



Safety Data Sheet

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

Product identifier:

Product name: 2-Aminoethanol

SDS No. : 2844E-3

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

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2. Hazards identification

GHS classification and label elements of the product**Classification of the substance or mixture****PHYSICAL AND CHEMICAL HAZARDS**

Flammable liquids: Category 4

HEALTH HAZARDS

Acute toxicity (Dermal): Category 4

Skin corrosion/irritation: Category 1A

Serious eye damage/eye irritation: Category 1

Skin sensitization: Category 1

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

Specific target organ toxicity – single exposure: Category 3(Narcosis)

Specific target organ toxicity – repeated exposure: Category 1(CNS)

Specific target organ toxicity – repeated exposure: Category 2(respiratory system)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 2

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

Label elements

Signal word: Danger

HAZARD STATEMENT

Combustible liquid

Harmful in contact with skin

Causes severe skin burns and eye damage

Causes serious eye damage

May cause an allergic skin reaction

Causes damage to organs after single exposure(CNS; respiratory system; liver)

May cause drowsiness or dizziness

Causes damage to organs through prolonged or repeated exposure(CNS)

May cause damage to organs through prolonged or repeated exposure(respiratory system)

Toxic to aquatic life

PRECAUTIONARY STATEMENT

Prevention



Avoid release to the environment.
Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Do not breathe dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wash contaminated parts thoroughly after handling.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not eat, drink or smoke when using this product.

Response

In case of fire: Use appropriate media other than water for extinction.
Get medical advice/attention if you feel unwell.
Call a POISON CENTER or doctor/physician if you feel unwell.
IF exposed or concerned: Call a POISON CENTER or doctor/physician.
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.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Take off 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: Rinse mouth. Do NOT induce vomiting.

Storage

Store in a well-ventilated place. Keep container tightly closed.

Disposal

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

Specific Physical and Chemical hazards

Heating may cause fire.

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

Ingredient name:2-Aminoethanol
Content (%):99(min)
Chemical formula:NH₂CH₂CH₂OH
Chemicals No, Japan:2-301
CAS No.:141-43-5
MW:61.08
ECNO:205-483-3

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 powder, CO2 to extinguish.

Unsuitable extinguishing media

Indoor firefighting equipment or outdoor firefighting equipment

Sprinkler equipment

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

Straight stream water extinguisher

Water mist extinguisher

Reinforcing liquid jet extinguisher

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

Bucket of water or tank of water

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

Use only outdoors or in a well-ventilated area.

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

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.

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.

Keep under lock and key.

Container and packaging materials for safe handling

Glass

Iron

8. Exposure controls/personal protection

Control parameters

Adopted value

(2-Aminoethanol)

ACGIH(1985) TWA: 3ppm;

STEL: 6ppm (Eye & skin irr)

OSHA-PEL

(2-Aminoethanol)

TWA: 3ppm, 6mg/m³

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: Liquid

Color: Colorless to light yellow

Odor: Characteristic odor

Melting point/Freezing point: 10°C

Boiling point or initial boiling point: (2-Aminoethanol)171°C

Boiling range data is not available.

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

Lower and upper explosion limit/flammability limit:

Lower explosion limit: 5.5 vol %

Upper explosion limit: 17 vol %

Flash point: (2-Aminoethanol)(C.C.) 85°C

Auto-ignition temperature: (2-Aminoethanol)410°C

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Freely soluble

n-Octanol/water partition coefficient: log Pow-1.31(estimated)

Vapor pressure: 53 Pa (20°C)

Density and/or relative density: 1.02

Relative vapor density (Air=1): 2.1

Relative density of the Vapor/air - mixture at 20°C (Air = 1): 1

No Particle characteristics data is not available.

10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Hygroscopic (absorbs moisture from the air).

