1. Identification of Substance:

- **GHS product identifier:** n/a
- **Other means of identification:** n/a (contains Sodium Azide and Cycloheximide.)
- **Application of the substance / the preparation:** n/a
- **Manufacturer/Supplier:**
  R&D Systems Inc.
  614 McKinley Place N.E.
  Minneapolis, MN 55413 USA
- **For product related questions call:** 1-800-343-7475.
- **Emergency information:** In case of a chemical emergency, spill, leak, fire, or accident, call CHEMTREC at 1-800-424-9300 (US or Canada). Outside USA and Canada: +1 703-527-3887 (collect calls accepted).

2. Hazards Identification:

- **Classification:** Regulation (EC) No. 1272/2008 [CLP/GHS]: Sodium Azide
  - Acute Tox. 2, Oral
  - Aquatic Acute 1
  - Aquatic Chronic 1
- **Signal Word:** DANGER
- **Hazard Statement(s):**
  - H300: Fatal if swallowed.
  - H410: Harmful to aquatic life with long lasting effects.
  - EUH032: Contact with acids liberates very toxic gas
- **Precautionary Statement(s):**
  - P264: Wash hands thoroughly after handling.
  - P270: Do not eat, drink or smoke when using this product.
  - P273: Avoid release to the environment.
- **Response:**
  - IF SWALLOWED: Immediately call a POISON CONTROL Center or physician. See specific treatment in this SDS. Rinse mouth.
  - IF ON SKIN: Remove immediately all contaminated clothing. Wash contaminated clothing before reuse. Call a POISON CONTROL center or physician.
  - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CONTROL center or physician. COLLECT SPILLAGE.
- **Classification according to Directive 67/548/EEC:** T+: Very toxic. N: Dangerous for the environment.
- **R-phrases:** R28: Very toxic if swallowed. R32: Contact with acids liberates very toxic gas. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **S-phrases:** S1/2: Keep locked up and out of reach of children. S28: After contact with skin, wash immediately with plenty of water. S45: In case of accident or if you feel unwell seek medical advice immediately (show the label where possible). S60: This material and its container must be disposed of as hazardous waste. S61 Avoid release to the environment. Refer to special instructions/safety data sheet.
- **Other Hazards:** Contact with acids liberates very toxic gas.

3. Information on Ingredients:

<table>
<thead>
<tr>
<th>Contains</th>
<th>Index No.</th>
<th>EINECS</th>
<th>CAS No.</th>
<th>Content %</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Azide</td>
<td>011-004-00-7</td>
<td>247-852-1</td>
<td>26628-22-8</td>
<td>&lt;0.1%</td>
<td>Not hazardous at this concentration</td>
</tr>
</tbody>
</table>

4. First Aid Measures:

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly. Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** Rinse mouth with water. Immediately seek medical attention and appropriate follow-up.

5. Fire Fighting Measures:

- **Suitable extinguishing agents:** Any means suitable for extinguishing the surrounding area.
- **Specific hazards arising from the chemical:** Dangerous decomposition is not anticipated.
6. Accidental Release Measures:

- **Person-related safety precautions:** Avoid breathing vapors, mist or gas. Ensure adequate ventilation.
- **Measures for environmental protection:** Prevent further spillage or leakage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
- **Measures for containment and cleaning:** Absorb liquid components with inert liquid-binding material. Pick up mechanically. Dispose contaminated material as waste according to item 13.

7. Handling and Storage:

- **Precautions for safe handling:** Store in a well ventilated place. Keep container tightly closed.
- **Information about protection against explosions and fires:** Normal measures for preventive fire protection.
- **Conditions for safe storage:** Keep locked up. Store in a cool place. Keep container tightly closed in a dry and well ventilated place.

