Date of issue: 2017/09/12
Date of revision: 2022/07/01

Safety Data Sheet

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

Product identifier:

Product name: 2-Ethyl hexanoic acid

SDS No. : 2960E-2

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
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

Acute toxicity (Dermal): Category 4
Skin corrosion/irritation: Category 1
Serious eye damage/eye irritation: Category 2
Reproductive toxicity: Category 1B
Specific target organ toxicity - single exposure: Category 2(respiratory system)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 3
Hazardous to the aquatic environment (Long-term): Category 3

Label elements

Signal word: Danger

HAZARD STATEMENT

Harmful in contact with skin
Causes severe skin burns and eye damage
May damage fertility or the unborn child
May cause damage to organs(respiratory system)
Harmful to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.
Do not breathe dust/fume/gas/mist/vapors/spray.
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

IF exposed or concerned: Get medical advice/attention.

Call a POISON CENTER/doctor/physician if you feel unwell.
IF exposed or concerned: Call a POISON CENTER/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 or shower.
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 eye irritation persists: Get medical advice/attention.
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:2-Ethylhexanoic acid
Content (%):99(min)
Chemical formula:CH3(CH2)3CH(C2H5)COOH
Chemicals No, Japan:2-608
CAS No.:149-57-5
MW:144.21
ECNO:205-743-6

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

4. First-aid measures

Descriptions of first-aid measures

General measures

IF exposed or concerned: Get medical advice/attention.

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 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 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.

(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

Wash contaminated parts thoroughly after handling.

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

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8. Exposure controls/personal protection

Control parameters

Adopted value

(2-Ethylhexanoic acid)
ACGIH(2007) TWA: 5mg/m3(IFV) (Teratogenic eff)

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.

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9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Liquid
Color: Colorless
Odor: Characteristic odour
Melting point/Freezing point: -59℃
Boiling point or initial boiling point: (2-Ethylhexanoic acid)227℃
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: 0.8 vol %
Upper explosion limit: 6 vol %

Flash point: (2-Ethylhexanoic acid)118℃
Auto-ignition temperature: (2-Ethylhexanoic acid)371℃
Decomposition temperature data is not available.
pH data is not available.
Kinematic viscosity data is not available.
Solubility:

Solubility in water: 0.14g/100ml

n-Octanol/water partition coefficient: log Pow2.64
Vapor pressure: 4 Pa (20℃)
Density and/or relative density: 0.9
Relative vapor density (Air=1): 5
Relative density of the Vapor/air - mixture at 20℃ (Air = 1): 1

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

The substance is a strong reducing agent. It reacts violently with oxidants. Decomposes on heating. This produces irritating fumes. (ICSC 0477)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Oxidizing agents

Hazardous decomposition products

Carbon oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(2-Ethylhexanoic acid)

rat LD50=2043mg/kg (IUCLID, 2000)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

(2-Ethylhexanoic acid)

rabbit LD50=1140mg/kg (ACGIH, 2001)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

(2-Ethylhexanoic acid)

rabbit corrosive (IUCLID, 2000)

Serious eye damage/irritation

[GHS Cat. Japan, base data]

(2-Ethylhexanoic acid)

rabbit (ACGIH 7th, 2001)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity

[GHS Cat. Japan, base data]

(2-Ethylhexanoic acid)

cat. 1B; rat : ACGIH 7th, 2001

STOT

STOT-single exposure

[cat.2]

[GHS Cat. Japan, base data]

(2-Ethylhexanoic acid)

respiratory system (HSDB, 2008)

STOT-repeated exposure data is not available.

Aspiration hazard data is not available.

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Harmful to aquatic life with long lasting effects

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(2-Ethylhexanoic acid)

Crustacea (Daphnia magna) EC50=85.4mg/L/48hr (IUCLID, 2000)

Water solubility

(2-Ethylhexanoic acid)

0.14 g/100 ml (ICSC, 2005)

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

(2-Ethylhexanoic acid)

log Pow=2.64 (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.: 1760

UN Proper Shipping Name :

CORROSIVE LIQUID, N.O.S.

Class or division (Transport hazard class) : 8

Packing group : III

ERG GUIDE No.: 154

Special provisions No.: 223; 274

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 1760

Proper Shipping Name :

CORROSIVE LIQUID, N.O.S.

Class or division : 8

Packing group : III

Special provisions No.: 223; 274

IATA Dangerous Goods Regulations

UN No.: 1760

Proper Shipping Name :

CORROSIVE LIQUID, N.O.S.

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
Reproductive toxicity: cat.1, 1A, 1B
2-Ethylhexanoic acid
Maritime transport in bulk according to IMO instruments
Noxious Liquid ; Cat. Y
2-Ethylhexanoic acid

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Chemicals listed in TSCA Inventory
2-Ethylhexanoic acid
Other regulatory information
Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

GHS classification and labelling
Acute Tox. 4: H312 Harmful in contact with skin
Skin Corr. 1: H314 Causes severe skin burns and eye damage
Eye Irrit. 2: H319 Causes serious eye irritation
Repr. 1B: H360 May damage fertility or the unborn child
STOT SE 2: H371 May cause damage to organs
Aquatic Acute 3: H402 Harmful to aquatic life
Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects
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).