

Safety Data Sheet

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

Product identifier:

Product name: Ethanol(99.5)

Product code(SDS NO): 17065jis_E1-3

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

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2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

PHYSICAL HAZARDS

Flammable liquids: Category 2

HEALTH HAZARDS

Serious eye damage/eye irritation: Category 2B

Carcinogenicity: Category 1A

Reproductive toxicity: Category 1A

Specific target organ toxicity – single exposure: Respiratory tract irritation Category 3

Specific target organ toxicity – single exposure: Narcosis Category 3

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

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

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

Label elements



Signal word: Danger

HAZARD STATEMENT

Highly flammable liquid and vapor

Causes eye irritation

May cause cancer

May damage fertility or the unborn child

May cause respiratory irritation

May cause drowsiness or dizziness

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

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

PRECAUTIONARY STATEMENT

Prevention

Do not handle until all safety precautions have been read and understood.

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.
Take precautionary measures against static discharge.
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/eye protection/face protection.
Use personal protective equipment as required.
Do not eat, drink or smoke when using this product.

Response

In case of fire: Use appropriate media for extinction.
Get medical advice/attention if you feel unwell.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.

Storage

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

Disposal

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

Physical and Chemical hazards

Highly flammable liquid. Vapor/air mixture may explode.

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

Common name, synonyms: Ethyl alcohol (99.5)

Ingredient name: Ethanol

Content(%): 99.5

Chemical formula: C₂H₅OH

Chemicals No, Japan: 2-202

CAS No.: 64-17-5

MW: 46.07

ECNO: 200-578-6

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.

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 or doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Cough. Headache. Fatigue. Drowsiness. Burning sensation. Confusion. Dizziness. Unconsciousness.

(Symptoms when skin and/or eye contact)

Dry skin. Eye's redness. Eye's pain. Eye's burning sensation.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use water mist, foam, dry powder, CO₂.

Unsuitable extinguishing media

Do not use direct water jet.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Cool container with water spray.

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

Keep unauthorized personnel away.

In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

Ventilate area after material pick up is complete.

Wear proper protective equipment.

PUBLIC SAFETY: Ventilate closed spaces before entering.

Environmental precautions

Runoff to sewer may create fire or explosion hazard.

Vapor explosion hazard indoors, outdoors or in sewers.

Avoid release to the rivers, lakes, ocean and groundwater.

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.

Use clean non-sparking tools to collect absorbed material.

All equipment used when handling the product must be grounded.

Preventive measures for secondary accident

Collect spillage.

Stop leak if you can do it without risk.

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Prevent entry into waterways, sewers, basements or confined areas.

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 & explosion)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Exhaust/ventilator

Exhaust/ventilator should be available.

Safety treatments

Avoid contact with skin.

Avoid contact with eyes.

Avoid breathing dust, fume, gas, mist or vapor.

Safety Measures/Incompatibility

Do not handle until all safety precautions have been read and understood.

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing or face protection.

Wear protective gloves and face protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities

Recommendation for storage

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

Keep cool. Protect from sunlight.

Store locked up.

8. Exposure controls/personal protection

Control parameters

No control value data available

Adopted value

No Adopted value data available

ACGIH(2008) STEL: 1000ppm (URT irr)

OSHA-PEL

TWA 1000ppm, 1900mg/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. Recommended material(s): butyl rubber, viton, impermeable or chemical resistant rubber

Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials.

Eye protection

Wear safety glasses with side-shields.

Wear eye/face protection.

Safety and Health measures

Wash ... thoroughly after handling.

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

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: Volatile liquid

Color: Colorless

Odor: Characteristic odor

Odor threshold: 10ppm

pH: 7.0(10g/L, 20°C)

Phase change temperature

Initial Boiling Point/Boiling point: 79°C

Melting point/Freezing point: -117°C

Decomposition temperature: >=700°C

Flash point: (C.C.) 13°C

Auto-ignition temperature: 363°C

Explosive properties: Flammability or explosive limit

lower limit: 3.3 vol %

upper limit: 19 vol %

Vapor pressure: 5.8 kPa (20°C)

Relative Vapor Density (Air=1): 1.6

Relative density of the Vapor/air-mixture at 20°C (Air = 1): 1.03

Specific gravity/Density: 0.789~0.791g/ml (20°C)

Viscosity: 1.074mPas(20°C)

Solubility

Solubility in water: Miscible

Solubility in solvent: Very soluble in ethyl ether.

n-Octanol /water partition coefficient: log Pow-0.32

10. Stability and Reactivity**Reactivity**

Runaway polymerization will not occur.

