

# SAFETY DATA SHEET

According to OSHA 29 CFR 1910.1200



Hoffman Fine Chemicals

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

### 1.1 Product identifier

CAS number: 4829-73-6  
Product name: 1,2,3,4-Tetrahydrophenazine

Catalog number: HFC2772  
Brand: Hoffman Fine Chemicals

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

Identified uses: For laboratory research purposes. Not for drug, household nor animal use.

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

Company: Hoffman Fine Chemicals Pty Ltd  
Address: 4 46-50 Buchanan Road, Brooklyn, Victoria, 3012, Australia

Telephone: 03 9315 3435  
Fax:

### 1.4 Emergency telephone number

Emergency telephone number: 800-424-9300 CHEMTREC USA 1-703-527-3887 CHEMTREC International 24 Hours/day; 7 Days/week

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

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

Acute toxicity, oral Category 4, H302

Skin corrosion/irritation Category 2, H315

Serious eye damage/eye irritation Category 2, H319

Specific target organ toxicity, single exposure; Respiratory tract irritation Category 3, H335

For the Full text of H-Statement mentioned in this Section: see SECTION 16.

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## 2.2 GHS Label elements, including precautionary statement

### Hazard pictograms



### Signal word

Warning

### Hazard statements

H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

### Precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling. Wash skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection
P301 P312	IF SWALLOWED: call a POISON CENTER or doctor/physician IF you feel unwell
P302 P352	IF ON SKIN: wash with plenty of soap and water.
P304 P340	IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.
P305 P351 P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P330	Rinse mouth.
P332 P313	IF SKIN irritation occurs: Get medical advice/attention
P337 P313	IF eye irritation persists: Get medical advice/attention.
P362	Take off contaminated clothing and wash before reuse.
P403 P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international

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## Supplemental Hazard information

None.

## 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Product name: 1,2,3,4-Tetrahydrophenazine

CAS number: 4829-73-6

Formula: C<sub>12</sub>H<sub>12</sub>N<sub>2</sub>

Molecular weight: 184.2371

Concentration: ≤100 Percent

### 3.2 Mixtures

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information

Consult a physician. Show this material 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.

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## In case of skin contact

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

## If swallowed

Provided the patient is conscious, wash out mouth with water. Vomiting should only be induced under the direction of a physician or a poison control centre.

## 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

Sand, carbon dioxide, dry chemical powder, or appropriate foam.

#### Unsuitable extinguishing media

### 5.2 Special hazards arising from the substance or mixture

May emit toxic fumes under fire conditions including Carbon monoxide, Carbon dioxide, Nitrogen oxides.

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## 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Fire-extinguishing work is done from the windward and the suitable fire-extinguishing method according to the surrounding situation is used.

Uninvolved persons should evacuate to a safe place. In case of fire in the surroundings: remove movable containers if safe to do so.

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

## 5.4 Further information

No data available.

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## SECTION 6: Accidental release measures

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

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

### 6.2 Environmental protections

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 material for containment and cleaning up

Wipe dry, place a rag in a bag and hold for waste disposal. Avoid fumes inhaling. Ventilate area and wash spill site after material pickup is complete.

### 6.4 Reference to other sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Handle in accordance with good industrial hygiene and safety practice
- Take measures to prevent the build-up of electrostatic charge.

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- c) Provide appropriate exhaust ventilation at places where dust is formed.
- d) Avoid inhalation of vapor or mist.
- e) Not to eat, drink, smoke in work areas.
- f) To wash hands after use.
- g) To remove contaminated clothing and protective equipment before entering eating areas.

For precautions see Section 2.2.

## 7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated area  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Keep container tightly closed and upright. Avoid overheating. Store in a dry and well-ventilated place at RT.

## 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

#### Components with workplace control parameters

No data available.

### 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.

- a) Handle in accordance with good industrial hygiene and safety practice.
- b) Wash hands before breaks and at the end of workday.
- c) Suitable eye/body wash equipment should be available in the vicinity of any potential exposure.
- d) Ensure adequate ventilation, especially in confined areas.

