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# Safety Data Sheet

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

Product identifier:
- Product name: Aniline
- SDS No. : 0494E-4

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

## Section 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 (Oral): Category 4
- Acute toxicity (Dermal): Category 3
- Acute toxicity (Inhalation): Category 2
- Serious eye damage/eye irritation: Category 2A
- Skin sensitization: Category 1
- Germ cell mutagenicity: Category 2
- Carcinogenicity: Category 1B
- Reproductive toxicity: Category 2
- Specific target organ toxicity - single exposure: Category 1 (blood system, nervous system)
- Specific target organ toxicity - repeated exposure: Category 1 (blood system, nervous system)

ENVIRONMENT HAZARDS
- Hazardous to the aquatic environment, short-term (acute): Category 1
- Hazardous to the aquatic environment, long-term (chronic): Category 1

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

Label elements

Signal word: Danger

HAZARD STATEMENT
- Combustible liquid
- Harmful if swallowed
- Toxic in contact with skin
- Fatal if inhaled
- Causes serious eye irritation
- May cause an allergic skin reaction
- Suspected of causing genetic defects
- May cause cancer

Suspected of damaging fertility or the unborn child
Causes damage to organs (blood system, nervous system)
Causes damage to organs through prolonged or repeated exposure (blood system, nervous system)
Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Do not breathe dust/fume/gas/mist/vapors/spray.
In case of inadequate ventilation wear respiratory protection.
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 to extinguish.
Collect spillage.
Get medical advice/attention if you feel unwell.
IF exposed or concerned: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
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 eye irritation persists: Get medical advice/attention.
IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.
IF SWALLOWED: Rinse mouth.

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.

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## Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Aniline
Content (%):99(min)
Chemical formula:C6H5NH2
Chemicals No, Japan:3-105
CAS No.:62-53-3
MW:93.13
ECNO:200-539-3

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

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

## Section 5. Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing media

In case of fire, use foam, dry powder, CO2 to extinguish.

#### Unsuitable extinguishing media

Indoor firefighting equipment or outdoor firefighting equipment
Sprinkler equipment
Dry-powder firefighting equipment - other (except for phosphate etc.,hydrogen carbonate etc.)
Straight stream water extinguisher
Water mist extinguisher
Reinforcing liquid jet extinguisher
Dry-powder extinguisher - other (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.

## Section 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.

## 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.

(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 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

Glass

Stainless steel

## Section 8. Exposure controls/personal protection

Control parameters

Adopted value

(Aniline)

ACGIH(1996) TWA: 2ppm (MeHb-emia)

Notation

(Aniline)

Skin

OSHA-PEL

(Aniline)

TWA: 5ppm, 19mg/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.

## Section 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: -6℃
Boiling point or initial boiling point: 184℃
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: 1.2 vol %
Upper explosion limit: 11 vol %
Flash point: (Aniline)(C.C.) 76℃
Auto-ignition temperature: 630℃
Decomposition temperature data is not available.
pH data is not available.
Kinematic viscosity data is not available.
Solubility:
Solubility in water: 3.4g/100 ml (20℃)
n-Octanol/water partition coefficient: log Pow0.94
Vapor pressure: 40Pa(20 ℃)
Density and/or relative density: 1.02 g/ml (20℃)
Relative vapor density (Air=1): 3.2
Particle characteristics data is not available.

## Section 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Turns brown on exposure to air or light. (ICSC 0011)

Possibility of hazardous reactions

Decomposes above 190° C . This produces toxic and corrosive fumes of nitrogen oxides and ammonia and flammable vapours. Reacts with strong acids and strong oxidants. This generates fire and explosion hazard. Attacks copper and its alloys. (ICSC 0011)

Conditions to avoid

Contact with incompatible materials.
Contact with fire source.

Incompatible materials

Strong acids, Strong oxidizing agents

Hazardous decomposition products

Nitrogen oxides, Ammonia

Section 11. Toxicological Information
Information on toxicological effects
Acute toxicity
Acute toxicity (Oral)
[Data for components of the product]
[GHS Cat. Japan, base data]
(Aniline)
rat LD50=440mg/kg (ACGIH 7th, 2001)
Acute toxicity (Dermal)
[Data for components of the product]
[GHS Cat. Japan, base data]
(Aniline)
rat LD50=670mg/kg (DFGOT vol.26, 2010)
Acute toxicity (Inhalation)
[Data for components of the product]
[GHS Cat. Japan, base data]
(Aniline)
vapor: rat LC50=250ppm/4hr (EU-RAR, 2004)
mist: rat LC50=1.86mg/L/4hr (EU-RAR, 2004)
Irritant properties
Skin corrosion/irritation data is not available.
Serious eye damage/irritation
[Data for components of the product]
[GHS Cat. Japan, base data]
(Aniline)
rabbit severe irritation (EU-RAR, 2004)
Sensitization
Skin sensitization
[Data for components of the product]
[GHS Cat. Japan, base data]
(Aniline)
cat. 1; guinea pig/positive (SIAT) EU-RAR, 2004
Germ cell mutagenicity
[Data for components of the product]
[GHS Cat. Japan, base data]
(Aniline)
cat. 2; NTP DB, Access on June 2016
Carcinogenicity
[Data for components of the product]
[GHS Cat. Japan, base data]
(Aniline)
cat.1B; IARC Gr.2A (IARC 127, 2021)
[IARC]
(Aniline)
Group 2A : Probably carcinogenic to humans
[ACGIH]
(Aniline)
A3(1996) : Confirmed Animal Carcinogen with Unknown Relevance to Humans
[EU]
(Aniline)
Category 2; Substances suspected human carcinogens
Reproductive toxicity
[Data for components of the product]