8. Exposure Controls and Personal Protection:

- **Components:** Sodium Azide
  - UK. EH40 WEL- Workplace Exposure Limits: Value: STEL 0.3 mg/m³ (15 min.). TWA 0.1 mg/m³; UK.
- **Appropriate engineering controls:** Follow usual standard laboratory practices. The following personal protection is recommended:
  - Respiratory Protection: Respiratory Protection not required. For nuisance exposures use respirators and components approved under appropriate government standards.
  - Hand Protection: Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.
  - Eye Protection: Use equipment for eye protection tested and approved under appropriate government standards.
  - Skin and Body Protection: Use impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
  - Hygiene Measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

9. Physical and Chemical Properties:

- **Appearance:** Lyophilized white powder or clear liquid.
- **Odor:** Little to none
- **Odor threshold:** Not available
- **pH:** Not available
- **Melting point/Freezing point:** Not available.
- **Boiling point/Boiling range:** Not available.
- **Flash point:** Not available.
- **Evaporation rate:** Undetermined.
- **Flammability:** Not available.
- **Upper/lower flammability or explosive limits:** Not available.
- **Vapor pressure/density:** Not available.
- **Relative Density:** Not available.
- **Solubility in/Miscibility with Water:** Not available.
- **Partition coefficient:** Noctanol/water: Not available
- **Auto igniting:** Product is not self igniting.
- **Decomposition temperature:** Not available.
- **Viscosity:** Not available.

10. Stability and Reactivity:

- **Reactivity:** Sodium Azide can form explosive compounds with heavy metals which, with repeated contact with lead and copper commonly found in plumbing drains may result in the buildup of shock sensitive compounds.
- **Chemical Stability:** Stable under normal ambient and storage and handling temperatures.
- **Thermal:** decomposition/conditions to be avoided: No decomposition if used according to specifications.
- **Incompatible materials to be avoided:** Metals and metallic compounds.
- **Hazardous decomposition products:** Hazardous decompositions formed under fire conditions. No dangerous decomposition products known.

11. Toxicological Information:

- **Acute toxicity:** Oral LD50 Oral: 27 mg/kg (mouse and rat); Inhalation LD50: 32 mg/m³ (mouse) and 37 mg/m³ (rat);
12. Ecological Information:

- **Ecotoxicity:** Harmful to aquatic life. LC50, 96 Hrs, Fish Lepomis macrochirus - 0.68 mg/L; EC50, 48 Hrs, Daphnia pulex - 4.2 mg/L
- **Persistence and degradability:** No data available
- **Bioaccumulative potential:** No data available
- **Mobility in soil:** Sodium azide is soluble in water.
- **Other adverse effects:** Sodium azide is toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment.

13. Disposal Considerations:

- **Disposal methods:** Dispose of waste in accordance to applicable national, regional, or local regulations.
- **Contaminated packaging:** Dispose in the same manner as unused product.
- **Special precautions:** Dispose of small amounts of spilled material as described in section 6. Large spills must be dealt with separately by qualified disposal personnel. Avoid dispersal of spilt material to soil, waterways, drains and sewers.

14. Transport Information:

- **ADR/RID ADN/ADNR IMDG IATA/DOT**
  - **ADR/DOT:** UN Number: UN3082
    - Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Sodium Azide)
    - Hazard class: 9
    - Packing group: III
  - **RID**
    - Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Sodium Azide)
    - Hazard class: 9
    - Packing group: III
  - **IATA:** UN Number: UN3082
    - Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Sodium Azide)
    - Hazard class: 9
    - Packing group: III
  - **IMDG:** UN Number: UN3082
    - Proper Shipping Name: Environmentally hazardous substance, liquid, n.o.s. (Sodium Azide)
    - Hazard class: 9
    - Packing group: III
    - Marine Pollutant: No
15. Regulations:

- US Federal and State Regulations
  - TSCA (Toxic Substances Control Act): Sodium Azide is listed.
  - SARA 313: Sodium Azide is listed.
  - SARA 311/312 Hazards: Acute Health Hazard
  - CERCLA Reportable Quantity: 1000 lbs.
  - California Proposition 65: Sodium Azide is not listed on California’s listing of known or potential carcinogens.

16. Other Information:

- R-phrases: R28: Very toxic if swallowed. R32: Contact with acids liberates very toxic gas. R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- S-phrases: S1/2: Keep locked up and out of reach of children. S28: After contact with skin, wash immediately with plenty of water. S45: In case of accident or if you feel unwell seek medical advice immediately (show the label where possible). S60: This material and its container must be disposed of as hazardous waste. S61 Avoid release to the environment. Refer to special instructions/safety data sheet.
- Other Hazards: Contact with acids liberates very toxic gas.

