



Safety Data Sheet

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

Product identifier:

Product name: Formazine standard solution 4000FTU

SDS No. : J3347E-2

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

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

Division: Safety Management Dept. of Chemicals

Telephone number: +81-6-6946-8061

FAX: +81-6-6946-1607

e-mail address: kagakuhinanzenkanri@kishida.co.jp

2. Hazards identification

GHS classification and label elements of the product**Classification of the substance or mixture****HEALTH HAZARDS**

Skin sensitization: Category 1

Reproductive toxicity: Category 2

Specific target organ toxicity – repeated exposure: Category 2 (bladder; kidney; systemic toxicity)

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

Label elements

Signal word: Warning

HAZARD STATEMENT

May cause an allergic skin reaction

Suspected of damaging fertility or the unborn child

May cause damage to organs through prolonged or repeated exposure (bladder; kidney; systemic toxicity)

PRECAUTIONARY STATEMENT**Prevention**

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

Wear protective gloves.

Contaminated work clothing should not be allowed out of the workplace.

Response

Get medical advice/attention if you feel unwell.

IF exposed or concerned: Get medical advice/attention.

IF ON SKIN: Wash with plenty of soap and water.

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

Take off contaminated clothing and wash it before reuse.

Disposal

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



3. Composition/information on ingredients

Mixture/Substance selection:

Mixture

Ingredient name:Hydrazinium sulfate

Content (%):0.50

Chemical formula:H6N2O4S

Chemicals No, Japan:1-374;1-430

CAS No.:10034-93-2

MW:130.12

ECNO:233-110-4

Ingredient name:Hexamethylenetetramine

Content (%):5.0

Chemical formula:C6H12N4

Chemicals No, Japan:5-1155

CAS No.:100-97-0

MW:140.19

ECNO:202-905-8

Ingredient name:Water

Content (%):95

Chemical formula:H2O

CAS No.:7732-18-5

MW:18.02

ECNO:231-791-2

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

4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical attention/advice if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

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

IF ON SKIN (or hair)

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

Wash with plenty of soap and water.

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.

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

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media



Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

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

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire/flame resistant/retardant clothing.

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

Firefighters should wear self-contained breathing apparatus with full face piece operated positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

Preventive measures for secondary accident

Collect spillage.

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/sparks/open flames/hot surfaces. – No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Wear protective gloves, protective clothing or face protection.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Advice on general occupational hygiene

Contaminated work clothing should not be allowed out of the workplace.

Take off contaminated clothing and wash it before reuse.

Storage

Conditions for safe storage

Keep container tightly closed.

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

Container and packaging materials for safe handling

Glass

Polyethylene



8. Exposure controls/personal protection

Control parameters

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

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Suspension liquid

Color: White

Odor: None

Melting point/Freezing point data is not available.

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

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

Vapor pressure data is not available.

Density and/or relative density: 1.01

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

No Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

(Hexamethylenetetramine)

Decomposes on heating and on burning. This produces toxic and corrosive gases including formaldehyde, ammonia, hydrogen cyanide and nitrogen oxides. The solution in water is a weak base. Reacts with strong oxidants and strong acids. Attacks aluminium and zinc. (ICSC 1228)

Conditions to avoid

Contact with incompatible materials.



Contact with fire source.
Incompatible materials
Strong acids, Strong oxidizing agents
Hazardous decomposition products
Nitrogen oxides, Formaldehyde, Ammonia, Hydrogen cyanide

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(Hydrazinium sulfate)

rat LD50=601mg/kg (HSDB, 2005)

Irritant properties

Skin corrosion/irritation data is not available.

Serious eye damage/irritation data is not available.

Sensitization

Skin sensitization

[GHS Cat. Japan, base data]

(Hydrazinium sulfate)

cat. 1; BUA 205, 1996

(Hexamethylenetetramine)

cat. 1; EU-RAR, 2008

Mutagenic effects data is not available.

Carcinogenicity

[GHS Cat. Japan, base data]

(Hydrazinium sulfate)

cat.2; IARC Gr. 2B (IARC 71, 1999 (Hydrazines) et al.)

Reproductive toxicity

[GHS Cat. Japan, base data]

(Hexamethylenetetramine)

cat. 2; EU-RAR, 2008

STOT

STOT-single exposure

[cat.3 (resp. irrit.)]

[GHS Cat. Japan, base data]

(Hydrazinium sulfate)

respiratory tract irritation (CERI/NITE risk assessment, 2004)

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

(Hexamethylenetetramine)

bladder; kidney; systemic toxicity (EU-RAR, 2008; HSDB, 2015)

Aspiration hazard data is not available.

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(Hexamethylenetetramine)

Crustacea (Daphnia magna) EC50 >100mg/L/48hr (MOE Japan, 2002)



Hazardous to the aquatic environment (Long-term)

[GHS Cat. Japan, base data]

(Hexamethylenetetramine)

Crustacea (Daphnia magna) NOEC >99mg/L/21days (MOE Japan, 2002)

Water solubility

(Hexamethylenetetramine)

44.9 g/100ml (PHYSPROP_DB, 2005)

Persistence and degradability

(Hexamethylenetetramine)

Not degrade rapidly (BOD_Degradation : 22%/14 days; TOC_Degradation: 45%/14 days;

HPLC_Degradation: 48%/14 days (MITI official bulletin))

Bioaccumulative potential

(Hexamethylenetetramine)

log Pow=-2.84 (ICSC, 2002)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

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 in accordance with local/national regulation.

14. Transport Information

UN No. or ID No.: Not applicable

Not applicable to IMDG Code

Not applicable to IATA Dangerous Goods Regulations

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

Maritime transport in bulk according to IMO instruments

Noxious Liquid ; Cat. Z

Hexamethylenetetramine

Non Noxious Liquid ; Cat. OS

Water

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Chemicals listed in TSCA Inventory

Hexamethylenetetramine; Water; Hydrazinium sulfate

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.



16. Other information**GHS classification and labelling**

Skin Sens. 1: H317 May cause an allergic skin reaction

Repr. 2: H361 Suspected of damaging fertility or the unborn child

STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (7th revised edition, 2017), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN IMDG Code, 2018 Edition (Incorporating Amendment 39-18)

IATA Dangerous Goods Regulations (61th Edition) 2020

Classification, labelling and packaging of substances and mixtures (Table 3 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2020 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

General Disclaimer

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 2019).