

### SECTION 1: IDENTIFICATION

#### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** Denago eBikes

**Synonyms:** Denago City 1.0 Model eBike

#### 1.2. Intended Use of the Product

Bicycle transportation and recreation

#### 1.3. Name, Address, and Telephone of the Responsible Party

BIKE USA, Inc

301 Alpha Road Suite 66-122

Dallas, TX 75240-4355

USA

877-755-2453

[www.BIKE.com](http://www.BIKE.com)

#### 1.4. Emergency Telephone Number

**Emergency Number** : ChemTel LLC

(800)255-3924 (North America)

+1 (813)248-0585 (International)

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the Substance or Mixture

##### GHS-US/CA Classification

Acute Tox. 3 (Oral) H301

Acute Tox. 2 (Inhalation) H330

Skin Corr. 1A H314

Eye Dam. 1 H318

Skin Sens. 1 H317

Carc. 1B H350

STOT RE 1 H372

Aquatic Acute 3 H402

Aquatic Chronic 3 H412

Full text of hazard classes and H-statements : see section 16

#### 2.2. Label Elements

##### GHS-US/CA Labeling

##### Hazard Pictograms (GHS-US/CA)

:



GHS05



GHS06



GHS07



GHS08

##### Signal Word (GHS-US/CA)

: Danger

##### Hazard Statements (GHS-US/CA)

: H301 - Toxic if swallowed.

H314 - Causes severe skin burns and eye damage.

H317 - May cause an allergic skin reaction.

H318 - Causes serious eye damage.

H330 - Fatal if inhaled.

H350 - May cause cancer (Inhalation).

H372 - Causes damage to organs (lungs, dental/bone fluorosis) through prolonged or repeated exposure.

H402 - Harmful to aquatic life.

H412 - Harmful to aquatic life with long lasting effects.

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**Precautionary Statements (GHS-US/CA) :**

- P201 - Obtain special instructions before use.
- P202 - Do not handle until all safety precautions have been read and understood.
- P260 - Do not breathe vapors, mist, or spray.
- P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
- P270 - Do not eat, drink or smoke when using this product.
- P271 - Use only outdoors or in a well-ventilated area.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P273 - Avoid release to the environment.
- P280 - Wear protective gloves, protective clothing, and eye protection.
- P284 - [In case of inadequate ventilation] wear respiratory protection.
- P301+P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
- P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
- P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P308+P313 - If exposed or concerned: Get medical advice/attention.
- P310 - Immediately call a POISON CENTER or doctor.
- P314 - Get medical advice/attention if you feel unwell.
- P320 - Specific treatment is urgent (see section 4 on this SDS).
- P330 - Rinse mouth.
- P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
- P362+P364 - Take off contaminated clothing and wash it before reuse.
- P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
- P405 - Store locked up.
- P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

### 2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

### 2.4. Unknown Acute Toxicity (GHS-US/CA)

No additional information available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Not applicable

### 3.2. Mixture

| Name                                  | Synonyms  | Product Identifier    | % *  | GHS Ingredient Classification   |
|---------------------------------------|---|-----------------------|------|---|
| Cobalt lithium manganese nickel oxide | Lithium cobalt manganese nickel oxide   | (CAS-No.) 182442-95-1 | ≤ 80 | Acute Tox. 2 (Inhalation), H330<br>Carc. 1B, H350<br>STOT RE 1, H372<br>Aquatic Chronic 3, H412 |
| Steel manufacture, chemicals          | Steel manufacture, chemicals (This category includes the chemical substances which are manufactured as part of steel and alloy steels. The following list identifies those elements which may exist in steel or which may comprise compounds present in steel or alloy steels. Aluminum, beryllium, boron, calcium, carbon, cerium, chromium, cobalt, copper, hafnium, iron, lanthanum, lead, magnesium, manganese, molybdenum, nickel, niobium, nitrogen, oxygen, phosphorus, selenium, silicon, sulfur, tantalum, tin, titanium, tungsten, vanadium, yttrium, zinc, zirconium.) | (CAS-No.) 65997-19-5  | < 76 | Not classified  |

