SAFETY DATA SHEET
Big Universal Trap - Nitrogen

Section 1. Identification

This product is considered an article. This Safety Data Sheet is written based on the encapsulated substance or mixture in this article.

1.1 Product identifier

Product name : Big Universal Trap - Nitrogen
Part no. : RMSN-2, RMSN-4
Validation date : 3/8/2023

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

Identified uses : Analytical chemistry.
A kit containing:
- RMSN-2 Big Universal Trap, 1/8" fttgs, Nitrogen 750 ml
- RMSN-4 Big Universal Trap, 1/4" fttgs, Nitrogen 750 ml
- Sealed cartridge

1.3 Details of the supplier of the safety data sheet

Supplier/Manufacturer : Agilent Technologies, Inc.
5301 Stevens Creek Blvd
Santa Clara, CA 95051, USA
800-227-9770

1.4 Emergency telephone number

In case of emergency : CHEMTREC®: 1-800-424-9300

Section 2. Hazards identification

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product’s directions for use it may present potential health and safety hazards.

2.1 Classification of the substance or mixture

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

H317 SKIN SENSITIZATION - Category 1
H350 CARCINOGENICITY - Category 1A
H372 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1
H400 AQUATIC HAZARD (ACUTE) - Category 1
H411 AQUATIC HAZARD (LONG-TERM) - Category 2

Percentage of the mixture consisting of ingredient(s) of unknown hazards to the aquatic environment: 6.6%

2.2 GHS label elements

Hazard pictograms : 

Signal word : Danger

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Section 2. Hazards identification

Hazard statements:
- H317 - May cause an allergic skin reaction.
- H350 - May cause cancer.
- H372 - Causes damage to organs through prolonged or repeated exposure. (lungs)
- H400 - Very toxic to aquatic life.
- H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements:

Prevention:
- P201 - Obtain special instructions before use.
- P280 - Wear protective gloves, protective clothing and eye or face protection.
- P273 - Avoid release to the environment.
- P260 - Do not breathe dust or mist.
- P270 - Do not eat, drink or smoke when using this product.

Response:
- P391 - Collect spillage.
- P308 + P313 - IF exposed or concerned: Get medical advice or attention.
- P363 - Wash contaminated clothing before reuse.
- P302 + P352 - IF ON SKIN: Wash with plenty of water.
- P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.

Storage:
- Not applicable.

Disposal:
- P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3 Other hazards
Hazards not otherwise classified:
- None known.

Section 3. Composition/information on ingredients

This article, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. The substance or mixture is encapsulated in the article. Only if released due to use or processing of the article in a manner not in accordance with the product’s directions for use it may present potential health and safety hazards.

Substance/mixture:
- Mixture (encapsulated in article)

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>%</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper oxide, Activated</td>
<td>≤5</td>
<td>1317-38-0</td>
</tr>
<tr>
<td>crystalline silica, respirable powder</td>
<td>≤5</td>
<td>14808-60-7</td>
</tr>
<tr>
<td>cristobalite</td>
<td>≤5</td>
<td>14464-46-1</td>
</tr>
<tr>
<td>nickel monoxide</td>
<td>≤0.3</td>
<td>1313-99-1</td>
</tr>
</tbody>
</table>

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

4.1 Description of necessary first aid measures

Eye contact:
- Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
Section 4. First aid measures

Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact: Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion: Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

4.2 Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation: Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact: May cause an allergic skin reaction.

Ingestion: No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact: Adverse symptoms may include the following:
- irritation
- redness

Inhalation: Adverse symptoms may include the following:
- respiratory tract irritation
- coughing

Skin contact: Adverse symptoms may include the following:
- irritation
- redness

Ingestion: No specific data.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments: No specific treatment.

Protection of first-aiders: No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

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Section 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media: None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards arising from the chemical: This material is very toxic to aquatic life. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products: Decomposition products may include the following materials:
- Carbon dioxide
- Carbon monoxide
- Metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing dust. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up: Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

7.1 Precautions for safe handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe dust. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container.