Notice to reader: To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.
2. Hazard Identification:

- Classification: Regulation (EC) No. 1272/2008 [CLP/EU-GHS]: Cycloheximide
- GHS Classification:
  - Acute toxicity, Oral (Category 1)
  - Skin Irritant (Category 2)
  - Germ Cell Mutagenicity (Category 2)
  - Reproductive Toxicity (Category 1B)
  - Acute Aquatic Toxicity (Category 2)
- Signal Word: DANGER
- Hazard Statements:
- Precautionary Statements:
  - P201: Obtain special instructions before use. P202: Do not handle until all safety precautions have been read and understood. P264: Wash hands thoroughly after handling. P270: Do not eat, drink or smoke when using this product. P273: Avoid release to the environment. P281: Use personal protective equipment as required.
- Responses:
  - IF SWALLOWED: Immediately call a Poison Center or physician. Specific treatment listed in this SDS. Rinse mouth.
  - IF EXPOSED OR CONCERNED: Get medical advice/attention.
  - IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. See specific treatments in this SDS. Take off contaminated clothing and wash it before reuse.
- Classification according to EU Directives 67/548/EEC or 1999/45/EC: T+; Xi; Reproductive Category 3.
- S Phrases: S1/2: Keep locked up and out of reach of children. S22: Do not breathe dust. S36/37: Wear suitable protective clothing and gloves. S45: In case of accident or if you feel unwell, seek medical advice immediately (show label where possible).
- Special Hazards: None.

3. Information on Ingredients:

<table>
<thead>
<tr>
<th>Contains</th>
<th>Index-No.</th>
<th>CAS No.</th>
<th>EC-No.</th>
<th>Content</th>
<th>Classification</th>
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<tr>
<td>Cycloheximide</td>
<td>616-140-00-8</td>
<td>66-81-9</td>
<td>200-636-0</td>
<td>&lt; 0.1 %</td>
<td>Not hazardous at this concentration</td>
</tr>
</tbody>
</table>

4. First Aid Measures:

- After Inhalation: If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.
- After Skin Contact: Wash off with soap and plenty of water. Remove contaminated clothing. Take immediately to a hospital.
- After Eye Contact: Rinse with plenty of water for several minutes (remove contact lenses if easy to do so).
- After Swallowing: Rinse mouth with water. Consult a physician.
- Indication of any immediate medical attention and special treatment needed: Consult a physician.

5. Fire Fighting Measures:

- Suitable extinguishing agents: Water spray, foam, carbon dioxide, or dry sand.
- Special hazards arising from the substance or mixture: Not combustible. Gives off irritating or toxic fumes (or gasses in a fire).
- Special protective actions for fire-fighters: Self contained breathing apparatus and full protective clothing must be worn in case of fire.
- Hazardous combustion products: Hazardous decomposition products formed under fire conditions – carbon oxides; nitrogen oxides.
6. Accidental Release Measures:

- **Personal precautions, protective equipment and emergency procedures:** Wear respiratory protection. Use appropriate personal protective equipment to prevent contamination of skin, eyes and personal clothing. Avoid breathing dust, vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
- **Environmental precautions:** Keep away from drains. Discharge into environment must be avoided.
- **Methods and materials for containment and cleaning up:** Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable closed containers for disposal.

7. Handling and Storage:

- **Precautions for safe handling:** Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Avoid inhalation of vapour or mist. Provide appropriate exhaust ventilation at places where dust is formed.
- **Conditions for safe storage, including incompatibilities:** Keep container tightly closed in a dry and well-ventilated area. Recommended storage temperature: 2-8 °C.

8. Exposure Controls and Personal Protection:

- **Control parameters:**
  - **Component:** Cycloheximide (CAS# 66-81-9): USA Occupational Exposure Limits (OSHA): None established. UK EH40 WEL – Workplace Exposure Limits: None established.
- **Appropriate engineering controls:** Use with adequate ventilation including local exhaust. Ensure that eyewash stations and safety showers are close to the workstation location.
- **Individual protection measures:** Avoid contact with skin, eyes and clothing. Wash hands thoroughly after handling chemical products and before eating, smoking or using the toilet. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.
  - **Eye/face protection:** Face Shield and Safety Glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).
  - **Skin/hand protection:** Handle with protective gloves, plastic or rubber. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
  - **Body protection:** Complete Suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
  - **Other skin protection:** Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.
  - **Respiratory protection:** In case of inadequate ventilation, use a suitable respirator. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