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|                                     |  |                      |         |  |
|-------------------------------------|--|----------------------|---------|--|
| Carbon                              | Carbon, activated / Activated carbon / Carbon Black / Graphite / Active carbon   | (CAS-No.) 7440-44-0  | 10 – 30 | Comb. Dust   |
| Phosphate(1-), hexafluoro-, lithium | Lithium hexafluorophosphate(1-) / Lithium phosphohexafluoride / Phosphate(1-), hexafluoro-, lithium (1:1) / Lithium hexafluorophosphate  | (CAS-No.) 21324-40-3 | 10 – 20 | Acute Tox. 3 (Oral), H301<br>Skin Corr. 1A, H314<br>Eye Dam. 1, H318<br>STOT RE 1, H372                                  |
| Copper                              | C.I. 77400 / C.I. Pigment Metal 2 / Copper, elemental / Copper metal / Copper, metallic  | (CAS-No.) 7440-50-8  | 2 – 10  | Comb. Dust   |
| Aluminum                            | Aluminium / Aluminum, metal / Aluminum, elemental / C.I. 77000 / Pigment Metal 1   | (CAS-No.) 7429-90-5  | 2 – 10  | Comb. Dust   |
| 1,1-Difluoroethylene polymer        | Ethene, 1,1-difluoro-, homopolymer / Homopolymer, ethene, 1,1-difluoro- / Polyvinylidene fluoride / Polyvinylidene fluoride resin / Poly(vinylidene fluoride) / Poly(1,1-difluoroethene) / Vinylidene fluoride homopolymer / Polymer of 1,1-difluoroethene   | (CAS-No.) 24937-79-9 | < 5     | Comb. Dust   |
| Styrene-butadiene copolymer         | Benzene, ethenyl-, polymer with 1,3-butadiene / Butadiene-styrene copolymer / Butadiene-styrene polymer / 1,3-Butadiene-styrene polymer / Butadiene-styrene resin / Styrene-1,3-butadiene copolymer / Styrene-butadiene polymer / Styrene-butadiene rubber / Polymer of styrene and 1,3-butadiene / Styrene homopolymer and 1,3-butadiene homopolymer, block copolymer / Polymer of buta-1,3-diene/styrene | (CAS-No.) 9003-55-8  | < 1     | Comb. Dust   |
| Nickel                              | Nickel, elemental / Nickel, metallic / Nickel, metal / C.I. 77775  | (CAS-No.) 7440-02-0  | < 1     | Skin Sens. 1, H317<br>Carc. 2, H351<br>STOT RE 1, H372<br>Aquatic Acute 1, H400<br>Aquatic Chronic 3, H412<br>Comb. Dust |

Full text of H-statements: see section 16

\*Percentages are listed in weight by weight percentage (w/w%).

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First-aid Measures

**General:** The following first aid measures apply in case of exposure to the interior battery components, if the battery is damaged and exposure occurs.

**Inhalation:** For exposure to battery contents: First, take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate respiratory protective equipment, use the buddy system), then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Immediately call a poison center or doctor/physician.

**Skin Contact:** For exposure to battery contents: Immediately remove contaminated clothing. Immediately flush skin with plenty of water for at least 30 minutes. Get immediate medical advice/attention.

**Eye Contact:** For exposure to battery contents: Immediately rinse with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

**Ingestion:** For exposure to battery contents: Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor.

### 4.2. Most Important Symptoms and Effects Both Acute and Delayed

**General:** Exposure to battery contents may result in the following: May be fatal if inhaled. Causes damage to organs (lungs, dental/bone fluorosis) through prolonged or repeated exposure. Skin sensitization. Toxic if swallowed. Causes severe skin burns and eye damage. May cause cancer by inhalation.

**Inhalation:** Exposure to materials housed in battery: May be fatal if inhaled in significant amounts. May be corrosive to the respiratory tract.

**Skin Contact:** Exposure to materials housed in battery: Causes severe irritation which will progress to chemical burns. May cause an allergic skin reaction.

**Eye Contact:** Exposure to materials housed in battery: Causes permanent damage to the cornea, iris, or conjunctiva.

**Ingestion:** Exposure to materials housed in battery: This material is toxic in small amounts orally, and can cause adverse health effects or death. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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**Chronic Symptoms:** Exposure to materials housed in battery: May cause cancer by inhalation. May cause damage to organs (lungs, dental/bone fluorosis) through prolonged or repeated exposure.

### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Carbon dioxide (CO<sub>2</sub>). Dry chemical powder. Foam. Sand/earth. Water spray, fog (flooding amounts).

