flammability: 0
- Instability: 0
- Physical and Chemical Hazards: -
- Personal Protection: -

**HMIS**

- Health Hazards: 0
- Flammability: 0
- Physical Hazard: 0

**Prepared By**

Product Stewardship
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Latham, NY 12110
1-800-572-6501

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**Revision Date**

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**Revision Note**

No information available

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End of Safety Data Sheet