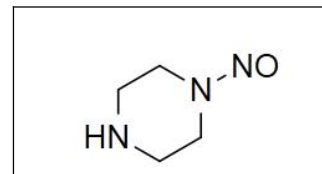


# SAFETY DATA SHEET

## 1. IDENTIFICATION

<b>Product identifier</b>	N-Nitrosopiperazine
<b>Catalog number</b>	P0039.06
<b>CAS number</b>	5632-47-3
<b>Synonyms</b>	1-nitrosopiperazine
<b>Chemical name</b>	1-Nitrosopiperazine
<b>Product uses</b>	To be used only for scientific research and development. Not for use in humans or animals.
<b>Manufacturer/Supplier information</b>	
<b>Company name</b>	Aozeal Certified Standards(HK) Co.,Limited
<b>Address</b>	Suite 603, 6/F Hang Pont Commercial Building 31 Tonkin Street, Cheung Sha Wan, Kowloon, Hong Kong
<b>Telephone</b>	+85253499607
<b>Email</b>	info@aozeal.com
<b>Website</b>	www.aozeal.com
<b>Emergency telephone number</b>	+1 (510) 225-4077



## 2. HAZARDS IDENTIFICATION

<b>Physical hazards</b>	Not classified.
<b>Environmental hazards</b>	Not classified.
<b>OSHA defined hazards</b>	Not classified.
<b>Classification of the substance or mixture and label elements</b>	
<b>GHS hazards classification (According to EU Regulation 1272/2008 and US OSHA 1910.1200)</b>	
Acute Toxicity, Oral (Category 5)	
<b>GHS hazards identification (According to EU Regulation 1272/2008 and US OSHA 1910.1200)</b>	
<b>Signal word</b>	None
<b>GHS hazard statements</b>	None
<b>GHS precautionary statements</b>	Not a hazardous substance according to GHS.

**Unclassified hazards/Hazards not otherwise classified** No data available.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Chemical name</b>	1-Nitrosopiperazine
<b>Common name and synonyms</b>	1-nitrosopiperazine
<b>Molecular formula:</b>	C <sub>4</sub> H <sub>9</sub> ON <sub>3</sub>
<b>Molecular weight:</b>	115.14
<b>CAS #:</b>	5632-47-3

Mixtures : Not a mixture.

#### 4. FIRST AID MEASURES

**General advice**

If medical attention is required, show this safety data sheet to the doctor.

**Inhalation**

If inhaled, move person to fresh air. If not breathing, give artificial respiration and consult a physician.

**Skin contact**

Wash affected area with soap and water. Consult a physician if any exposure symptoms are observed.

**Eye contact**

Immediately rinse eyes with plenty of water for at least 15 minutes. Consult a physician

**Ingestion**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Do NOT induce vomiting unless advised to do so by a physician or Poison Control Center. Seek medical attention.

**Most important symptoms and effects, both acute and delayed**

Pharmaceutical related compound of unknown potency. It is not known if occupational exposure may cause physiological effects.

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

No data available.

#### 5. FIREFIGHTING MEASURES

**Suitable extinguishing media**

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

**Special hazards arising from the substance or mixture**

Carbon oxides, Nitrogen oxides

**Advice for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**Further information**

No data available

#### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions**

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

**Method 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.

**Environmental precautions**

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

#### 7. HANDLING AND STORAGE

**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.

**Conditions for safe storage**

Store in tightly closed container in a dry and well-ventilated place. This material should be handled and stored per label and COA instructions to ensure product integrity.

**Specific end uses**

For laboratory research and development only. Not for use in humans or animals.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational exposure limits**

No exposure limits noted for ingredient(s).

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls** Control exposures to below the occupational exposure level (if available). Select and use containment devices and personal protective equipment based on a risk assessment of exposure potential. Cover all containers for solutions and slurries while being transferred. For laboratory operations, use approved ventilation or containment system (biological safety cabinet, ventilated balance enclosure, glove box). No open handling.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields, chemical splash goggles, or full face shield, if necessary. Base the choice of protection on the job activity and potential for contact with eyes or face. An emergency eye wash station should be available.

**Skin protection**

**Hand protection** Wear nit-rile or other impervious gloves if skin contact is possible. When the material is dissolved or suspended in an organic solvent, wear gloves that provide protection against the solvent. Consider double gloves.

**Other** Base the choice of skin protection on the job activity, potential for skin contact and solvents and reagents in use. Do not wear protective garments in common areas (e.g., cafeterias) or out-of-doors. Train employees in proper gowning and degowning practices. Wear disposable lab coat, disposable sleeve covers and two pair of gloves as appropriate for the task.