9. Physical and Chemical Properties:

- **Appearance:** Powder, beige
- **Odor:** Odorless
- **Odor threshold:** Not available
- **pH:** Not available
- **Melting point/freezing point:** 110 °C (230 °F)
- **Boiling point/Boiling range:** Not available
- **Flash point:** Not available
- **Evaporation rate:** Not available
- **Flammability (solid, gas):** Not available
- **Upper/lower flammability or explosive limits:** Not available
- **Vapor density:** Not available
- **Vapor pressure:** Not available
- **Relative density:** Not available
- **Solubility in Water:** Soluble
- **Partition coefficient: n-octanol/water:** Not available
- **Auto igniting:** Not available
- **Decomposition temperature:** Not available
- **Viscosity:** Not available
10. Stability and Reactivity:
- Reactivity: Not combustible.
- Chemical stability: Stable under recommended storage conditions.
- Possibility of hazardous reactions: No data available.
- Conditions to avoid: No data available.
- Incompatible materials: Bases, strong oxidizing agents, acid anhydrides, acid chlorides.
- Hazardous decomposition products: Products formed under fire conditions: toxic fumes including carbon oxides and nitrogen oxides.

11. Toxicological Information:
- Acute toxicity: LD50 Oral – rat – 2 mg/kg.
- Inhalation LC50 and Dermal LD50: No data available.
- Skin corrosion/irritation: Skin – rabbit – irritation – 24 hr.
- Serious eye damage/irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: Laboratory experiments have shown mutagenic effects. In-vitro tests showed mutagenic effects.
- Carcinogenicity: No data available.
- Reproductive toxicity: Suspected of having fertility effects. May cause congenital malformation in the fetus.
- Specific target organ toxicity (STOT) -single exposure: No data available.
- Specific target organ toxicity (STOT) -repeated exposure: No data available.
- Aspiration hazard: No data available.
- Information on likely routes of exposure: Routes of entry anticipated; oral, dermal, inhalation.

**Signs and Symptoms of Exposure:** To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

- Effects of chronic exposure: No data available.
- Numerical measures of toxicity: No data available.
- Other Information: RTECS: MA4375000

12. Ecological Information:
- Ecotoxicity: No data available.
- Biodegradability and Persistence: No data available.
- Bioaccumulative potential: No data available.
- Mobility in soil: No data available.
- Other adverse effects: Toxic to aquatic life. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. Disposal Considerations:
- Disposal methods: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Dispose of waste in accordance to applicable national, regional, or local regulations.
- Contaminated packaging: Dispose in the same manner as unused product.
- Special precautions: no data available.
14. Transport Information:

- ADR/RID  UN-Number: 2811  Class: 6.1  Packing Group: I
  Proper shipping name: Toxic solid, organic, n.o.s. (Cycloheximide)
  Marine Pollutant: No
  Poison Inhalation Hazard: No

- IMDG  UN-Number: 2811  Class: 6.1  Packing Group: I  EMS-No.: F-A, S-A
  Proper shipping name: Toxic solid, organic, n.o.s. (Cycloheximide)
  Marine Pollutant: No

- IATA  UN-Number: 2811  Class: 6.1  Packing Group: I
  Proper shipping name: Toxic solid, organic, n.o.s. (Cycloheximide)

Further Information: Excepted quantity for single packagings and combination packagings containing inner packagings with Dangerous Goods < 30 mL for Liquids or < 30 kg for solids.

15. Regulations:

US Federal and State Regulations

- OSHA Hazards: Target Organ Effect, Highly toxic by ingestion, Irritant, Teratogen, Mutagen.
- CERCLA/SARA 302: Cycloheximide is listed.
- CERCLA/SARA 311/312: Acute health hazard, chronic health hazard.
- SARA 313: Cycloheximide is not listed.
- TSCA (Toxic Substances Control Act): Cycloheximide is listed.
- California Proposition 65: WARNING! Cycloheximide is a chemical known to the State of California to cause birth defects or other reproductive harm.

16. Other Information:

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