1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 2-Nitropropane

Product Number : 130265
Brand : Aldrich

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO  63103
USA

Telephone : +18003255832
Fax : +18003255052
Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C₃H₇NO₂
Molecular Weight : 89.09 g/mol

<table>
<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>79-46-9</td>
<td>201-209-1</td>
<td>609-002-00-1</td>
<td>-</td>
</tr>
</tbody>
</table>

3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Flammable Liquid, Target Organ Effect, Toxic by inhalation., Harmful by ingestion., Carcinogen

Target Organs
Liver, Blood, Lungs

HMIS Classification

Health Hazard: 3
Chronic Health Hazard: *
Flammability: 3
Physical hazards: 0

NFPA Rating

Health Hazard: 4
Fire: 3
Reactivity Hazard: 0

Potential Health Effects

Inhalation
Toxic if inhaled. May cause respiratory tract irritation.

Skin
May be harmful if absorbed through skin. May cause skin irritation.
Eyes
May cause eye irritation.

Ingestion
Harmful if swallowed.

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

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. 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.

5. FIRE-FIGHTING MEASURES

Flammable properties
Flash point 26 °C (79 °F) - closed cup
Ignition temperature 428 °C (802 °F)

Suitable extinguishing media
For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Further information
Use water spray to cool unopened containers.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods for cleaning up
Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling
Avoid exposure - obtain special instructions before use. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

Storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.
# 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

## Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Update</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Nitropropane</td>
<td>79-46-9</td>
<td>TWA</td>
<td>10 ppm 36 mg/m³</td>
<td>1996-05-18</td>
<td>US. American Conference of Governmental and Industrial Hygienists</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Threshold Limit Values for Chemical Substances in the Work Environment; Annual Reports for the Year 2004; Committees on Threshold Limit Values (TLVs) and Biological Exposure Indices (BEIs)</td>
</tr>
<tr>
<td>Remarks</td>
<td></td>
<td></td>
<td>Confirmed animal carcinogen with unknown relevance to humans. Substance identified by other sources as a suspected or confirmed human carcinogen. Refers to Appendix A -- Carcinogens. 1996 Adoption Substances for which the TLV is higher than the OSHA Permissible Exposure Limit (PEL) and/or the NIOSH Recommended Exposure Limit (REL). See CFR 58(124) :36338-33351, June 30, 1993, for revised OSHA PEL.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| TWA             | 10 ppm | 36 mg/m³ | 1989-03-01 | US. Department of Labor - Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1000 Z-1-A |

| Sec. 1910.1003 13 Carcinogens | TWA | 25 ppm 90 mg/m³ | 1993-06-30 | US. Department of Labor - Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL) 29 CFR 1910.1000 Air Contaminants. |

## Personal protective equipment

### Respiratory protection
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) or CEN (EU).

### Hand protection
Handle with gloves.

### Eye protection
Safety glasses

### Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hygiene measures
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form: liquid

Safety data
pH: no data available
Melting point: -93 °C (-135 °F)
Boiling point: 120 °C (248 °F)
Flash point: 26 °C (79 °F) - closed cup
Ignition temperature: 428 °C (802 °F)
Lower explosion limit: 2.6 %(V)
Vapour pressure: 17 hPa (13 mmHg) at 20 °C (68 °F)
Density: 0.992 g/mL at 25 °C (77 °F)
Water solubility: no data available
Partition coefficient: 
n-octanol/water
log Pow: 1.35
Relative vapour density: 3.08 - (Air = 1.0)

10. STABILITY AND REACTIVITY

Storage stability
Stable under recommended storage conditions.

Conditions to avoid
Heat, flames and sparks.

Materials to avoid
Strong oxidizing agents, Strong bases, Copper

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

Hazardous reactions
Vapours may form explosive mixture with air.

11. TOXICOLOGICAL INFORMATION

Acute toxicity
LD50 Oral - rat - 720 mg/kg
LC50 Inhalation - rat - 6 h - 400 ppm

Irritation and corrosion
no data available

Sensitisation
Chronic exposure

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

IARC: Group 2B - Possibly carcinogenic to humans (2-Nitropropane)
NTP: NTP reasonably anticipated to be carcinogenic (2-Nitropropane)
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs and Symptoms of Exposure

Liver injury may occur., Cough, Shortness of breath, Headache, Nausea, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential Health Effects

Inhalation Toxic if inhaled. May cause respiratory tract irritation.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion Harmful if swallowed.
Target Organs Liver, Blood, Lungs,

Additional Information
RTECS: TZ5250000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)
no data available

Ecotoxicity effects
Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - < 210 mg/l - 96 h

Further information on ecology
no data available

13. DISPOSAL CONSIDERATIONS

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN-Number: 2608 Class: 3 Packing group: III
Proper shipping name: Nitropropanes
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
15. REGULATORY INFORMATION

**OSHA Hazards**
Flammable Liquid, Target Organ Effect, Toxic by inhalation., Harmful by ingestion., Carcinogen

**DSL Status**
All components of this product are on the Canadian DSL list.

**SARA 302 Components**
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**
- **2-Nitropropane**
  - CAS-No.: 79-46-9
  - Revision Date: 1991-07-01

**SARA 311/312 Hazards**
Fire Hazard, Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**
- **2-Nitropropane**
  - CAS-No.: 79-46-9
  - Revision Date: 1991-07-01

**Pennsylvania Right To Know Components**
- **2-Nitropropane**
  - CAS-No.: 79-46-9
  - Revision Date: 1991-07-01

**New Jersey Right To Know Components**
- **2-Nitropropane**
  - CAS-No.: 79-46-9
  - Revision Date: 1991-07-01

**California Prop. 65 Components**
WARNING! This product contains a chemical known in the State of California to cause cancer.
- **2-Nitropropane**
  - CAS-No.: 79-46-9
  - Revision Date: 1988-01-01

16. OTHER INFORMATION

**Further information**
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