



Safety Data Sheet

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

Product identifier:

Product name: Sodium azide
Product code (SDS NO): 7106E-4

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

PHYSICAL AND CHEMICAL HAZARDS

Self-reactive substances and mixtures: Type G

HEALTH HAZARDS

Acute toxicity (Oral): Category 2
Acute toxicity (Dermal): Category 1
Skin corrosion/irritation: Category 1
Serious eye damage/eye irritation: Category 1
Specific target organ toxicity – single exposure: Category 1 (CVS; lung; CNS; systemic toxicity)
Specific target organ toxicity – repeated exposure: Category 1 (CVS; CNS)
Specific target organ toxicity – repeated exposure: Category 2 (lung)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 1
Hazardous to the aquatic environment (Long-term): Category 1

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

Label elements



Signal word: Danger

HAZARD STATEMENT

Fatal if swallowed
Fatal in contact with skin
Causes severe skin burns and eye damage
Causes serious eye damage
Causes damage to organs after single exposure
Causes damage to organs through prolonged or repeated exposure
May cause damage to organs through prolonged or repeated exposure
Very toxic to aquatic life
Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention



Avoid release to the environment.
Do not breathe dust/fume/gas/mist/vapors/spray.
Do not get in eyes, on skin, or on clothing.
Wash contaminated parts thoroughly after handling.
Wear protective gloves, protective clothing or face protection.
Wear eye protection/face protection.
Do not eat, drink or smoke when using this product.

Response

Collect spillage.
Get medical advice/attention if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN: Wash with plenty of soap and water.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Take off immediately all contaminated clothing and wash it before reuse.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Disposal

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

3. Composition/information on ingredients**Mixture/Substance selection:****Substance**

Ingredient name:Sodium azide

Content (%):98(min)

Chemical formula:NaN₃

Chemicals No, Japan:1-482

CAS No.:26628-22-8

MW:65.01

ECNO:247-852-1

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. Do NOT induce vomiting.

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



5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

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

Unsuitable extinguishing media

Inactive gas firefighting equipment

Halogenated firefighting system

Dry-powder firefighting equipment – phosphate etc.

Dry-powder firefighting equipment – hydrogen carbonate etc.

Dry-powder firefighting equipment – except for phosphate etc., hydrogen carbonate etc.

Carbon dioxide extinguisher

Halogenated extinguisher

Dry-powder extinguisher – phosphate etc.

Dry-powder extinguisher – hydrogen carbonate etc.

Dry-powder extinguisher – except for phosphate etc., hydrogen carbonate etc.

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.

Avoid raising dust.

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.

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.

Wear eye protection/face protection.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Advice on general occupational hygiene

Do not get in eyes, on skin, or on clothing.

Wash contaminated parts thoroughly after handling.

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

Take off immediately all 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.

Keep under lock and key.

Container and packaging materials for safe handling

Polyethylene

8. Exposure controls/personal protection**Control parameters****Adopted value**

(Sodium azide)

ACGIH(1992) STEL: C (as Sodium azide) 0.29mg/m³; (as Hydrazoic acid vapor) 0.11ppm (Card impair; lung dam)

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: Crystals or crystalline powder

Color: Colorless to white

Odor: Odorless

pH data is not available.

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Melting point/Freezing point: (decomposes) $\geq 275^{\circ}\text{C}$

Decomposition temperature data is not available.

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

Flash point data is not available.

Auto-ignition temperature data is not available.

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



Vapor pressure: 1 Pa (20°C)
Relative vapor density (Air=1) data is not available.
Density and/or relative density: 1.85
Kinematic viscosity data is not available.
Solubility:
Solubility in water: Soluble (29wt%, 20°C)
n-Octanol/water partition coefficient data is not available.
No Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Deliquescent material.