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Section 7. Handling and storage

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities: Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations: Industrial applications, Professional applications.

Industrial sector specific solutions: Not available.

Section 8. Exposure controls/personal protection

Since the hazardous ingredient in this article is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

8.1 Control parameters

8.1.1 Occupational exposure limits

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>Exposure limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper oxide, Activated</td>
<td>NIOSH REL (United States, 10/2020). [COPPER FUME] TWA: 0.1 mg/m³, (as Cu) 10 hours. Form: Fume</td>
</tr>
<tr>
<td>crystalline silica, respirable powder</td>
<td>OSHA PEL (United States, 3/1989). TWA: 0.1 mg/m³, (as quartz) 8 hours. Form: Respirable dust</td>
</tr>
</tbody>
</table>

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Section 8. Exposure controls/personal protection

Respirable fraction

NIOSH REL (United States, 10/2020) [SILICA, CRYSTALLINE]
- TWA: 0.05 mg/m³ 10 hours. Form: respirable dust

OSHA PEL Z3 (United States, 6/2016)
- TWA: 250 mppcf / 2 x (%SiO2+5) 8 hours. Form: Respirable dust
- TWA: 10 mg/m³ / 2 x (%SiO2+2) 8 hours. Form: Respirable dust
- TWA: 30 mg/m³ / 2 x (%SiO2+2) 8 hours. Form: Total dust

- TWA: 0.05 mg/m³, (as quartz) 8 hours. Form: Respirable dust

OSHA PEL (United States, 5/2018) [Silica, crystalline]
- TWA: 50 µg/m³ 8 hours. Form: Respirable dust

ACGIH TLV (United States, 1/2022) [Silica, crystalline]
- TWA: 0.025 mg/m³ 8 hours. Form: Respirable fraction

NIOSH REL (United States, 10/2020) [SILICA, CRYSTALLINE]
- TWA: 0.05 mg/m³ 10 hours. Form: respirable dust

OSHA PEL 1989 (United States, 3/1989) [Nickel, metal and insoluble compounds (as Ni)]
- TWA: 1 mg/m³, (as Ni) 8 hours.

ACGIH TLV (United States, 1/2022) [Nickel, insoluble inorganic compounds]
- TWA: 0.2 mg/m³, (as Ni) 8 hours. Form: Inhalable fraction

NIOSH REL (United States, 10/2020) [nickel metal and other compounds]
- TWA: 0.015 mg/m³, (as Ni) 10 hours.

OSHA PEL (United States, 5/2018) [Nickel, metal and insoluble compounds]
- TWA: 1 mg/m³, (as Ni) 8 hours.

Appropriate engineering controls

Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Biological exposure indices

Ingredient name | Exposure indices
--- | ---
Nickel monoxide | ACGIH BEI (United States, 1/2022) [nickel and inorganic compounds]
- BEI: 30 µg/l, nickel [in urine after exposure to soluble compounds]. Sampling time: post-shift at end of workweek.

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**Environmental exposure controls**

- Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**Individual protection measures**

**Hygiene measures**

- Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

**Eye/face protection**

- Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields. If operating conditions cause high dust concentrations to be produced, use dust goggles.

**Body protection**

- Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Other skin protection**

- Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection**

- Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties and safety characteristics

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

**Appearance**

- **Physical state**: Solid. [Pellets. Granular solid. or Powder.]
- **Color**: Tan. or White.
- **Odor**: Odorless.
- **Odor threshold**: Not available.
- **pH**: 8 to 11 (aqueous slurry)
- **Melting point/freezing point**: Not available.
- **Boiling point, initial boiling point, and boiling range**: Not available.
- **Flash point**: Not applicable.
- **Evaporation rate**: Not available.
- **Flammability**: Not available.