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- e) Use explosion-proof electrical appliances, ventilation, lighting and other equipment.
- f) Set up emergency evacuation routes and necessary evacuation zones.

## Personal protective equipment

### Eye/face protection

Tightly fitting safety goggles. Face shield (8-inch minimum). 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 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 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).

### Control of environmental exposure

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Appearance:	Yellow powder
Odor:	No data available
Odor threshold:	No data available
pH:	No data available
Melting point/freezing point:	90-95
Initial boiling point/boiling range:	No data available

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Flash point:	No data available
Evaporation rate:	No data available
Flammability (solid, gas):	No data available
Upper explosive limits:	No data available
Lower explosive limits:	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Relative density:	No data available
Water solubility:	No data available
Partition coefficient: n-octanol/water	2.854
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Viscosity:	No data available
Explosive properties:	No data available
Oxidizing properties:	No data available

## 9.2 Other information

No data available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under specified storage temperature.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available



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## 10.5 Incompatible materials

Strong oxidizing agents.

## 10.6 Hazardous decomposition products

Carbon monoxide, Carbon dioxide, Nitrogen oxides

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Acute toxicity:	No data available
Skin corrosion/irritation:	No data available
Serious eye damage/eye irritation:	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	No data available
Carcinogenicity:	No data available
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
Chronic Symptoms:	No data available

### 11.2 Additional information

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

## SECTION 12: Ecological information

### 12.1 Toxicity

No data available

### 12.2 Persistence and degradability

No data available

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## 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

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

- Dispose of contents/container in accordance with local, regional, national, and international regulations.
- Avoid release to the environment.
- Contaminated packaging dispose of as unused product.

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## SECTION 14: Transport information

### DOT (US)

UN number:

Class:

Packing group:

Proper shipping name:

Classed non-hazardous for shipping.

Reportable quantity (RQ):

Poison inhalation hazard:

### IMDG

UN number:

Class:

EMS-No:

Classed non-hazardous for shipping.

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Proper shipping name:

## IATA

UN number:

Class:

Classed non-hazardous for shipping.

Proper shipping name:

## SECTION 15: Regulatory information

### 15.1 U.S. Federal regulations

OSHA 29 CFR 1910.1200:

Toxic Substances Control Act (TSCA):

Comprehensive Response Compensation and Liability Act (CERCLA):

Superfund Amendments and Reauthorization Act (SARA Title III):

SARA 313 Reportable Ingredients:

California Proposition 65:

Safety Assessment:

No Chemical Safety Assessment

## SECTION 16: Other information

### 16.1 Full text of H-Statements referred to under Sections 2

H302

Harmful if swallowed

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H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation

## 16.2 Further information

The reference company name of written contents:

Company: Hoffman Fine Chemicals Pty Ltd

Address: 4 46-50 Buchanan Road, Brooklyn, Victoria, 3012, Australia

Email: infoathoffmanchemicals.com

Telephone: 03 9315 3435

Fax:

The above information is provided without any warranty, express or implied, regarding its correctness and does not purport to be all inclusive and shall be used only as a guide. Prior to use, please investigate not only the hazards and toxicity information but also the laws and regulations of the organization, area and country where the products are to be used, which shall be given the first priority. This Safety Data Sheet ('SDS') was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable

The conditions or methods of handling, storage, contact, use or disposal of the product are beyond our control and may be beyond our knowledge. 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. The stated cautions are for normal handling only. In case of special handling, sufficient care should be taken, in addition to the safety measures suitable for the situation. All chemical products should be treated with the recognition of having unknown hazards and toxicity, which differ greatly depending on the conditions and/or duration of handling, storage, contact, use and/or disposal. The products must be handled only by those who are familiar with specialized knowledge and have experience and/or under the guidance of those specialists throughout handling, storage, contact, use and disposal. Safe usage conditions shall be set up on each user's own responsibility. New information or amendments may be made to this SDS.

For the abovementioned reasons and others, the Company listed in Section 16.2 of this SDS and its affiliates do not assume responsibility and expressly disclaim any liability for loss, damage and/or expense arising out of or in any way connected with the handling, storage, contact, use and/or disposal of this product.

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