Date of issue: 2019/06/12
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Safety Data Sheet

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

Product identifier:
- Product name: Ethylamine solution 70%
- SDS No. : 2861E-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: Chemical Safety Management Department
- 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
- Flammable liquids: Category 2

HEALTH HAZARDS
- Acute toxicity (Oral): Category 4
- Acute toxicity (Dermal): Category 3
- Skin corrosion/irritation: Category 1
- Serious eye damage/eye irritation: Category 1
- Specific target organ toxicity - single exposure: Category 3 (Respiratory tract irritation)
- Specific target organ toxicity - repeated exposure: Category 1(respiratory system)
- Specific target organ toxicity - repeated exposure: Category 2(kidney)

ENVIRONMENT HAZARDS
- Hazardous to the aquatic environment (Acute): Category 2

Label elements

Signal word: Danger

HAZARD STATEMENT
- Highly flammable liquid and vapor
- Harmful if swallowed
- Toxic in contact with skin
- Causes severe skin burns and eye damage
- May cause respiratory irritation
- Causes damage to organs through prolonged or repeated exposure(respiratory system)
- May cause damage to organs through prolonged or repeated exposure(kidney)
- Toxic to aquatic life

PRECAUTIONARY STATEMENT

Prevention
- Avoid release to the environment.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Keep container tightly closed.

Ground and bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Do not breathe dust/fume/gas/mist/vapors/spray.
Use only outdoors or in a well-ventilated area.
Wash contaminated parts thoroughly after handling.
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 to extinguish.
Get medical advice/attention if you feel unwell.
Call a POISON CENTER/doctor/physician 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 or 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: Call a POISON CENTER/doctor/physician if you feel unwell.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage

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

Disposal

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

Specific Physical and Chemical hazards

Highly flammable liquid. Vapor/air mixture may explode.

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3. Composition/information on ingredients

Mixture/Substance selection:

Mixture

Ingredient name:Ethylamine
Content (%):70
Chemical formula:C2H5NH2
Chemicals No, Japan:2-130
CAS No.:75-04-7
MW:45.08
ECNO:200-834-7

Ingredient name:Water
Content (%):30
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. The content of products may exceed the figures shown above.

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 (or hair)

Take off immediately all contaminated clothing. Rinse skin with water or 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/doctor/physician if you feel unwell.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use dry powder 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 resistant or flame retardant clothing.

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

Firefighters should wear self-contained breathing apparatus with full face peace 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, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Ground and bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use non-sparking tools.

Take action to prevent static discharges.

(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.

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.

Container and packaging materials for safe handling

Glass

Polyethylene

8. Exposure controls/personal protection

Control parameters

Adopted value

(Ethylamine)

ACGIH(2013) TWA: 5ppm;

STEL: 15ppm (URT irr)

Notation

(Ethylamine)

Skin

OSHA-PEL

(Ethylamine)

TWA: 10ppm, 18mg/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 pale yellow
Odor: Characteristic odor
Melting point/Freezing point data is not available.
Boiling point or initial boiling point: 38℃
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: -24.3℃
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: 0.81
Relative vapor density (Air=1) data is not available.
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
(Ethylamine)
The vapour is heavier than air and may travel along the ground; distant ignition possible. The substance is a strong base. It reacts violently with acid and is corrosive. Reacts violently with strong oxidants and organic compounds. This generates fire and explosion hazard. Attacks many non-ferrous metals and plastics. (ICSC 1482)
Conditions to avoid
Contact with incompatible materials.
Contact with fire source.
Incompatible materials
Acids, Strong oxidizing agents, Organic compounds

Hazardous decomposition products
Carbon oxides, Nitrogen oxides

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11. Toxicological Information
Information on toxicological effects
Acute toxicity
Acute toxicity (Oral)
[GHS Cat. Japan, base data]
(Ethylamine)
rat LD50=400mg/kg (ACGIH, 2001)
Acute toxicity (Dermal)
[GHS Cat. Japan, base data]
(Ethylamine)
rabbit LD50=390mg/kg (ACGIH, 2001)
Acute toxicity (Inhalation)
[GHS Cat. Japan, base data]
(Ethylamine)
vapor: rat LC50=6842ppm (IUCLID, 2000)
Irritant properties
Skin corrosion/irritation
[GHS Cat. Japan, base data]
(Ethylamine)
animal test corrosive (IUCLID, 2000)
Serious eye damage/irritation
[GHS Cat. Japan, base data]
(Ethylamine)
animal severe damage (PATTY 5th, 2001)
Allergenic and sensitizing effects data is not available.
Mutagenic effects data is not available.
Carcinogenic effects data is not available.
Reproductive toxicity data is not available.
STOT
STOT-single exposure
[cat.3 (resp. irrit.)]
[GHS Cat. Japan, base data]
(Ethylamine)
respiratory tract irritation (ICSC(J), 2002)
STOT-repeated exposure
[cat.1]
[GHS Cat. Japan, base data]
(Ethylamine)
respiratory system (ACGIH, 2001)
[cat.2]
[GHS Cat. Japan, base data]
(Ethylamine)
kidney (ACGIH, 2001)
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]

(Ethylamine)

Crustacea (Ceriodaphnia reticulata) EC50＝7.9mg/L/48hr (OECD SIDS, 2016)

Hazardous to the aquatic environment (Long-term)

[GHS Cat. Japan, base data]

(Ethylamine)

Crustacea (Ceriodaphnia reticulata) NOEC=3.2mg/L/7days (OECD SIDS, 2016)

Water solubility

(Ethylamine)

miscible (ICSC, 2002)

Persistence and degradability

(Ethylamine)

Degrade rapidly (BOD_Degradation : (NO2)58.7% (NH3)90.3% (CSCL DB, 1988))

Bioaccumulative potential

(Ethylamine)

log Pow=-0.13 (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.

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

14. Transport Information

UN No. or ID No.: 2270

UN Proper Shipping Name :

ETHYLAMINE, AQUEOUS SOLUTION with not less than 50% but not more than 70% ethylamine

Class or division (Transport hazard class) : 3

Subsidiary hazard(s) : 8

Packing group : II

ERG GUIDE No.: 132

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 2270

Proper Shipping Name :

ETHYLAMINE, AQUEOUS SOLUTION with not less than 50% but not more than 70% ethylamine

Class or division : 3

Subsidiary hazard(s) : 8

Packing group : II

IATA Dangerous Goods Regulations

UN No.: 2270

Proper Shipping Name :

ETHYLAMINE, AQUEOUS SOLUTION with not less than 50% but not more than 70% ethylamine
Class or division : 3
Subsidiary hazard(s) : 8
Hazard labels : Flamm.liquid & Corrosive
Packing group : II

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
Ethylamine

Maritime transport in bulk according to IMO instruments

Noxious Liquid ; Cat. Y
Ethylamine
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

Ethylamine; Water

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. 2: H225 Highly flammable liquid and vapor
Acute Tox. 4: H302 Harmful if swallowed
Acute Tox. 3: H311 Toxic 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 3: H335 May cause respiratory irritation
STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure
STOT RE 2: H373 May cause 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, UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN
IMDG Code, 2018 Edition (Incorporating Amendment 39-18)
IATA Dangerous Goods Regulations (62nd Edition) 2021
2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2021 TLVs and BEIs. (ACGIH)
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 2020).