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Section 9. Physical and chemical properties and safety characteristics

Lower and upper explosion limit/flammability limit: Not applicable.
Vapor pressure: Not available.
Relative vapor density: Not applicable.
Relative density: 1.1 (piece)
                      2.1 (crystal)
Solubility(ies): Media
                  Water
                  Result
                  Not soluble
Partition coefficient: n-octanol/water: Not applicable.
Auto-ignition temperature: Not applicable.
Decomposition temperature: Not available.
Viscosity: Not applicable.

Section 10. Stability and reactivity

10.1 Reactivity: No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability: The product is stable.

10.3 Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid: The addition of moisture (water) without flooding can cause a rise in temperature from the heat of adsorption.

10.5 Incompatible materials: May react or be incompatible with oxidizing materials.
                              Hydrogen chloride (HCl).

10.6 Hazardous decomposition products: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Dose</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper oxide, Activated</td>
<td>LD50 Dermal</td>
<td>Rat - Male, Female</td>
<td>&gt;2000 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td>Nickel monoxide</td>
<td>LD50 Oral</td>
<td>Rat</td>
<td>470 mg/kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>LC50 Inhalation Dusts and mists</td>
<td>Rat - Male, Female</td>
<td>&gt;5.08 mg/l</td>
<td>4 hours</td>
</tr>
</tbody>
</table>

Irritation/Corrosion
Not available.

Sensitization
Not available.

Mutagenicity

Conclusion/Summary: Not available.

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Carcinogenicity

Conclusion/Summary : Not available.

Classification

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>OSHA</th>
<th>IARC</th>
<th>NTP</th>
</tr>
</thead>
<tbody>
<tr>
<td>crystalline silica, respirable powder</td>
<td>-</td>
<td>1</td>
<td>Known to be a human carcinogen.</td>
</tr>
<tr>
<td>cristobalite</td>
<td>-</td>
<td>1</td>
<td>Known to be a human carcinogen.</td>
</tr>
<tr>
<td>nickel monoxide</td>
<td>-</td>
<td>1</td>
<td>Known to be a human carcinogen.</td>
</tr>
</tbody>
</table>

Reproductive toxicity

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

<table>
<thead>
<tr>
<th>Name</th>
<th>Category</th>
<th>Route of exposure</th>
<th>Target organs</th>
</tr>
</thead>
<tbody>
<tr>
<td>crystalline silica, respirable powder</td>
<td>Category 1</td>
<td>inhalation</td>
<td>lungs</td>
</tr>
<tr>
<td>cristobalite</td>
<td>Category 1</td>
<td>inhalation</td>
<td>lungs</td>
</tr>
<tr>
<td>nickel monoxide</td>
<td>Category 1</td>
<td>inhalation</td>
<td>lungs</td>
</tr>
</tbody>
</table>

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following: irritation, redness.

Inhalation : Adverse symptoms may include the following: respiratory tract irritation, coughing.

Skin contact : Adverse symptoms may include the following: irritation, redness.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.
Section 11. Toxicological information

Potential delayed effects: Not available.

Long term exposure
Potential immediate effects: Not available.
Potential delayed effects: Not available.

Potential chronic health effects
General: Causes damage to organs through prolonged or repeated exposure. Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
Carcinogenicity: May cause cancer. Risk of cancer depends on duration and level of exposure.
Mutagenicity: No known significant effects or critical hazards.
Reproductive toxicity: No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Oral (mg/kg)</th>
<th>Dermal (mg/kg)</th>
<th>Inhalation (gases) (ppm)</th>
<th>Inhalation (vapors) (mg/l)</th>
<th>Inhalation (dusts and mists) (mg/l)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Universal Trap - Nitrogen</td>
<td>12380.8</td>
<td>65855.3</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Copper oxide, Activated</td>
<td>470</td>
<td>2500</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Other information: Adverse symptoms may include the following: May cause skin sensitization.