**Unsuitable Extinguishing Media:** Application of water to product may generate heat and increase fire intensity.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not considered flammable but may burn at high temperatures.

**Explosion Hazard:** Battery may rupture/explode when exposed to excessive heat or fire, if overcharged, short circuited, punctured, or crushed.

**Reactivity:** Batteries are non-reactive under normal conditions of storage and use. If the internal contents are leaked lithium ion batteries may react with incompatible materials such as water, acids, bases, oxidizers, and reducing agents and form corrosive, irritating, and harmful fumes and by-products. If the battery is damaged, the interaction of water or water vapor and exposed lithium hexafluorophosphate may result in the generation of hydrogen and hydrogen fluoride (HF) gas.

### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Remove containers from fire area if this can be done without risk. Evacuate area. Fight fire remotely due to the risk of explosion.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Carbon oxides (CO, CO<sub>2</sub>). Hydrogen Fluoride (HF). Lithium oxides. Metal oxides. Phosphorus oxides.

**Other Information:** Batteries may explode in fire. Damaged batteries can result in rapid heating and the release of flammable vapors.

### 5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Do not handle until all safety precautions have been read and understood. Product itself under normal conditions of use is not considered hazardous, for materials housed within product: Do not breathe fumes. Do not breathe vapor, mist or spray. Do not get in eyes, on skin, or on clothing.

#### 6.1.1. For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protective equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit. Ventilate area.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters. Avoid release to the environment. Collect spillage.

### 6.3. Methods and Materials for Containment and Cleaning Up

**For Containment:** Contain solid spills with appropriate barriers and prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions. Ventilate area.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. If battery is not damaged cleanup spills mechanically, and put into approved container for disposal. If battery is damaged and/or leaking: Using shovel or broom, cover battery or spilled substances with dry sand or vermiculite, place in approved container and dispose in accordance with local regulations. Contact competent authorities after a spill.

### 6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

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### SECTION 7: HANDLING AND STORAGE

#### 7.1. Precautions for Safe Handling

**Additional Hazards When Processed:** May release corrosive vapors.

**Precautions for Safe Handling:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Since this product is a sealed battery, normal handling hazards are minimal unless the battery is damaged or the internal contents are exposed. Do not get in eyes, on skin, or on clothing. Do not breathe dust, vapors, spray from inner battery components. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle empty containers with care because they may still present a hazard.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

#### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations. Proper grounding procedures to avoid static electricity should be followed.

**Storage Conditions:** Batteries should be separated from other materials and stored in a noncombustible, well ventilated, sprinkler-protected structure with sufficient clearance between walls and battery stacks. Do not store batteries in a manner that allows terminals to short circuit. Do not place batteries near heating equipment, nor expose to direct sunlight for long periods. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

**Incompatible Materials:** Strong acids, strong bases, strong oxidizers. Water.

#### 7.3. Specific End Use(s)

Bicycle transportation and recreation

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

| Copper (7440-50-8)      |               |   |
|-------------------------|---------------|---|
| USA ACGIH               | ACGIH OEL TWA | 0.2 mg/m <sup>3</sup> (fume)  |
| USA OSHA                | OSHA PEL TWA  | 0.1 mg/m <sup>3</sup> (fume)<br>1 mg/m <sup>3</sup> (dust and mist) |
| USA NIOSH               | NIOSH REL TWA | 1 mg/m <sup>3</sup> (dust and mist)<br>0.1 mg/m <sup>3</sup> (fume) |
| USA IDLH                | IDLH          | 100 mg/m <sup>3</sup> (dust, fume and mist)                         |
| Alberta                 | OEL TWA       | 0.2 mg/m <sup>3</sup> (fume)<br>1 mg/m <sup>3</sup> (dust and mist) |
| British Columbia        | OEL TWA       | 1 mg/m <sup>3</sup> (dust and mist)<br>0.2 mg/m <sup>3</sup> (fume) |
| Manitoba                | OEL TWA       | 0.2 mg/m <sup>3</sup> (fume)  |
| New Brunswick           | OEL TWA       | 0.2 mg/m <sup>3</sup> (fume)<br>1 mg/m <sup>3</sup> (dust and mist) |
| Newfoundland & Labrador | OEL TWA       | 0.2 mg/m <sup>3</sup> (fume)  |
| Nova Scotia             | OEL TWA       | 0.2 mg/m <sup>3</sup> (fume)  |
| Nunavut                 | OEL STEL      | 3 mg/m <sup>3</sup> (dust and mist)<br>0.6 mg/m <sup>3</sup> (fume) |
| Nunavut                 | OEL TWA       | 0.2 mg/m <sup>3</sup> (fume)<br>1 mg/m <sup>3</sup> (dust and mist) |
| Northwest Territories   | OEL STEL      | 3 mg/m <sup>3</sup> (dust and mist)<br>0.6 mg/m <sup>3</sup> (fume) |
| Northwest Territories   | OEL TWA       | 0.2 mg/m <sup>3</sup> (fume)<br>1 mg/m <sup>3</sup> (dust and mist) |
| Ontario                 | OEL TWA       | 0.2 mg/m <sup>3</sup> (fume)<br>1 mg/m <sup>3</sup> (dust and mist) |
| Prince Edward Island    | OEL TWA       | 0.2 mg/m <sup>3</sup> (fume)  |
| Québec                  | VEMP OEL TWA  | 0.2 mg/m <sup>3</sup> (fume)<br>1 mg/m <sup>3</sup> (dust and mist) |

