Safety Data Sheet

N-Nitrosopyrrolidine-d₈

Section 1. Chemical product and company identifications

Product code: D-6521
Chemical formula: C₄D₈N₂O
CAS: 1219802-09-1
CAS (unlabelled): 930-55-2
Synonyms: 1-Nitrosopyrrolidine

Supplier / Manufacturer:
C/D/N Isotopes Inc.
88 Leacock Street
Pointe-Claire (Québec) H9R 1H1
Phone: 514-697-6254
Toll-Free (Canada & USA): 1-800-565-4696
Fax: 514-697-6148
Website: www.cdnisotopes.com

In case of emergency:
TOXYSCAN HOTLINE: 1-855-780-0599

Section 2. Hazards identifications

Physical state: Liquid
Warning: Toxic if swallowed. Suspected of causing cancer.
Routes of entry: Inhalation, ingestion, skin and eyes

GHS (Globally Harmonized System of Classification and Labelling of Chemicals):

GHS Classification: - Acute toxicity, Oral (Category 3)
- Carcinogenicity (Category 2)

GHS Label elements: - Pictograms: ☢️ ⚠️
- Signal word: Danger

Hazards statement: - H301 Toxic if swallowed.
- H351 Suspected of causing cancer.

Precautionary statement: - P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P310 Immediately call a POISON CENTER or doctor/ physician.

Section 3. Composition and information on ingredients

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS</th>
<th>Concentration %</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Nitrosopyrrolidine-d₈</td>
<td>1219802-09-1</td>
<td>&gt; 98</td>
</tr>
</tbody>
</table>

Section 4. First aid measures

Eye contact: Flush eyes with water as a precaution.
Skin contact: Wash off with soap and plenty of water. Consult a physician.
Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
Section 5. Firefighting measures

Flammability of the product: Not flammable or combustible.
Lower explosion limit: No data available
Upper explosion limit: No data available
Auto-ignition temperature: No data available.
Flash point: 98 °C (208 °F)
Products of combustion: Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Section 6. Accidental release measures

Personal precautions: Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
Environmental precautions: Do not let product enter drains.
Methods for cleaning up: Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Section 7. Handling and storage

Handling: Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Provide appropriate exhaust ventilation.
Storage: Store at room temperature. Adequate ventilation.

Section 8. Exposure Controls, Personal Protections

Engineering controls: Use mechanical exhaust or laboratory fume hood to avoid exposure.
Eyes: Safety glasses with side-shields conforming to NIOSH (US) or EN 166 (EU).
Respiratory: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. 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).
Hands: Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Skin/body: Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Section 9. Physical and chemical properties (unlabelled)

Molecular weight: 100.12 g/mol
Physical status: Liquid
Color: Yellow
Odour: No data available
Density: 1.085 g/cm³
Melting point: No data available
Boiling point: 214 °C (417 °F)
Vapour pressure: No data available
Vapour density: No data available
Partition coefficient (octanol/water): log Pow: -0.19
Water solubility: Soluble

Section 10. Stability and reactivity

Stability and reactivity: Stable under recommended storage conditions.
Incompatibility: Strong oxidizing agents.
Products of combustion: Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides.
Reactivity conditions: No data available.
Section 11. Toxicological information (unlabelled)

Toxicological data: 1-Nitrosopyrrolidine

Information on ingredients:

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS</th>
<th>LD₅₀</th>
<th>LC₅₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Nitrosopyrrolidine</td>
<td>930-55-2</td>
<td>Oral - Rat - 900 mg/kg</td>
<td>No data available</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Oral - Mouse - 125 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

Potential acute effects
- **Eyes**: May cause eye irritation.
- **Skin**: May be harmful if absorbed through skin. May cause skin irritation.
- **Inhalation**: May be harmful if inhaled. May cause respiratory tract irritation.
- **Ingestion**: Toxic if swallowed.

Potential chronic effects
- **Carcinogenic effects**: Limited evidence of carcinogenicity in animal studies. IARC: 2B - Group 2B: Possibly carcinogenic to humans (1-Nitrosopyrrolidine). ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
- **Mutagenic effects**: No data available.
- **Teratogenic effects**: No data available.
- **Medical conditions aggravated by overexposure**: No data available.

Section 12. Ecological information

Ecological data:

<table>
<thead>
<tr>
<th>Name</th>
<th>Results</th>
<th>Species</th>
<th>Period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-Nitrosopyrrolidine</td>
<td>No data available</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Effects on environment: No data available.
Mobility: No data available.
Environmental precautions: No data available.
Persistence and degradability: No data available.
Bioaccumulative potential: No data available.

Section 13. Disposal considerations

Waste disposal: Contact a licensed professional waste disposal service to dispose of this material.

Section 14. Transportation information

Classification DOT/IMDG/IATA label:
Shipping name: Toxic liquid, organic, n.o.s. (Nitrosopyrrolidine)
UN number: UN2810
Class: 6.1
Packaging group: III

Additional information: None
Section 15. Regulatory information

UNITED STATES:

**NFPA classification**

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammable</th>
<th>Reactivity</th>
<th>Special conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>1</td>
<td>0</td>
<td>None</td>
</tr>
</tbody>
</table>

Legend: 4: Severe, 3: High, 2: Moderate, 1: Slightly, 0: Not hazardous

**U.S. Federal regulations:**

- **TSCA 8(b) inventory:** 1-Nitrosopyrrolidine
- **SARA 302/304/311/312 extremely hazardous substances:** Not Listed
- **SARA 302/304 emergency planning and notification:** Not Listed
- **SARA 302/304/311/312 hazardous chemicals:** Not Listed
- **SARA 311/312 MSDS distribution - chemical inventory - hazard identification:** Fire hazard, Immediate (acute) health hazard, Delayed (chronic) health hazard: Not Listed
- **CWA (Clean Water Act) 307:** Not Listed
- **CWA (Clean Water Act) 311:** Not Listed
- **CAA (Clean Air Act) 112 accidental release prevention:** Not Listed
- **CAA (Clean Air Act) 112 regulated flammable substances:** Not Listed
- **CAA (Clean Air Act) 112 regulated toxic substances:** Not Listed

**State regulations:**

- **DEA List I Chemicals (Precursor Chemicals):** Not Listed
- **DEA List II Chemicals (Essential Chemicals):** Not Listed
- **Substances in Massachusetts:** Not Listed
- **New York – Dangerous substances with acute effects:** Not Listed
- **Dangerous substances in Pennsylvania – right to know:** Not Listed

**WHMIS (Canada):**

- **D1B** - Toxic material causing immediate and serious toxic effects
- **D2A** - Very toxic material causing other toxic effects

Section 16. Additional information

**References:**

- Manufacturer’s Material Safety Data Sheet.
- 49CFR Table List of Hazardous Materials, UN#, Proper Shipping Names, PG. -Canada
- Federal act on the controlled products
- Toxicological repertory, HSC.
- Material safety date sheet from the components.

**Date of issue:** February 21st, 2019

**Version:** 3

**Elaborated by:** Toxyscan Inc., 1-866-780-0599

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