Section 12. Ecological information

12.1 Toxicity

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>Result</th>
<th>Species</th>
<th>Exposure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copper oxide, Activated</td>
<td>Acute LC50 2.6 mg/l Fresh water</td>
<td>Daphnia - Daphnia magna - Neonate Fish - Gambusia affinis - Adult</td>
<td>48 hours</td>
</tr>
<tr>
<td></td>
<td>Acute LC50 &gt;56000 ppm Fresh water</td>
<td></td>
<td>96 hours</td>
</tr>
</tbody>
</table>

12.2 Persistence and degradability
Not available.

12.3 Bioaccumulative potential

<table>
<thead>
<tr>
<th>Product/ingredient name</th>
<th>LogP_{ow}</th>
<th>BCF</th>
<th>Potential</th>
</tr>
</thead>
<tbody>
<tr>
<td>nickel monoxide</td>
<td>-</td>
<td>5613</td>
<td>high</td>
</tr>
</tbody>
</table>

12.4 Mobility in soil

| Soil/water partition coefficient (K_{oc}) | Not available. |

12.5 Other adverse effects
No known significant effects or critical hazards.
Section 13. Disposal considerations

13.1 Waste treatment methods

Disposal methods: The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

The information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations.

Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

Section 14. Transport information

This Safety Data Sheet is written based on the encapsulated substance or mixture in this article. Since the hazardous ingredient is encapsulated, the risk of exposure by inhalation, ingestion, skin contact and eyes contact is minimum.

<table>
<thead>
<tr>
<th>DOT Classification</th>
<th>TDG Classification</th>
<th>Mexico Classification</th>
<th>IMDG</th>
<th>IATA</th>
</tr>
</thead>
<tbody>
<tr>
<td>UN number</td>
<td>Not regulated.</td>
<td>UN3077</td>
<td>UN3077</td>
<td>UN3077</td>
</tr>
<tr>
<td>UN proper shipping name</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper oxide, Activated)</td>
<td>SUBSTANCIA SOLIDA POTENCIALMENTE PELIGROSA PARA EL MEDIO AMBIENTE, N.E.P. (Copper oxide, Activated)</td>
<td>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper oxide, Activated)</td>
<td>Environmentally hazardous substance, solid, n. o.s. (Copper oxide, Activated)</td>
</tr>
<tr>
<td>Transport hazard class(es)</td>
<td>g</td>
<td>g</td>
<td>g</td>
<td>g</td>
</tr>
<tr>
<td>Packing group</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental hazards</td>
<td>No.</td>
<td>Yes.</td>
<td>Yes.</td>
<td>Yes.</td>
</tr>
</tbody>
</table>

Additional information

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Section 14. Transport information

TDG Classification: Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark). Non-bulk packages of this product are not regulated as dangerous goods when transported by road or rail. Explosive Limit and Limited Quantity Index 5 Special provisions 16, 99

Mexico Classification: The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg. Special provisions 274, 331, 335

IMDG: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. Emergency schedules F-A, S-F Special provisions 274, 335, 966, 967, 969

IATA: This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8. Quantity limitation Passenger and Cargo Aircraft: 400 kg. Packaging instructions: 956. Cargo Aircraft Only: 400 kg. Packaging instructions: 956. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y956. Special provisions A97, A158, A179, A197, A215

Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to IMO instruments: Not available.

Section 15. Regulatory information

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

U.S. Federal regulations: TSCA 8(a) CDR Exempt/Partial exemption: Not determined Clean Water Act (CWA) 307: Copper oxide, Activated; nickel monoxide

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs): Listed

Clean Air Act Section 602 Class I Substances: Not listed

Clean Air Act Section 602 Class II Substances: Not listed

DEA List I Chemicals (Precursor Chemicals): Not listed

DEA List II Chemicals (Essential Chemicals): Not listed

SARA 302/304 Composition/information on ingredients: No products were found.

SARA 304 RQ: Not applicable.