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|                                    |                         |  |
|------------------------------------|-------------------------|--|
| <b>Saskatchewan</b>                | OEL STEL                | 0.6 mg/m <sup>3</sup> (fume)<br>3 mg/m <sup>3</sup> (dust and mist)                                  |
| <b>Saskatchewan</b>                | OEL TWA                 | 0.2 mg/m <sup>3</sup> (fume)<br>1 mg/m <sup>3</sup> (dust and mist)                                  |
| <b>Yukon</b>                       | OEL STEL                | 0.2 mg/m <sup>3</sup> (fume)<br>2 mg/m <sup>3</sup> (dust and mist)                                  |
| <b>Yukon</b>                       | OEL TWA                 | 0.2 mg/m <sup>3</sup> (fume)<br>1 mg/m <sup>3</sup> (dust and mist)                                  |
| <b>Aluminum (7429-90-5)</b>        |                         |  |
| <b>USA ACGIH</b>                   | ACGIH OEL TWA           | 1 mg/m <sup>3</sup> (respirable particulate matter)  |
| <b>USA ACGIH</b>                   | ACGIH chemical category | Not Classifiable as a Human Carcinogen   |
| <b>USA OSHA</b>                    | OSHA PEL TWA            | 15 mg/m <sup>3</sup> (total dust)<br>5 mg/m <sup>3</sup> (respirable fraction)                       |
| <b>USA NIOSH</b>                   | NIOSH REL TWA           | 10 mg/m <sup>3</sup> (total dust)<br>5 mg/m <sup>3</sup> (respirable dust)                           |
| <b>Alberta</b>                     | OEL TWA                 | 10 mg/m <sup>3</sup> (dust)  |
| <b>British Columbia</b>            | OEL TWA                 | 1 mg/m <sup>3</sup> (respirable)   |
| <b>Manitoba</b>                    | OEL TWA                 | 1 mg/m <sup>3</sup> (respirable particulate matter)  |
| <b>New Brunswick</b>               | OEL TWA                 | 10 mg/m <sup>3</sup> (metal dust)  |
| <b>Newfoundland &amp; Labrador</b> | OEL TWA                 | 1 mg/m <sup>3</sup> (respirable particulate matter)  |
| <b>Nova Scotia</b>                 | OEL TWA                 | 1 mg/m <sup>3</sup> (respirable particulate matter)  |
| <b>Nunavut</b>                     | OEL STEL                | 20 mg/m <sup>3</sup> (metal-dust)  |
| <b>Nunavut</b>                     | OEL TWA                 | 10 mg/m <sup>3</sup> (metal-dust)  |
| <b>Northwest Territories</b>       | OEL STEL                | 20 mg/m <sup>3</sup> (metal-dust)  |
| <b>Northwest Territories</b>       | OEL TWA                 | 10 mg/m <sup>3</sup> (metal-dust)  |
| <b>Ontario</b>                     | OEL TWA                 | 1 mg/m <sup>3</sup> (respirable particulate matter)  |
| <b>Prince Edward Island</b>        | OEL TWA                 | 1 mg/m <sup>3</sup> (respirable particulate matter)  |
| <b>Québec</b>                      | VEMP OEL TWA            | 10 mg/m <sup>3</sup>   |
| <b>Saskatchewan</b>                | OEL STEL                | 20 mg/m <sup>3</sup> (dust)  |
| <b>Saskatchewan</b>                | OEL TWA                 | 10 mg/m <sup>3</sup> (dust)  |
| <b>Nickel (7440-02-0)</b>          |                         |  |
| <b>USA ACGIH</b>                   | ACGIH OEL TWA           | 1.5 mg/m <sup>3</sup> (inhalable particulate matter)   |
| <b>USA ACGIH</b>                   | ACGIH chemical category | Not Suspected as a Human Carcinogen  |
| <b>USA ACGIH</b>                   | BEI BLV                 | 5 µg/l Parameter: Nickel - Medium: urine - Sampling time: post-shift at end of workweek (background) |
| <b>USA OSHA</b>                    | OSHA PEL TWA            | 1 mg/m <sup>3</sup>  |
| <b>USA NIOSH</b>                   | NIOSH REL TWA           | 0.015 mg/m <sup>3</sup>  |
| <b>USA IDLH</b>                    | IDLH                    | 10 mg/m <sup>3</sup>   |
| <b>Alberta</b>                     | OEL TWA                 | 1.5 mg/m <sup>3</sup>  |
| <b>British Columbia</b>            | OEL TWA                 | 0.05 mg/m <sup>3</sup>   |
| <b>Manitoba</b>                    | OEL TWA                 | 1.5 mg/m <sup>3</sup> (inhalable particulate matter)   |
| <b>New Brunswick</b>               | OEL TWA                 | 1 mg/m <sup>3</sup>  |
| <b>Newfoundland &amp; Labrador</b> | OEL TWA                 | 1.5 mg/m <sup>3</sup> (inhalable particulate matter)   |
| <b>Nova Scotia</b>                 | OEL TWA                 | 1.5 mg/m <sup>3</sup> (inhalable particulate matter)   |
| <b>Nunavut</b>                     | OEL STEL                | 3 mg/m <sup>3</sup> (inhalable fraction)   |
| <b>Nunavut</b>                     | OEL TWA                 | 1.5 mg/m <sup>3</sup> (inhalable fraction)   |
| <b>Northwest Territories</b>       | OEL STEL                | 3 mg/m <sup>3</sup> (inhalable fraction)   |
| <b>Northwest Territories</b>       | OEL TWA                 | 1.5 mg/m <sup>3</sup> (inhalable fraction)   |
| <b>Ontario</b>                     | OEL TWA                 | 1 mg/m <sup>3</sup> (inhalable fraction)   |
| <b>Prince Edward Island</b>        | OEL TWA                 | 1.5 mg/m <sup>3</sup> (inhalable particulate matter)   |
| <b>Québec</b>                      | VEMP OEL TWA            | 1.5 mg/m <sup>3</sup> (inhalable dust)   |
| <b>Saskatchewan</b>                | OEL STEL                | 3 mg/m <sup>3</sup> (inhalable fraction)   |

