**2,2-Dibromo-3-nitrilopropionamide (cas 10222-01-2) MSDS**

1. **IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

1.1 **Product identifiers**

<table>
<thead>
<tr>
<th>Product name</th>
<th>2,2-Dibromo-2-cyanoacetamide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Number</td>
<td>540978</td>
</tr>
<tr>
<td>Brand</td>
<td>Anonymous</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>10222-01-2</td>
</tr>
</tbody>
</table>

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

Identified uses: Laboratory chemicals, Manufacture of substances

2. **HAZARDS IDENTIFICATION**

2.1 **Classification of the substance or mixture**

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

- Skin corrosion (Category 1B)
- Skin sensitization (Category 1)
- Acute aquatic toxicity (Category 1)

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Causes burns. May cause sensitization by skin contact.

2.2 **Label elements**

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram

- Signal word: Danger
- Hazard statement(s):
  - H314: Causes severe skin burns and eye damage.
  - H317: May cause an allergic skin reaction.
  - H400: Very toxic to aquatic life.
- Precautionary statement(s):
  - P273: Avoid release to the environment.
  - P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
  - P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P310: Immediately call a POISON CENTER or doctor/ physician.
- Supplemental Hazard Statements: none


Hazard symbol(s)

- R-phrase(s)
  - R34: Causes burns.
  - R43: May cause sensitization by skin contact.
- S-phrase(s)
  - S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.
  - S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
  - S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

2.3 **Other hazards**

Lachrymator.

3. **COMPOSITION/INFORMATION ON INGREDIENTS**

3.1 **Substances**

| Synonyms | Dibromocyno acetic acid amide |
4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed
Cough, Shortness of breath, Headache, Nausea, Vomiting

4.3 Indication of any immediate medical attention and special treatment needed
no data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture
Carbon oxides, nitrogen oxides (NOx), Hydrogen bromide gas

5.3 Advice for firefighters
Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information
no data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 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.

6.4 Reference to other sections
For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Moisture sensitive.

7.3 Specific end uses
8. **EXPOSURE CONTROLS/PERSONAL PROTECTION**

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

**Appropriate engineering controls**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment**

- **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 protection**
  Handle with gloves. Gloves must be inspected prior to use. 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.
  The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

- **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.

- **Respiratory protection**
  Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) 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) or CEN (EU).

9. **PHYSICAL AND CHEMICAL PROPERTIES**

9.1 Information on basic physical and chemical properties

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Appearance</td>
<td>Form: powder</td>
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<tr>
<td>b) Odour</td>
<td>no data available</td>
</tr>
<tr>
<td>c) Odour Threshold</td>
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</tr>
<tr>
<td>d) pH</td>
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</tr>
<tr>
<td>e) Melting point/freezing point</td>
<td>Melting point/range: 122 - 125 °C - lit.</td>
</tr>
<tr>
<td>f) Initial boiling point and boiling range</td>
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<tr>
<td>g) Flash point</td>
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</tr>
<tr>
<td>h) Evaporation rate</td>
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<tr>
<td>i) Flammability (solid, gas)</td>
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<tr>
<td>j) Upper/lower flammability or explosive limits</td>
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</tr>
<tr>
<td>k) Vapour pressure</td>
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<td>l) Vapour density</td>
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<tr>
<td>m) Relative density</td>
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<tr>
<td>n) Water solubility</td>
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<td>o) Partition coefficient: n-octanol/water</td>
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<td>p) Autoignition temperature</td>
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<tr>
<td>q) Decomposition temperature</td>
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<tr>
<td>r) Viscosity</td>
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<tr>
<td>s) Explosive properties</td>
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<tr>
<td>t) Oxidizing properties</td>
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</table>
9.2 Other safety information
no data available

10. STABILITY AND REACTIVITY
10.1 Reactivity
no data available
10.2 Chemical stability
no data available
10.3 Possibility of hazardous reactions
no data available
10.4 Conditions to avoid
Avoid moisture.
10.5 Incompatible materials
Strong oxidizing agents
10.6 Hazardous decomposition products
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION
11.1 Information on toxicological effects

Acute toxicity
LD50 Intravenous - mouse - 10 mg/kg

Skin corrosion/irritation
Skin - rabbit - Severe skin irritation

Serious eye damage/eye irritation
Eyes - rabbit - Severe eye irritation

Respiratory or skin sensitization
May cause sensitization by skin contact.

Germ cell mutagenicity
no data available

Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity
no data available

Specific target organ toxicity - single exposure
no data available

Specific target organ toxicity - repeated exposure
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation
May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion
May be harmful if swallowed. Causes burns.

Skin
May be harmful if absorbed through skin. Causes skin burns.

Eyes
Causes eye burns.

Signs and Symptoms of Exposure
Cough, Shortness of breath, Headache, Nausea, Vomiting

Additional Information
RTECS: AB5956000

12. ECOLOGICAL INFORMATION
12.1 Toxicity

Toxicity to fish
LC50 - Oncorhynchus mykiss (rainbow trout) - 1,0 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates
EC50 - Daphnia magna (Water flea) - 0,86 mg/l - 48 h
12.2 Persistence and degradability
   no data available

12.3 Bioaccumulative potential
   no data available

12.4 Mobility in soil
   no data available

12.5 Results of PBT and vPvB assessment
   no data available

12.6 Other adverse effects
   Very toxic to aquatic life.
   no data available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods
   Product
   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.
   Contaminated packaging
   Dispose of as unused product.

14. TRANSPORT INFORMATION

14.1 UN number
   ADR/RID: 1759   IMDG: 1759   IATA: 1759

14.2 UN proper shipping name
   ADR/RID: CORROSIVE SOLID, N.O.S. (2,2-Dibromo-2-cyanoacetamide)
   IMDG: CORROSIVE SOLID, N.O.S. (2,2-Dibromo-2-cyanoacetamide)
   IATA: Corrosive solid, n.o.s. (2,2-Dibromo-2-cyanoacetamide)

14.3 Transport hazard class(es)
   ADR/RID: 8   IMDG: 8   IATA: 8

14.4 Packaging group
   ADR/RID: III   IMDG: III   IATA: III

14.5 Environmental hazards
   ADR/RID: no   IMDG Marine pollutant: no   IATA: no

14.6 Special precautions for user
   no data available

15. REGULATORY INFORMATION
   This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
   no data available

15.2 Chemical Safety Assessment
   no data available

16. OTHER INFORMATION
   Further information
   The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the resent state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. guidechem shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.