SARA 311/312

Date of issue: 03/08/2023
**Section 15. Regulatory information**

**Classification**: 
- SKIN SENSITIZATION - Category 1
- CARCINOGENICITY - Category 1A
- SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1

**Composition/information on ingredients**

<table>
<thead>
<tr>
<th>Name</th>
<th>%</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>carbon</td>
<td>≥25 - ≤50</td>
<td>COMBUSTIBLE DUSTS</td>
</tr>
<tr>
<td>Copper oxide, Activated crystalline silica, respirable powder cristobalite nickle monoxide</td>
<td>≤5 ≤5 ≤0.3</td>
<td>ACUTE TOXICITY (oral) - Category 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CARCINOGENICITY - Category 1A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SKIN SENSITIZATION - Category 1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CARCINOGENICITY - Category 1A</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1</td>
</tr>
</tbody>
</table>

**SARA 313**

<table>
<thead>
<tr>
<th>Form R - Reporting requirements</th>
<th>Product name</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supplier notification</td>
<td>Copper oxide, Activated nickel monoxide</td>
<td>1317-38-0</td>
<td>≤5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1313-99-1</td>
<td>≤0.3</td>
</tr>
</tbody>
</table>

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

**State regulations**

- **Massachusetts**: The following components are listed: ALUMINUM OXIDE; SILICA, CRYSSTALLINE, QUARTZ; CRISTOBALITE DUST
- **New York**: None of the components are listed.
- **New Jersey**: The following components are listed: ALUMINUM OXIDE; COPPER compounds; SILICA, QUARTZ, SILICA, CRISTOBALITE; NICKEL OXIDE
- **Pennsylvania**: The following components are listed: ALUMINUM OXIDE; COPPER COMPOUNDS; QUARTZ DUST; CRISTOBALITE DUST

**California Prop. 65**

⚠️ **WARNING**: This product can expose you to chemicals including Silica, crystalline, Silica, crystalline and Nickel oxide, which are known to the State of California to cause cancer. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

<table>
<thead>
<tr>
<th>Ingredient name</th>
<th>No significant risk level</th>
<th>Maximum acceptable dosage level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silica, crystalline</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Silica, crystalline</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Nickel oxide</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**International regulations**

- **Chemical Weapon Convention List Schedules I, II & III Chemicals**
  Not listed.

- **Montreal Protocol**
  Not listed.

- **Stockholm Convention on Persistent Organic Pollutants**
  Not listed.

- **Rotterdam Convention on Prior Informed Consent (PIC)**
  Not listed.

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Section 15. Regulatory information

**UNECE Aarhus Protocol on POPs and Heavy Metals**

Not listed.

**Inventory list**

- **Australia**: All components are listed or exempted.
- **Canada**: All components are listed or exempted.
- **China**: All components are listed or exempted.
- **Eurasian Economic Union**: Russian Federation inventory: All components are listed or exempted.
- **Japan**: Japan inventory (CSCL): All components are listed or exempted. Japan inventory (ISHL): All components are listed or exempted.
- **New Zealand**: All components are listed or exempted.
- **Philippines**: All components are listed or exempted.
- **Republic of Korea**: All components are listed or exempted.
- **Taiwan**: All components are listed or exempted.
- **Thailand**: All components are listed or exempted.
- **Turkey**: All components are active or exempted.
- **United States**: All components are active or exempted.
- **Viet Nam**: All components are listed or exempted.

Section 16. Other information

**Procedure used to derive the classification**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>SKIN SENSITIZATION - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>CARCINOGENICITY - Category 1A</td>
<td>Calculation method</td>
</tr>
<tr>
<td>SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>AQUATIC HAZARD (ACUTE) - Category 1</td>
<td>Calculation method</td>
</tr>
<tr>
<td>AQUATIC HAZARD (LONG-TERM) - Category 2</td>
<td>Calculation method</td>
</tr>
</tbody>
</table>

**History**

- **Date of issue**: 03/08/2023
- **Date of previous issue**: 11/20/2019
- **Version**: 9

**Key to abbreviations**

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- N/A = Not available
- UN = United Nations

▶ Indicates information that has changed from previously issued version.

**Notice to reader**

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