

**2-NITRO PROPANE**  
**CAS No 79-46-9**

**MATERIAL SAFETY DATA SHEET**  
**SDS/MSDS**

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1 Product identifiers**

Product name : 2-Nitro Propane

CAS-No. : 79-46-9

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

**1.3 Details of the supplier of the safety data sheet**

Company : Central Drug House (P) Ltd  
7/28 Vardaan House  
New Delhi -110002  
INDIA

Telephone : +91 11 49404040

Email : [care@cdhfinechemical.com](mailto:care@cdhfinechemical.com)

**1.4 Emergency telephone number**

Emergency Phone # : +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No 1272/2008**

Flammable liquids (Category 3), H226  
Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Inhalation (Category 3), H331  
Germ cell mutagenicity (Category 2), H341  
Carcinogenicity (Category 1B), H350  
Chronic aquatic toxicity (Category 3), H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 Label elements**

**Labelling according Regulation (EC) No 1272/2008**

Pictogram



Signal word

Danger

Hazard statement(s)

H226

Flammable liquid and vapour.

H302

Harmful if swallowed.

H331

Toxic if inhaled.

H341 Suspected of causing genetic defects.  
 H350 May cause cancer.  
 H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P201 Obtain special instructions before use.  
 P261 Avoid breathing vapours.  
 P273 Avoid release to the environment.  
 P281 Use personal protective equipment as required.  
 P311 Call a POISON CENTER /doctor.

Supplemental Hazard Statements none

Restricted to professional users.

**2.3 Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**SECTION 3: Composition/information on ingredients**

**3.1 Substances**

Formula : C<sub>3</sub>H<sub>7</sub>O<sub>2</sub>N  
 Molecular weight : 89.09 g/mol  
 CAS-No. : 79-46-9  
 EC-No. : 201-209-1  
 Index-No. : 609-002-00-1

**Hazardous ingredients according to Regulation (EC) No 1272/2008**

Component		Classification	Concentration
<b>2-Nitropropane</b>			
CAS-No.	79-46-9	Flam. Liq. 3; Acute Tox. 4;	<= 100 %
EC-No.	201-209-1	Acute Tox. 3; Muta. 2; Carc.	
Index-No.	609-002-00-1	1B; Aquatic Chronic 3; H226, H302, H331, H341, H350, H412	

For the full text of the H-Statements mentioned in this Section, see Section 16.

**SECTION 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**

Flush eyes with water as a precaution.

**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**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

## **SECTION 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)

### **5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

### **5.4 Further information**

Use water spray to cool unopened containers.

## **SECTION 6: Accidental release measures**

### **6.1 Personal precautions, protective equipment and emergency procedures**

Wear respiratory protection. Avoid breathing vapours, 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.

For personal protection see section 8.

### **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**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

### **6.4 Reference to other sections**

For disposal see section 13.

## **SECTION 7: Handling and storage**

### **7.1 Precautions for safe handling**

Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

For precautions see section 2.2.

### **7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place. 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.

Storage class (TRGS 510): Flammable liquids

### **7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

## **SECTION 8: Exposure controls/personal protection**

### **8.1 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.

### **Body Protection**

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., 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 (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee 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).

### **Control of environmental exposure**

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

## **SECTION 9: Physical and chemical properties**

### **9.1 Information on basic physical and chemical properties**

a) Appearance	Form: liquid Colour: colourless
b) Odour	mild
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: -93 °C - lit.
f) Initial boiling point and boiling range	120 °C - lit.
g) Flash point	26 °C - closed cup
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Lower explosion limit: 2.6 %(V)
k) Vapour pressure	13 mmHg at 20 °C
l) Vapour density	3.08 - (Air = 1.0)
m) Relative density	0.992 g/mL at 25 °C
n) Water solubility	17.4 g/l at 25 °C - soluble
o) Partition coefficient: n-octanol/water	log Pow: 1.35 at 20 °C
p) Auto-ignition temperature	389 - 399 °C at 999.0 - 1010.40 hPa
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

Surface tension 72 mN/m at 21.6 °C  
Relative vapour density 3.08 - (Air = 1.0)

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Heat, flames and sparks.

### 10.5 Incompatible materials

Strong oxidizing agents, Strong bases, Copper

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)  
Other decomposition products - No data available  
In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - 565 - 885 mg/kg(2-Nitropropane)  
LC50 Inhalation - Rat - female - 4 h - 3.21 mg/l(2-Nitropropane)  
LD50 Dermal - Rabbit - male and female - > 2,000 mg/kg(2-Nitropropane)

#### Skin corrosion/irritation Skin

- Rabbit(2-Nitropropane)  
Result: No skin irritation - 24 h

#### Serious eye damage/eye irritation

Eyes - Rabbit(2-Nitropropane)  
Result: Mild eye irritation

#### Respiratory or skin sensitisation

- Guinea pig(2-Nitropropane)  
Result: Does not cause skin sensitization

#### Germ cell mutagenicity

In vitro tests showed mutagenic effects(2-Nitropropane)  
Ames test(2-Nitropropane)  
S. typhimurium  
Result: positive

#### Carcinogenicity

This product is or contains a component that has been reported to be proba EPA classification.(2-Nitropropane)  
Possible human carcinogen(2-Nitropropane)

IARC: 2B - Group 2B: Possibly carcinogenic to humans (2-Nitropropane)

#### Reproductive toxicity

No data available(2-Nitropropane)

#### Specific target organ toxicity - single exposure

No data available(2-Nitropropane)

### Specific target organ toxicity - repeated exposure

No data available

### Aspiration hazard

No data available(2-Nitropropane)

### Additional Information

RTECS: TZ5250000

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.(2-Nitropropane)

## SECTION 12: Ecological information

### 12.1 Toxicity

Toxicity to fish static test LC50 - Pimephales promelas (fathead minnow) - > 612.5 mg/l - 96 h(2-Nitropropane)

Toxicity to daphnia and other aquatic flow-through test EC50 - Daphnia magna (Water flea) - 19 mg/l - 48 h(2- Nitropropane)

### 12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d(2-Nitropropane)  
Result: 8 - 14 % - Not readily biodegradable.

### 12.3 Bioaccumulative potential

Bioaccumulation Leuciscus idus melanotus - 3 d  
(2-Nitropropane)

Bioconcentration factor (BCF): <= 1

### 12.4 Mobility in soil

No data available(2-Nitropropane)

### 12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### 12.6 Other adverse effects

Harmful to aquatic life with long lasting effects.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Product

Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

#### Contaminated packaging

Dispose of as unused product.

## SECTION 14: Transport information

### 14.1 UN number

ADR/RID: 2608

IMDG: 2608

IATA: 2608

### 14.2 UN proper shipping name

ADR/RID: NITROPROPANES

IMDG: NITROPROPANES

IATA: Nitropropanes

### 14.3 Transport hazard class(es)

ADR/RID: 3

IMDG: 3

IATA: 3

**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

**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

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

**15.2 Chemical safety assessment**

For this product a chemical safety assessment was not carried out

**SECTION 16: Other information****Full text of H-Statements referred to under sections 2 and 3.**

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H331	Toxic if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H412	Harmful to aquatic life with long lasting effects.

**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 present 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. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.cdhfinechemical.com](http://www.cdhfinechemical.com) for additional terms and conditions of sale.