



## Safety Data Sheet

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### Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Hydrazine dihydrochloride

SDS No. : 3748E-1

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

Research and Development

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Chemical Safety Management Department

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

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### Section 2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

PHYSICAL AND CHEMICAL HAZARDS

Self-reactive substances and mixtures: Type C

HEALTH HAZARDS

Acute toxicity (Oral): Category 3

Skin corrosion/irritation: Category 1

Serious eye damage/eye irritation: Category 1

Germ cell mutagenicity: Category 2

Specific target organ toxicity – single exposure: Category 1 (CNS; liver; kidney)

Specific target organ toxicity – repeated exposure: Category 1 (liver; nerve system; digestive tract; kidney)

(Note) GHS classification without description: Not classified/Classification not possible

Label elements



Signal word: Danger

HAZARD STATEMENT

H242 Heating may cause a fire

H301 Toxic if swallowed

H314 Causes severe skin burns and eye damage

H341 Suspected of causing genetic defects

H370 Causes damage to organs (CNS; liver; kidney)

H372 Causes damage to organs through prolonged or repeated exposure (liver; nerve system; digestive tract; kidney)

PRECAUTIONARY STATEMENT

Prevention

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No



smoking.

P234 Keep only in original packaging.

P235 Keep cool.

P240 Ground and bond container and receiving equipment.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash contaminated parts thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P280 Use personal protective equipment as required.

P270 Do not eat, drink or smoke when using this product.

#### Response

P370 + P378 In case of fire: Use appropriate media to extinguish.

P314 Get medical advice/attention if you feel unwell.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P310 Immediately call a POISON CENTER/doctor/physician.

P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor/physician.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing.

Rinse skin with water or shower.

P363 Wash contaminated clothing before reuse.

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 IF SWALLOWED: Rinse mouth.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

#### Storage

P403 Store in a well-ventilated place.

P405 Store locked up.

P411 Store at temperatures not exceeding specified values.

P420 Store separately.

#### Disposal

P501 Dispose of contents/container in accordance with local/national regulation.

#### Specific adverse human health effects

See "11. Toxicological Information".

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### Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name	Content (%)	CAS No.	Chemicals No, Japan	Chemical formula
Hydrazine dihydrochloride	95(min)	5341-61-7	1-374, 1-215	N <sub>2</sub> H <sub>6</sub> Cl <sub>2</sub>

Note : The figures shown above are not the specifications of the product.

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### Section 4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical advice/attention if you feel unwell.

**IF INHALED**

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor/physician if you feel unwell.

**IF ON SKIN**

Take off immediately all contaminated clothing. Rinse skin with water or shower.

If skin irritation or rash occurs: Get medical advice/attention.

**IF IN EYES**

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice/attention.

**IF SWALLOWED**

Rinse mouth.

Do NOT induce vomiting.

Immediately call a POISON CENTER/doctor/physician.

Call a POISON CENTER/doctor/physician if you feel unwell.

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**Section 5. Fire-fighting measures****Extinguishing media****Suitable extinguishing media**

Use appropriate extinguishing media suitable for surrounding facilities.

In case of fire, use water mist or loaded liquid, foam, dry sand to extinguish.

\*Fire Service Act Group 5 Hazardous Materials

**Unsuitable extinguishing media**

Carbon Dioxide/ Halon Extinguishing System

Dry Chemical Extinguishing System—Using Phosphates, etc./Using Hydrogen Carbonates, etc./Others (except for phosphates etc., Hydrogen Carbonates etc.)

Fire Extinguisher Discharging Carbon Dioxide/Halogenide

Fire Extinguisher Discharging Dry Extinguishing agents— Using Phosphates, etc./Using Hydrogen Carbonates, etc./Others (except for phosphates etc., Hydrogen Carbonates etc.)

\*Cabinet Order Concerning the Control of Hazardous Materials (Attached Table 5) Group 5 Hazardous Materials

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

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

See "10.Stability and Reactivity".

**Advice for firefighters****Specific fire-fighting measures**

Evacuate non-essential personnel to safe area.

**Special protective equipment and precautions for fire-fighters**

Wear fire resistant or flame retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure mode.

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**Section 6. Accidental release measures****Personnel precautions, protective equipment and emergency procedures**

Keep unauthorized personnel away.

Ventilate area until material pick up is complete.



Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses, low areas or rivers. To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

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## Section 7. Handling and storage

### Precautions for safe handling

#### Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Ground and bond container and receiving equipment.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

#### Safety Measures

Do not handle until all safety precautions have been read and understood.

Wear protective gloves/protective clothing/eye protection/face protection.

Wash hands et al thoroughly after handling.

When using do not eat, drink or smoke.

#### Any incompatibilities

See "10.Stability and Reactivity".

#### Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Do not eat, drink or smoke when using this product.

Wash contaminated clothing before reuse.

### Storage

#### Conditions for safe storage

Keep container tightly closed.

Store locked up. (P405)

Store at temperatures not exceeding specified values.

Store in a cool, dry place. Do not store in direct sunlight.

Storage in accordance with local/national regulation.

(Incompatible storage condition)

Store separately.