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|              |          |  |
|--------------|----------|--|
| Saskatchewan | OEL TWA  | 1.5 mg/m <sup>3</sup> (inhalable fraction) |
| Yukon        | OEL STEL | 3 mg/m <sup>3</sup>                        |
| Yukon        | OEL TWA  | 1 mg/m <sup>3</sup>                        |

### 8.2. Exposure Controls

**Appropriate Engineering Controls:** Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Gas detectors should be used when toxic gases may be released.

**Personal Protective Equipment:** Not required under normal conditions of use. When handling damaged batteries: Gloves. Protective clothing. Protective goggles. Face shield. Insufficient ventilation: wear respiratory protection.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics. Corrosion-proof clothing.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

**Other Information:** When using, do not eat, drink or smoke.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1. Information on Basic Physical and Chemical Properties

|  |                     |
|--|---------------------|
| Physical State                         | : Solid             |
| Appearance                             | : No data available |
| Odor                                   | : Odorless          |
| Odor Threshold                         | : No data available |
| pH                                     | : No data available |
| Evaporation Rate                       | : No data available |
| Melting Point                          | : No data available |
| Freezing Point                         | : No data available |
| Boiling Point                          | : No data available |
| Flash Point                            | : No data available |
| Auto-ignition Temperature              | : No data available |
| Decomposition Temperature              | : No data available |
| Flammability (solid, gas)              | : No data available |
| Lower Flammable Limit                  | : No data available |
| Upper Flammable Limit                  | : No data available |
| Vapor Pressure                         | : No data available |
| Relative Vapor Density at 20°C         | : No data available |
| Relative Density                       | : No data available |
| Specific Gravity                       | : No data available |
| Solubility                             | : Water: Insoluble  |
| Partition Coefficient: N-Octanol/Water | : No data available |
| Viscosity                              | : No data available |