Chemical stability

Stable under normal storage/handling conditions.

Highly flammable.

Possibility of hazardous reactions

The vapour mixes well with air, explosive mixtures are easily formed.

Reacts slowly with calcium hypochlorite, silver oxide and ammonia. This generates fire and explosion hazard.

Reacts violently with strong oxidants such as nitric acid, silver nitrate, mercuric nitrate and magnesium perchlorate. This generates fire and explosion hazard.

Conditions to avoid

Contact with incompatible materials.

Open flames. Heat.

Sparks.

Incompatible materials

Oxidizing agents, Calcium hypochlorite, Silver oxide, Ammonia

Hazardous decomposition products
Carbon oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

rat LD50=6200~13700mg/kg (PATTY 6th, 2012)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

rabbit LDLo= 20000 mg/kg (SIDS, 2005)

Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

vapor : rat LC50=63000 ppmV (DFGOT vol.12, 1999)

Irritant properties

Skin corrosion/irritation

[GHS Cat. Japan, base data]

rabbit (OECD TG404) : not irritating (SIDS, 2005)

Serious eye damage /irritation

[GHS Cat. Japan, base data]

rabbit : moderate eye irritation recover within 7 days (ECETOC TR No.48(2), 1998 et al.)

No Allergenic and sensitizing effects data available

No Mutagenic effects data available

Carcinogenicity

[GHS Cat. Japan, base data]

cat.1A; ACGIH 7th, 2012; IARC, 2010

IARC-Gr.1 : Carcinogenic to humans

ACGIH-A3(2008) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

Reproductive toxicity

[GHS Cat. Japan, base data]

cat.1A; human : PATTY 6th, 2012

Teratogenic effects

human : Fetal alcohol syndrome is growth, mental, and physical problems that may occur in a baby when a mother drinks alcohol during pregnancy.

Delayed and immediate effects and also chronic effects from short- and long-term exposure

STOT

STOT-single exposure

[cat.3(resp. irrit.)]

[Japan published data]

Respiratory tract irritation (PATTY 6th, 2012)

[cat.3(drow./dizz.)]

[Japan published data]

Narcosis (PATTY 6th, 2012; SIDS, 2005)

STOT-repeated exposure

[cat.1]

[Japan published data]

liver (DFGOT vol.12, 1999)

[cat.2]

[Japan published data]

CNS (HSDB, Access on June 2013)

No Aspiration hazard data available

12. Ecological Information

Toxicity

Aquatic toxicity

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

Algae (Chlorella) EC50=1000 mg/L/96hr (SIDS, 2005)

Aquatic chronic toxicity component(s) data

[GHS Cat. Japan, base data]

Crustacea (Ceriodaphnia reticulata) NOEC=9.6 mg/L/10 days (SIDS, 2005)

Water solubility

miscible (ICSC, 2000)

Persistence and degradability

Degrade rapidly [BOD_Degradation : 89% (Registered chemicals data check & review, Japan, 1993)]

Bioaccumulative potential

log Pow=-0.32 (ICSC, 2000)

13. Disposal considerations

Waste treatment methods

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

14. Transport Information

UN No, UN CLASS

UN number: 1170

UN proper shipping name:

ETHANOL (ETHYL ALCOHOL) or ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

Transport hazard class(es): 3

Packing group: II

ERG GUIDE NO.: 127

Transport in bulk according to Annex II of MARPOL73/78 and IBC Code

Noxious Liquid ; Cat. Z...Ethanol

15. Regulatory Information

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

US major regulations

TSCA

Ethanol

Other regulatory information

We are not able to check up the regulatory information in regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

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

Eye Irrit. 2B: H320 Causes eye irritation

Ethanol(99.5),JUNSEI CHEMICAL CO., LTD.,17065jis_E1-3,30/10/2017

Carc. 1A: H350 May cause cancer

Repr. 1A: H360 May damage fertility or the unborn child

STOT SE 3: H335 May cause respiratory irritation

STOT SE 3: H336 May cause drowsiness or dizziness

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

STOT RE 2: H373 May cause damage to organs(central nervous system) through prolonged or repeated exposure

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN

Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)

2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2017 TLVs and BEIs. (ACGIH)

<http://monographs.iarc.fr/ENG/Classification/index.php>

Supplier's data/information

NITE Chemical Risk Information Platform(NITE-CHRIP)<http://www.safe.nite.go.jp/japan/db.html>

GHS Classification Guidance for Enterprises 2013 Revised Edition (August, 2013,METI)

General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It are advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.

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 2015).