#### Container and packaging materials for safe handling

Keep only in original packaging.

Use closed unbreakable containers.



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**Section 8. Exposure controls/personal protection**

## Control parameters

## Adopted value

Adopted value in ACGIH is not available.

## Exposure controls

## Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

## Individual protection measures

Recommend to use protective equipment in conformity with the standards.

## Respiratory protection

Wear respiratory protection (dust-proof mask/gas mask). Select chemical cartridge corresponding to type of gases when using a gas mask.

## Hand protection

Wear impervious protective glove.

## Eye protection

Wear eye/face protection. Wear safety goggles in cases gas is generated.

## Skin and body protection

Wear protective clothing.

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**Section 9. Physical and Chemical Properties**

## Information on basic physical and chemical properties

Physical state: Crystals or crystalline powder

Color: White

Odor: Odorless

Melting point/Freezing point: 198°C

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

## Solubility:

Solubility in water: Soluble

Solubility in solvent data is not available.

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Density and/or relative density: 1.42

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.

## Other information

Other information is not available.



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**Section 10. Stability and Reactivity**

## Reactivity

Not available.

## Chemical stability

Stable under normal storage/handling conditions.

## Possibility of hazardous reactions

Not available.

## Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

## Incompatible materials

Bases, Oxidizing agents

## Hazardous decomposition products

Nitrogen oxides, Hydrogen chloride

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**Section 11. Toxicological Information**

## Information on toxicological effects

## Acute toxicity

## Acute toxicity (Oral)

## [Product]

Category 3, Toxic if swallowed

## [Data for components of the product]

## [Company proprietary data]

(As Hydrazine monohydrochloride)

rat LD50=128mg/kg

## Irritant properties

## Skin corrosion/irritation

## [Product]

Category 1, Causes severe skin burns and eye damage

## [Data for components of the product]

## [Company proprietary data]

Category 1

## Serious eye damage/irritation

## [Product]

Category 1, Causes serious eye damage

## [Data for components of the product]

## [Company proprietary data]

Category 1

Allergenic and sensitizing effects data is not available.

## Germ cell mutagenicity

## [Product]

Category 2, Suspected of causing genetic defects

## [Data for components of the product]

## [Company proprietary data]

cat. 2; Ames test

## Carcinogenicity

## [Data for components of the product]

## [EU]



Category 1B; Substances presumed to have carcinogenic potential for humans

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Category 1, Causes damage to organs

[Data for components of the product]

[cat.1]

[Company proprietary data]

CNS; liver; kidney

STOT-repeated exposure

[Product]

Category 1, Causes damage to organs through prolonged or repeated exposure

[Data for components of the product]

[cat.1]

[Company proprietary data]

liver; nerve system; digestive tract; kidney

Aspiration hazard data is not available.

Information on other hazards

May cause lung disorders by massive inhalation of powdered substance.

-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

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## Section 12. Ecological Information

Toxicity

Toxicity data is not available.

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

Bioaccumulative potential data is not available.

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

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## Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Dispose of contents/container as industrial waste. Accordance with local/national regulation.

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## Section 14. Transport Information

UN Number or ID Number : 2923

UN Proper Shipping Name :

CORROSIVE SOLID, TOXIC, N.O.S.

Class or division (Transport hazard class) : 8



Subsidiary hazard(s) : 6.1  
Packing group : III  
ERG GUIDE No.: 154  
Special provisions No.: 223; 274  
IMDG Code (International Maritime Dangerous Goods Regulations)  
UN Number or ID Number : 2923  
UN Proper Shipping Name :  
CORROSIVE SOLID, TOXIC, N.O.S.  
Class or division (Transport hazard class) : 8  
Subsidiary hazard(s) : 6.1  
Packing group : III  
Special provisions No.: 223; 274  
IATA (Dangerous Goods Regulations)  
UN Number or ID Number : 2923  
UN Proper Shipping Name :  
CORROSIVE SOLID, TOXIC, N.O.S.  
Class or division (Transport hazard class) : 8  
Subsidiary hazard(s) : 6.1  
Hazard labels : Corrosive & Toxic  
Packing group : III  
Special provisions No.: A3; A5; A803  
Environmental hazards  
Marine pollutants (yes/no) : no

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**Section 15. Regulatory Information**

Safety, health and environmental regulations/legislation specific for the substance or mixture  
U.S. Toxic Substances Control Act (TSCA) Inventory  
Chemicals listed in TSCA Inventory  
Applicable  
Other regulatory information  
Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

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**Section 16. Other information**

References and sources for data  
Globally Harmonized System of classification and labelling of chemicals, UN  
Recommendations on the TRANSPORT OF DANGEROUS GOODS 22nd edit., 2021 UN  
IMDG Code, 2022 Edition (Incorporating Amendment 41-22)  
IATA Dangerous Goods Regulations (65th Edition) 2024  
2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)  
2024 TLVs and BEIs. (ACGIH)  
Supplier's data/information  
General Disclaimer  
Please provide SDS to customers for selling or transferring.  
All chemicals have unknown hazard. Handle the product with care.  
This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your





safety.

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.

The GHS classification data given here is based on current Japan official data (NITE published in 2022).