### Propanoic acid, 3-nitro- (cas 504-88-1) MSDS

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

   1.1 **Product identifiers**
   
      | Product name       | 3-Nitropropionic acid |
      |-------------------|----------------------|
      | Product Number    | N5636                |
      | Brand             |                      |
      | CAS-No.           | 504-88-1             |

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

   Identify 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]
   - Acute toxicity, Oral (Category 3)
   - Skin irritation (Category 2)
   - Eye irritation (Category 2)
   - Specific target organ toxicity - single exposure (Category 3)

   Classification according to EU Directives 67/548/EEC or 1999/45/EC
   - Irritating to eyes, respiratory system and skin. Toxic if swallowed.

2.2 **Label elements**

   Labelling according Regulation (EC) No 1272/2008 [CLP]
   
   **Pictogram**
   - [Chemical symbol]
   
   **Signal word**
   - Danger
   
   **Hazard statement(s)**
   - H301: Toxic if swallowed.
   - H315: Causes skin irritation.
   - H319: Causes serious eye irritation.
   - H335: May cause respiratory irritation.

   **Precautionary statement(s)**
   - P261: Avoid breathing dust/fume/gas/mist/vapours/spray.
   - P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
   - N5636: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
   - P305 + P351 + P338: PHYSICIAN.

   **Supplemental Hazard Statements**
   - none


   **Hazard symbol(s)**
   - [Hazard symbol]

   **R-phrase(s)**
   - R36/37/38: Irritating to eyes, respiratory system and skin.
   - R25: Toxic if swallowed.

   **S-phrase(s)**
   - S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
   - S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

2.3 **Other hazards** - none

3. **COMPOSITION/INFORMATION ON INGREDIENTS**

3.1 **Substances**

<table>
<thead>
<tr>
<th>Formula</th>
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<tbody>
<tr>
<td>C3H5NO4</td>
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</table>
Molecular Weight: 119.08 g/mol

Component: 3-Nitropropionic acid

Concentration:

- CAS-No.: 504-88-1
- EC-No.: 208-003-0

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
Wash off with soap and plenty of water. Take victim immediately to hospital. 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
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

4.3 Indication of immediate medical attention and special treatment needed

no data available

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

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

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5.2 Special hazards arising from the substance or mixture

Carbon oxides, nitrogen oxides (NOx)

5.3 Precautions for fire-fighters

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

Wear respiratory protection. 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.

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. Recommended storage temperature: 2 - 8 °C

7.3 Specific end uses

no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters
8.2 Exposure controls

Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

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 N99 (US) or type P2 (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

| a) Appearance | Form: crystalline  
| b) Odour | no data available  
| c) Odour Threshold | no data available  
| d) pH | no data available  
| e) Melting/freezing point | Melting point/range: 68 - 70 °C - lit.  
| f) Initial boiling point and boiling range | no data available  
| g) Flash point | no data available  
| h) Evaporation rate | no data available  
| i) Flammability (solid, gas) | no data available  
| j) Upper/lower flammability or explosive limits | no data available  
| k) Vapour pressure | no data available  
| l) Vapour density | no data available  
| m) Relative density | no data available  
| n) Water solubility | no data available  
| o) Partition coefficient: n-octanol/water | no data available  
| p) Autoignition temperature | no data available  
| q) Decomposition temperature | no data available  
| r) Viscosity | no data available  
| s) Explosive properties | no data available  
| t) Oxidizing properties | no data available  

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

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10.3 Possibility of hazardous reactions  
no data available

10.4 Conditions to avoid  
no data available

10.5 Incompatible materials  
Bases, Oxidizing agents, Reducing agents

10.6 Hazardous decomposition products  
Other decomposition products - no data available

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity  
LD50 Oral - mouse - 68,1 mg/kg  

Skin corrosion/irritation  
no data available

Serious eye damage/eye irritation  
no data available

Respiratory or skin sensitization  
no data available

Germ cell mutagenicity  
Laboratory experiments have shown mutagenic effects.

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  
Inhalation - May cause respiratory irritation.

Specific target organ toxicity - repeated exposure  
no data available

Aspiration hazard  
no data available

Potential health effects

Inhalation  
May be harmful if inhaled. Causes respiratory tract irritation.

Ingestion  
Toxic if swallowed.

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

Eyes  
Causes serious eye irritation.

Additional Information  
RTECS: UF6220000

12. ECOLOGICAL INFORMATION

12.1 Toxicity  
no data available

12.2 Persistence and degradability  
no data available

12.3 Bioaccumulative potential  
no data available

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12.4 Mobility in soil  
no data available

12.5 Results of PBT and vPvB assessment  
no data available

12.6 Other adverse effects  
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: 2811
IMDG: 2811
IATA: 2811

14.2 UN proper shipping name
ADR/RID: TOXIC SOLID, ORGANIC, N.O.S. (3-Nitropropionic acid)
IMDG: TOXIC SOLID, ORGANIC, N.O.S. (3-Nitropropionic acid)
IATA: Toxic solid, organic, n.o.s. (3-Nitropropionic acid)

14.3 Transport hazard class(es)
ADR/RID: 6.1
IMDG: 6.1
IATA: 6.1

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 users
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 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.