Possibility of hazardous reactions

Decomposes on heating and on burning. This produces toxic and corrosive gases including nitrogen oxides. Reacts violently with strong acids and strong oxidants. This generates fire and explosion hazard. The substance is a medium strong base. Attacks copper, aluminium, their alloys and rubber. (ICSC 0152)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Strong acids, Strong oxidizing agents

Hazardous decomposition products

Carbon oxides, Nitrogen oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]



(2-Aminoethanol)
rat LD50=500-20000mg/kg (NITE risk assessment, 2008)
Acute toxicity (Dermal)
[GHS Cat. Japan, base data]
(2-Aminoethanol)
rabbit LD50=1018mg/kg (PATTY 6th, 2012)

Irritant properties
Skin corrosion/irritation
[GHS Cat. Japan, base data]
(2-Aminoethanol)
rabbit necrosis (NITE primary risk assessment, 2008)

Serious eye damage/irritation
[GHS Cat. Japan, base data]
(2-Aminoethanol)
rabbit severe (NITE primary risk assessment, 2008)

Sensitization
Skin sensitization
[GHS Cat. Japan, base data]
(2-Aminoethanol)
cat. 1; CERI/NITE risk assessment, 2008

Mutagenic effects data is not available.
Carcinogenic effects data is not available.
Reproductive toxicity data is not available.

STOT

STOT-single exposure
[cat.1]
[GHS Cat. Japan, base data]
(2-Aminoethanol)
CNS; respiratory system; liver (MOE risk assessment, vol 9, 2011)

[cat.3 (drow./dizz.)]
[GHS Cat. Japan, base data]
(2-Aminoethanol)
narcotic effect (MOE risk assessment, vol 9, 2011)

STOT-repeated exposure
[cat.1]
[GHS Cat. Japan, base data]
(2-Aminoethanol)
CNS (MOE risk assessment, vol 9, 2011)

[cat.2]
[GHS Cat. Japan, base data]
(2-Aminoethanol)
respiratory system (PATTY 6th, 2012)

Aspiration hazard data is not available.

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Toxic to aquatic life

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(2-Aminoethanol)

Algae (selenastrum) ErC50=2.5mg/L/72hr (MOE Japan, 1996)

Water solubility



(2-Aminoethanol)
very good (ICSC, 2002)
Persistence and degradability
(2-Aminoethanol)
BOD_Degradation : 83% (Registered chemicals data check & review)
Bioaccumulative potential
(2-Aminoethanol)
log Pow=-1.31 (PHYSPROP DB, 2005)
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

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. or ID No.: 2491
UN Proper Shipping Name :
ETHANOLAMINE or ETHANOLAMINE SOLUTION
Class or division (Transport hazard class) : 8
Packing group : III
ERG GUIDE No.: 153
Special provisions No.: 223

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 2491
Proper Shipping Name :
ETHANOLAMINE or ETHANOLAMINE SOLUTION
Class or division : 8
Packing group : III
Special provisions No.: 223

IATA Dangerous Goods Regulations

UN No.: 2491
Proper Shipping Name :
ETHANOLAMINE or ETHANOLAMINE SOLUTION
Class or division : 8
Hazard labels : Corrosive
Packing group : III
Special provisions No.: A3; A803

Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances
Marine pollutants (yes/no) : no
MARPOL Annex V – Prevention of pollution by garbage discharge
Specific target organ toxicity – repeated exposure: cat.1
2-Aminoethanol

Maritime transport in bulk according to IMO instruments

Noxious Liquid ; Cat. Y
2-Aminoethanol



15. Regulatory Information

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

Chemicals listed in TSCA Inventory

2-Aminoethanol

Other regulatory information

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

16. Other information

GHS classification and labelling

Flam. Liq. 4: H227 Combustible liquid

Acute Tox. 4: H312 Harmful in contact with skin

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

Eye Dam. 1: H318 Causes serious eye damage

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

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

STOT SE 3: H336 May cause drowsiness or dizziness

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

Aquatic Acute 2: H401 Toxic to aquatic life

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).