## SECTION 10: STABILITY AND REACTIVITY

### 10.1. Reactivity:

Batteries are non-reactive under normal conditions of storage and use. If the internal contents are leaked lithium ion batteries may react with incompatible materials such as water, acids, bases, oxidizers, and reducing agents and form corrosive, irritating, and harmful fumes and by-products. If the battery is damaged, the interaction of water or water vapor and exposed lithium hexafluorophosphate may result in the generation of hydrogen and hydrogen fluoride (HF) gas.

### 10.2. Chemical Stability:

Stable under recommended handling and storage conditions (see section 7).

### 10.3. Possibility of Hazardous Reactions:

Hazardous polymerization will not occur.

### 10.4. Conditions to Avoid:

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Do not heat, expose to fire, disassemble, short circuit, immerse in water, or abuse batteries.

### 10.5. Incompatible Materials:

Strong acids, strong bases, strong oxidizers. Water.

### 10.6. Hazardous Decomposition Products:

Thermal decomposition may produce: Hydrogen Fluoride (HF). Carbon oxides (CO, CO<sub>2</sub>). Lithium oxides. Metal oxides. Phosphorus oxides.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects - Product

Exposure to the internal contents of the battery may result in:

**Acute Toxicity (Oral):** Toxic if swallowed.

**Acute Toxicity (Dermal):** Not classified

**Acute Toxicity (Inhalation):** Fatal if inhaled.

**LD50 and LC50 Data:** No additional information available

**Skin Corrosion/Irritation:** Causes severe skin burns.

**Eye Damage/Irritation:** Causes serious eye damage.

**Respiratory or Skin Sensitization:** May cause an allergic skin reaction.

**Germ Cell Mutagenicity:** Not classified

**Carcinogenicity:** May cause cancer (Inhalation).

**Specific Target Organ Toxicity (Repeated Exposure):** Causes damage to organs (lungs, dental/bone fluorosis) through prolonged or repeated exposure.

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Exposure to materials housed in battery: May be fatal if inhaled in significant amounts. May be corrosive to the respiratory tract.

**Symptoms/Injuries After Skin Contact:** Exposure to materials housed in battery: Causes severe irritation which will progress to chemical burns. May cause an allergic skin reaction.

**Symptoms/Injuries After Eye Contact:** Exposure to materials housed in battery: Causes permanent damage to the cornea, iris, or conjunctiva.

**Symptoms/Injuries After Ingestion:** Exposure to materials housed in battery: This material is toxic in small amounts orally, and can cause adverse health effects or death. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

**Chronic Symptoms:** Exposure to materials housed in battery: May cause cancer by inhalation. May cause damage to organs (lungs, dental/bone fluorosis) through prolonged or repeated exposure.

### 11.2. Information on Toxicological Effects - Ingredient(s)

**LD50 and LC50 Data:**

|   |  |
|---|--|
| <b>Copper (7440-50-8)</b>                               |  |
| LC50 Inhalation Rat                                     | > 5.11 mg/l/4h                                 |
| <b>Aluminum (7429-90-5)</b>                             |  |
| LC50 Inhalation Rat                                     | > 0.888 mg/l/4h                                |
| <b>Phosphate(1-), hexafluoro-, lithium (21324-40-3)</b> |  |
| LD50 Oral Rat   | 50 – 300 mg/kg                                 |
| <b>Carbon (7440-44-0)</b>                               |  |
| LD50 Oral Rat   | > 10000 mg/kg                                  |
| <b>Nickel (7440-02-0)</b>                               |  |
| LD50 Oral Rat   | > 9000 mg/kg                                   |
| LC50 Inhalation Rat                                     | > 10.2 mg/l (Exposure time: 1 h)               |
| <b>Nickel (7440-02-0)</b>                               |  |
| IARC Group  | 2B   |
| National Toxicology Program (NTP) Status                | Reasonably anticipated to be Human Carcinogen. |
| OSHA Hazard Communication Carcinogen List               | In OSHA Hazard Communication Carcinogen list.  |