[GHS Cat. Japan, base data]
(Aniline)
cat. 2; MHLW report, 2016 (Anilinium chloride (CAS RN 142-04-1))

Specific target organ toxicity (STOT)

STOT-single exposure

[Data for components of the product]
[cat.1]
[GHS Cat. Japan, base data]
(Aniline)
blood system, nervous system (EU-RAR, 2004; NITE Initial Risk Assessment Report, 2007)

STOT-repeated exposure

[Data for components of the product]
[cat.1]
[GHS Cat. Japan, base data]
(Aniline)
blood system, nervous system (NITE Initial Risk Assessment Report, 2007)

Aspiration hazard data is not available.

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## Section 12. Ecological Information

Toxicity

Aquatic toxicity

[Data for components of the product]
Hazardous to the aquatic environment, short-term (acute)
[GHS Cat. Japan, base data]
(Aniline)
Crustacea (Daphnia magna) EC50=0.1mg/L/48hr (CEPA, 1994; EU-RAR, 2004)

Hazardous to the aquatic environment, long-term (chronic)
[GHS Cat. Japan, base data]
(Aniline)
Crustacea (Daphnia magna) NOEC=0.004mg/L /21days (ECETOC TR91, 2003; NITE Initial Risk Assessment Report, 2007; MOE Japan, 2002)

Water solubility

(Aniline)
3.4g/100 ml (20℃) (ICSC, 2014)

Persistence and degradability

[Data for components of the product]
(Aniline)
BOD_Degradation : 85% (METI existing chemical safety inspections, 1993)

Bioaccumulative potential

[Data for components of the product]
(Aniline)
log Pow=0.9 (PHYSPROP DB, 2009)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

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

Avoid release to the environment.

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

Section 14. Transport Information

UN Number or ID Number : 1547

UN Proper Shipping Name :

ANILINE

Class or division (Transport hazard class) : 6.1

Packing group : II

ERG GUIDE No.: 153

Special provisions No.: 279

IMDG Code (International Maritime Dangerous Goods Regulations)

UN Number or ID Number : 1547

UN Proper Shipping Name :

ANILINE

Class or division (Transport hazard class) : 6.1

Packing group : II

Special provisions No.: 279

IATA (Dangerous Goods Regulations)

UN Number or ID Number : 1547

UN Proper Shipping Name :

ANILINE

Class or division (Transport hazard class) : 6.1

Hazard labels : Toxic

Packing group : II

Special provisions No.: A113

Environmental hazards

Marine pollutants (yes/no) : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Noxious Liquid Substances ; Cat. Y

Aniline

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

Aniline

Other regulatory information

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

Section 16. Other information

GHS classification and labelling

Flammable liquids, Category 4: H227 Combustible liquid

Acute toxicity, Category 4: H302 Harmful if swallowed

Acute toxicity, Category 3: H311 Toxic in contact with skin

Acute toxicity, Category 2: H330 Fatal if inhaled
Serious eye damage/eye irritation, Category 2A: H319 Causes serious eye irritation
Skin sensitization, Category 1: H317 May cause an allergic skin reaction
Germ cell mutagenicity, Category 2: H341 Suspected of causing genetic defects
Carcinogenicity, Category 1B: H350 May cause cancer
Reproductive toxicity, Category 2: H361 Suspected of damaging fertility or the unborn child
STOT - single exposure, Category 1: H370 Causes damage to organs
STOT - Repeated exposure, Category 1: H372 Causes damage to organs through prolonged or repeated exposure
Hazardous to the aquatic environment, short-term (acute), Category 1: H400 Very toxic to aquatic life
Hazardous to the aquatic environment, long-term (chronic), Category 1: H410 Very toxic to aquatic life with long lasting effects

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN
IMDG Code, 2020 Edition (Incorporating Amendment 40-20)
IATA Dangerous Goods Regulations (62nd Edition) 2021
2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2022 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 2021).