**Respiratory protection** Chose respiratory protection appropriate to the task and the level of existing engineering controls. Use a powered air-purifying respirator (PAPR) with HEPA filters, disposable outerwear and head cover for spill cleanup.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** Handling practices in this SDS are recommendations for laboratory use of reference standards. Procedures for any other uses or quantities should be determined after an appropriate assessment. Pharmacological effects may be seen with occupational exposure.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Pale Yellow Oil.
<b>Odor</b>	Not available.
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	No data available
<b>Initial boiling point and boiling range</b>	Not available.
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.

<b>Vapour pressure</b>	Not available.
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility</b>	CH <sub>3</sub> CN.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidizing properties</b>	Not available.
<b>Other information</b>	Not available.

## 10. STABILITY AND REACTIVITY

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Not available.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	NOx. Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions

## 11. TOXICOLOGICAL INFORMATION

### Information on toxicological effects

<b>Acute toxicity</b>	Oral LD50: Not available. Inhalation LC50: Not available. Dermal LD50: Not available.
<b>Skin corrosion/Irritation</b>	Not available.
<b>Serious eye damage/Irritation</b>	Not available.
<b>Respiratory or Skin sensitization</b>	Not available.
<b>Carcinogenicity</b>	Not available.
<b>IARC monographs. Overall evaluation of carcinogenicity</b>	Not listed.
<b>OSHA specifically regulated Substances (29 CFR 1910.1001-1050)</b>	Not regulated.
<b>US. national toxicology program (NTP) report on carcinogens</b>	Not listed.
<b>Reproductive toxicity/Teratogenicity</b>	Not available.
<b>Single target organ toxicity - Single exposure</b>	Not available.

<b>Single target organ toxicity -</b>	Not available.
<b>Repeated exposure</b>	
<b>Aspiration hazard</b>	Not available.
<b>Potential health effects and routes of exposure</b>	
<b>Inhalation</b>	May be harmful if inhaled. May cause respiratory tract irritation.
<b>Ingestion</b>	May be harmful if swallowed.
<b>Skin</b>	May be harmful if absorbed through skin. May cause skin irritation.
<b>Eyes</b>	May cause eye irritation.
<b>Signs and symptoms of exposure</b>	The most important known symptoms and effects are described in the labeling To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been thoroughly investigated.
<b>Additional information</b>	<b>RTECS:</b> Not available.

## 12. ECOLOGICAL INFORMATION

<b>Eco-toxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
<b>Persistence and degradability</b>	No data is available on the degrade ability of this product.
<b>Bioaccumulative potential</b>	No data available.
<b>Mobility in soil</b>	No data available.
<b>Other adverse effects</b>	No data available.

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal instructions</b>	Dispose in accordance with all applicable regulations. Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste treatment methods</b>	Product may be burned in an incinerator equipped with afterburner and scrubber. Excess and expired materials are to be offered to a licensed hazardous material disposal company. Ensure that all Federal and Local regulations regarding the disposal and destruction of this material are followed.
<b>Contaminated packaging</b>	Dispose of as above.
<b>Other considerations</b>	Product is not to be disposed of in sanitary sewers, storm sewers, or landfills.

## 14. TRANSPORT INFORMATION

<b>UN number</b>	ADR/RID: -	IMDG: -	IATA: -
<b>UN proper shipping name</b>	ADR/RID: Not dangerous goods IMDG: Not dangerous goods		



	IATA: Not dangerous goods		
<b>Transport hazard class(es)</b>	ADR/RID: -	IMDG: -	IATA: -
<b>Packaging group</b>	ADR/RID: -	IMDG: -	IATA: -
<b>Environmental hazards</b>	ADR/RID: no	IMDG Marine pollutant: no	IATA: no
<b>Special precautions for user</b>	No data available.		

**15. REGULATORY INFORMATION**

This safety data sheet complies with the requirements of OSHA 1910.1200 (US), WHMIS (Canada) and EU Regulation Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture

**United States**

**TSCA Status:** This product is not listed on the US EPA TSCA.

**Canada**

**DSL/NDSL Status:** This product is not listed on the Canadian DSL/NDSL.

**European Union**

**ECHA Status:** This product or a component is registered with the EU ECHA.

**Chemical safety assessment** No data available.

**16. OTHER INFORMATION**

**Original publication date** 04/17/2025

**Latest revision date (If Revised)**

**SDS expiry date** 04/16/2028

**List of abbreviations**

**LD50** Median lethal dose of a substance required to kill 50% of a test population.

**LC50** Medial lethal concentration of a substance required to kill 50% of a test population.

**IARC** International Agency for Research on Cancer

**NTP** National Toxicology Program

**RTECS** Registry of Toxic Effects of Chemical Substances

**Further information** Copy right 2018. Aozeal Certified Standards Inc. Copies may be made for internal use only. The above information developed by Aozeal staff from sources considered reliable to the best of our knowledge, but is to be only used as a guide and has not been independently verified by Aozeal. Therefore, Aozeal cannot guarantee the accuracy of the information in these sources. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Please take all due care when handling this product.