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### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1. Toxicity

**Ecology - General:** Harmful to aquatic life with long lasting effects.

| Nickel (7440-02-0) |  |
|--------------------|--|
| LC50 Fish 1        | 100 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)    |
| EC50 Crustacea 1   | 100 mg/l (Exposure time: 48 h - Species: Daphnia magna)        |
| LC50 Fish 2        | 15.3 mg/l  |
| EC50 Crustacea 2   | 1 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |

#### 12.2. Persistence and Degradability

| Denago eBikes                 |   |
|-------------------------------|---|
| Persistence and Degradability | May cause long-term adverse effects in the environment. |

  

| Copper (7440-50-8)            |                            |
|-------------------------------|----------------------------|
| Persistence and Degradability | Not readily biodegradable. |

#### 12.3. Bioaccumulative Potential

| Denago eBikes             |                  |
|---------------------------|------------------|
| Bioaccumulative Potential | Not established. |

#### 12.4. Mobility in Soil

No additional information available

#### 12.5. Other Adverse Effects

**Other Information:** Avoid release to the environment.

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

**Waste Disposal Recommendations:** Material should be recycled if possible. Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

**Additional Information:** Batteries should be completely discharged prior to disposal and/or the terminals taped or capped to prevent short circuit.

**Ecology - Waste Materials:** This material is hazardous to the aquatic environment. Keep out of sewers and waterways. Avoid release to the environment.

### SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

#### 14.1. In Accordance with DOT

**Proper Shipping Name** : BATTERY-POWERED VEHICLE  
**Hazard Class** : 9  
**Identification Number** : UN3171  
**Label Codes** : 9  
**ERG Number** : 154



#### 14.2. In Accordance with IMDG

**Proper Shipping Name** : BATTERY-POWERED VEHICLE  
**Hazard Class** : 9A  
**Identification Number** : UN3171  
**Label Codes** : 9A  
**EmS-No. (Fire)** : F-A  
**EmS-No. (Spillage)** : S-I



#### 14.3. In Accordance with IATA

**Proper Shipping Name** : BATTERY-POWERED VEHICLE  
**Hazard Class** : 9  
**Identification Number** : UN3171  
**Label Codes** : 9  
**ERG Code (IATA)** : 9L



#### 14.4. In Accordance with TDG

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**Proper Shipping Name** : BATTERY-POWERED VEHICLE  
**Hazard Class** : 9  
**Identification Number** : UN3171  
**Label Codes** : 9



### SECTION 15: REGULATORY INFORMATION

#### 15.1. US Federal Regulations

|   |  |
|---|--|
| <b>Denago eBikes</b>  |  |
| <b>SARA Section 311/312 Hazard Classes</b>  | Health hazard - Acute toxicity (any route of exposure)<br>Health hazard - Carcinogenicity<br>Health hazard - Respiratory or skin sensitization<br>Health hazard - Serious eye damage or eye irritation<br>Health hazard - Skin corrosion or Irritation<br>Health hazard - Specific target organ toxicity (single or repeated exposure) |
| <b>Copper (7440-50-8)</b>   |  |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active<br>Subject to reporting requirements of United States SARA Section 313 |  |
| <b>CERCLA RQ</b>  | 5000 lb no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is >100 µm  |
| <b>SARA Section 313 - Emission Reporting</b>  | 1 %  |
| <b>Aluminum (7429-90-5)</b>   |  |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active<br>Subject to reporting requirements of United States SARA Section 313 |  |
| <b>SARA Section 313 - Emission Reporting</b>  | 1 % (dust or fume only)  |
| <b>1,1-Difluoroethylene polymer (24937-79-9)</b>  |  |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  |  |
| <b>EPA TSCA Regulatory Flag</b>   | XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).  |
| <b>Cobalt lithium manganese nickel oxide (182442-95-1)</b>  |  |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  |  |
| <b>EPA TSCA Regulatory Flag</b>   | PMN - PMN indicates a commenced PMN substance.<br>S - S indicates a substance that is identified in a final Significant New Use Rule.<br>5E - 5E indicates a substance that is the subject of a TSCA section 5E order.   |
| <b>Styrene-butadiene copolymer (9003-55-8)</b>  |  |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  |  |
| <b>EPA TSCA Regulatory Flag</b>   | XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).  |
| <b>Phosphate(1-), hexafluoro-, lithium (21324-40-3)</b>   |  |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  |  |
| <b>EPA TSCA Regulatory Flag</b>   | PMN - PMN - indicates a commenced PMN substance.   |
| <b>Carbon (7440-44-0)</b>   |  |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  |  |
| <b>Nickel (7440-02-0)</b>   |  |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active<br>Subject to reporting requirements of United States SARA Section 313 |  |
| <b>CERCLA RQ</b>  | 100 lb (only applicable if particles are < 100 µm)   |
| <b>SARA Section 313 - Emission Reporting</b>  | 0.1 %  |
| <b>Steel manufacture, chemicals (65997-19-5)</b>  |  |
| Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active  |  |

