

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifiers

Product Name: N-Nitrosopyrrolidine
CAT Number KL-06-00152

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

Product Uses To be used only for scientific research and development. Not for use in humans or animals.

1.3 Details of the supplier of the safety data sheet

Kaaris Research Labs Private Limited
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2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin corrosion/irritation (Category 2)	H315
Sensitisation, skin (Category 1, 1A, 1B)	H317
Serious eye damage/eye irritation(Category 2A)	H319
No Resource File	

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Warning

Hazard statement(s)

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation

Precautionary statement(s)

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.

2.3 Other hazards.

Additional precautionary phrases are located throughout the safety data sheet.

3. COMPOSITION, INFORMATION ON INGREDIENTS

3.1 Substances

Molecular formula: C₄H₈N₂O

Molecular Weight: 100.12

CAS Registry#: 930-55-2

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. 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

Take off contaminated clothing and shoes immediately. 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. Continue rinsing eyes during transport to hospital.

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

5. FIRE FIGHTING MEASURES**5.1 Extinguishing media**

Suitable extinguishing media: alcohol-resistant foam, dry chemical or carbon dioxide
Unsuitable extinguishing media: no data

5.2 Special hazards arising from the substance or mixture In combustion toxic fumes may form.**5.3 Advice for firefighters**

Wear self-contained breathing apparatus.
Wear protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES**6.1 Personal precautions, protective equipment and emergency procedures** Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. Do not attempt to take action without suitable protective clothing. 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 or river. Alert the neighbourhood to the presence of fumes or gas.

6.3 Methods and materials for containment and cleaning up

Mix with sand or vermiculite. Sweep up and shovel. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

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. Wash hands thoroughly after handling. Ensure there is sufficient ventilation of the area. Normal measures for preventive fire protection. For precautions see section 2.2.

7.2 Conditions for safe storage,

Keep container tightly closed. Stored at 2-8° C.

7.3 Specific end use(s)

The end use(s) have not been fully determined. The substance is supplied for Research and Development purposes by professionals only.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION**8.1 Control parameters****Components with workplace control parameters**

Contains no substances with occupational exposure limit values.

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.

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).

Control of environmental exposure

Do not let product enter drains.

9.1 PHYSICAL AND CHEMICAL PROPERTIES

a) Appearance	Pale Yellow to Yellow Oil
b) Odour	No data available
c) Odour Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	No data available
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) Auto-ignition 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

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions No data available**10.4 Conditions to avoid**

Not data available

10.5 Incompatible materials

Not data available

10.6 Hazardous decomposition products

Carbon monoxide , carbon dioxide , hydrogen bromide , nitrogen oxides

11. TOXICOLOGICAL INFORMATION**11.1 Acute Toxicity**

No data available

Skin corrosion/irritation

No data available

Serious eye Damage/irritation

No data available

Respiratory or skin sensitisation

No data available

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

11.2 Additional Information

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION**12.1 Toxicity**

No data available

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 No

data available

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Disposal Operations**

Consult state, local or national regulations for proper disposal. Hand over to authorised disposal company as hazardous waste.

Disposal of Packaging

Disposal must be made according to official regulations.

14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: N/A

IMDG: N/A

IATA: N/A

14.2 UN proper shipping name ADR/RID:

Not dangerous goods IMDG:

Not dangerous goods IATA: Not

dangerous goods

14.3 Transport hazard class(es)

ADR/RID: N/A

IMDG: N/A

IATA: N/A

14.4 Packaging group

ADR/RID: N/A

IMDG: N/A

IATA: N/A

14.5 Environmental hazards

ADR/RID: N/A

IMDG: N/A

IATA: N/A

14.6 Special precautions for user No

special precautions required

14.7 Further information

No data available

15. REGULATORY INFORMATION

Safety, health and environmental and national

regulations: Product is not subject to any additional

regulations or provisions **Safety Assessment No**

Chemical Safety Assessment

16. OTHER INFORMATION

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. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages. Howsoever arising, even if the company has been advised of the possibility of such damages..