Possibility of hazardous reactions

Decomposes on heating above 275° C . This produces toxic fumes. This generates fire and explosion hazard. Reacts with copper, lead, silver, mercury and carbon disulfide. This produces particularly shock-sensitive compounds. Reacts with acids. This produces toxic and explosive hydrogen azide. (ICSC 0950)

Conditions to avoid

Contact with incompatible materials.
Contact with fire source.

Incompatible materials

Acids, Copper, Lead, Silver, Mercury, Carbon disulfide

Hazardous decomposition products

Hydrogen azide

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]
(Sodium azide)
rat LD50=45mg/kg (DFGOT vol.20, 2003)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]
(Sodium azide)
rabbit LD50=20mg/kg (ACGIH, 2001)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]
(Sodium azide)
rabbit corrosive (DFGOT vol.20, 2003)

Serious eye damage/irritation

[GHS Cat. Japan, base data]
(Sodium azide)
Skin Corr. cat. 1

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenicity

(Sodium azide)
ACGIH-A4(1992) : Not Classifiable as a Human Carcinogen



Reproductive toxicity data is not available.

STOT

STOT-single exposure

[cat.1]

[GHS Cat. Japan, base data]

(Sodium azide)

CVS; lung; CNS; systemic toxicity (DFGOT vol.20, 2003; ACGIH, 2001)

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

(Sodium azide)

CNS; CVS (NTPTR 389, 1991)

[cat.2]

[GHS Cat. Japan, base data]

(Sodium azide)

lung (NTPTR 389, 1991)

Aspiration hazard data is not available.

Additional data

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

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Very toxic to aquatic life

Very toxic to aquatic life with long lasting effects

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

(Sodium azide)

Algae (*Pseudokirchneriella subcapitata*) ErC50=0.348mg/L/96hr (Aquire, 2010)

Water solubility

(Sodium azide)

good (41.7 g/100 ml, 17°C) (ICSC, 2014)

Persistence and degradability

(Sodium azide)

Degradation measured by HPLC : 1% (Registered chemicals data check & review)

Bioaccumulative potential

(Sodium azide)

log Pow <= 0.3 (Check & Review, Japan)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

13. Disposal considerations

Waste treatment methods

Avoid release to the environment (- if this is not the intended use).

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



14. Transport Information

UN No.: 1687

Proper Shipping Name :

SODIUM AZIDE

Class or division : 6.1

Packing group : II

ERG GUIDE No.: 153

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 1687

Proper Shipping Name :

SODIUM AZIDE

Class or division : 6.1

Packing group : II

IATA Dangerous Goods Regulations

UN No.: 1687

Proper Shipping Name :

SODIUM AZIDE

Class or division : 6.1

Hazard labels : Toxic

Packing group : II

Environmental hazards**MARPOL Annex III – Prevention of pollution by harmful substances**

Marine pollutants (yes/no) : yes

MARPOL Annex V – Prevention of pollution by garbage discharge

Specific target organ toxicity – repeated exposure: cat.1

Sodium azide

Hazardous to the aquatic environment – acute hazard: cat.1

Sodium azide

Hazardous to the aquatic environment – long-term hazard: cat.1, 2

Sodium azide

15. Regulatory Information

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

US major regulations

TSCA

Sodium azide

Other regulatory information

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

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

Self-react. G

Acute Tox. 2: H300 Fatal if swallowed

Acute Tox. 1: H310 Fatal in contact with skin

Skin Corr. 1: H314 Causes severe skin burns and eye damage

Eye Dam. 1: H318 Causes serious eye damage

STOT SE 1: H370 Causes damage to organs after single exposure

STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure

Aquatic Acute 1: H400 Very toxic to aquatic life

Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects

**Reference Book**

Globally Harmonized System of classification and labelling of chemicals, (6th ed., 2015), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN IMDG Code, 2018 Edition (Incorporating Amendment 39-18)
IATA Dangerous Goods Regulations (60th Edition) 2019
Classification, labelling and packaging of substances and mixtures (table 3-1 ECNO 6182012)
2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2019 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 2018).