#### 15.2. US State Regulations

##### California Proposition 65

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**WARNING:** This product can expose you to Nickel, which is known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

| Chemical Name (CAS No.) | Carcinogenicity | Developmental Toxicity | Female Reproductive Toxicity | Male Reproductive Toxicity |
|-------------------------|-----------------|------------------------|------------------------------|----------------------------|
| Nickel (7440-02-0)      | X               |                        |                              |                            |

### Copper (7440-50-8)

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

### Aluminum (7429-90-5)

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

### Nickel (7440-02-0)

U.S. - New Jersey - Right to Know Hazardous Substance List  
U.S. - Pennsylvania - RTK (Right to Know) List  
U.S. - Massachusetts - Right To Know List  
U.S. - Pennsylvania - RTK (Right to Know) - Special Hazardous Substances  
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

## 15.3. Canadian Regulations

### Copper (7440-50-8)

Listed on the Canadian DSL (Domestic Substances List)

### Aluminum (7429-90-5)

Listed on the Canadian DSL (Domestic Substances List)

### 1,1-Difluoroethylene polymer (24937-79-9)

Listed on the Canadian DSL (Domestic Substances List)

### Styrene-butadiene copolymer (9003-55-8)

Listed on the Canadian DSL (Domestic Substances List)

### Phosphate(1-), hexafluoro-, lithium (21324-40-3)

Listed on the Canadian NDSL (Non-Domestic Substances List)

### Carbon (7440-44-0)

Listed on the Canadian DSL (Domestic Substances List)

### Nickel (7440-02-0)

Listed on the Canadian DSL (Domestic Substances List)

### Steel manufacture, chemicals (65997-19-5)

Listed on the Canadian DSL (Domestic Substances List)

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Date of Preparation or Latest Revision** : 04/26/2022

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

### GHS Full Text Phrases:

|                           |  |
|---------------------------|--|
| Acute Tox. 2 (Inhalation) | Acute toxicity (inhalation) Category 2                           |
| Acute Tox. 3 (Oral)       | Acute toxicity (oral) Category 3                                 |
| Aquatic Acute 1           | Hazardous to the aquatic environment - Acute Hazard Category 1   |
| Aquatic Acute 3           | Hazardous to the aquatic environment - Acute Hazard Category 3   |
| Aquatic Chronic 3         | Hazardous to the aquatic environment - Chronic Hazard Category 3 |

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|               |  |
|---------------|--|
| Carc. 1B      | Carcinogenicity Category 1B                                    |
| Carc. 2       | Carcinogenicity Category 2                                     |
| Comb. Dust    | Combustible Dust   |
| Eye Dam. 1    | Serious eye damage/eye irritation Category 1                   |
| Skin Corr. 1A | Skin corrosion/irritation Category 1A                          |
| Skin Sens. 1  | Skin sensitization, Category 1                                 |
| STOT RE 1     | Specific target organ toxicity (repeated exposure) Category 1  |
| H301          | Toxic if swallowed   |
| H314          | Causes severe skin burns and eye damage                        |
| H317          | May cause an allergic skin reaction                            |
| H318          | Causes serious eye damage                                      |
| H330          | Fatal if inhaled   |
| H350          | May cause cancer   |
| H351          | Suspected of causing cancer                                    |
| H372          | Causes damage to organs through prolonged or repeated exposure |
| H400          | Very toxic to aquatic life                                     |
| H402          | Harmful to aquatic life  |
| H412          | Harmful to aquatic life with long lasting effects              |

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

NA GHS SDS 2015 (Can, US)