Date of issue: 26/09/2016

Safety Data Sheet

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

Product identifier:

Product name: Ethanol(95)

Product code(SDS NO): 17070jis_J_E1-1

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-Cho, Koshigaya, Saitama 343-0844, Japan

Division: Quality Assurance Department

Telephone number: +81-48-986-6161

FAX: +81-48-989-2787

e-mail address: shiyaku-t@junsei.co.jp

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 and 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.
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

Substance/Mixture:

Mixture

Ingredient name:Ethanol
Content(%):94.8～95.8
Chemical formula:C2H5OH
Chemicals No, Japan:2-202
CAS No.:64-17-5
MW:46.07
ECNO:200-578-6

Ingredient name:Water
Content(%):Residual quantity of the ingredient mentioned above
Chemical formula:H2O
CAS No.:7732-18-5
MW:18.02
ECNO:231-791-2

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.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use foam, dry powder, CO2, dry sand, water in large amounts.

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 peace operated positive pressure mode.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area after material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Avoid release to the rivers, lakes, ocean, 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.

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 & 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, vapor, mist, or gas.
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.
Keep cool. Protect from sunlight.
Store locked up.

8. Exposure controls/personal protection

Control parameters
No control value data available
Adopted value
(Ethanol)
ACGIH(2008) STEL: 1000ppm (URT irr)
OSHA-PEL
(Ethanol)
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.
Eye protection
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
pH data N.A.
Phase change temperature
Initial Boiling Point/Boiling point: 79℃(Ethanol)
Melting point/Freezing point data N.A.

Decomposition temperature data N.A.
Flash point: (c.c.) 13℃(Ethanol)
Auto-ignition temperature: 363℃(Ethanol)
Explosive properties: Flammability or explosive limit
lower limit: 3.3 vol %(Ethanol)
upper limit: 19 vol %(Ethanol)
Vapor pressure: 5.8 kPa(20℃)(Ethanol)
Relative Vapor Density (Air=1): 1.6(Ethanol)
Relative density of the Vapor/air-mixture at 20℃ (Air = 1): 1.03(Ethanol)
Specific gravity/Density: 0.808～0.812 g/ml (20℃)
Solubility
Solubility in water: Miscible
Solubility in solvent: Miscible with ethyl ether.
n-Octanol /water partition coefficient data N.A.

10. Stability and Reactivity

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.
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]
(Ethanol) rat LD50=6200～13700mg/kg (PATTY 6th, 2012)
Acute toxicity (Dermal)
[GHS Cat. Japan, base data]
(Ethanol) rabbit LDLo= 20000 mg/kg(SIDS, 2005)
Acute toxicity (Inhalation)
[GHS Cat. Japan, base data]
(Ethanol) vapor : rat LC50=63000 ppmV(DFGOT vol.12, 1999)
Irritant properties
Skin corrosion/irritation
[GHS Cat. Japan, base data]
(Ethanol) rabbit(OECD TG404) : not irritating(SIDS, 2005)
Serious eye damage /irritation
[GHS Cat. Japan, base data]
(Ethanol) 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]
(Ethanol)
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]
(Ethanol) cat.1A; human : PATTY 6th, 2012
Teratogenic effects
(Ethanol)
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]
(Ethanol) Respiratory tract irritation (PATTY 6th, 2012)
[cat.3(drow./dizz.)]
[Japan published data]
(Ethanol) Narcosis (PATTY 6th, 2012; SIDS, 2005)
STOT-repeated exposure
[cat.1]
[Japan published data]
(Ethanol) liver (DFGOT vol.12, 1999)
[cat.2]
[Japan published data]
(Ethanol) CNS (HSDB, Access on June 2013)
No Aspiration hazard data available
Additional data
There are no data available on the preparation itself.

12. Ecological Information

Toxicity
Aquatic toxicity
Aquatic acute toxicity component(s) data
[GHS Cat. Japan, base data]
(Ethanol) Algae(Chlorella) EC50=1000 mg/L/96hr (SIDS, 2005)
Aquatic chronic toxicity component(s) data
[GHS Cat. Japan, base data]
(Ethanol) Crustacea(Ceriodaphnia reticulata)NOEC=9.6 mg/L/10 days (SIDS, 2005)
Water solubility
(Ethanol) miscible (ICSC, 2000)
Persistence and degradability
(Ethanol)
Degrade rapidly (BOD_Degradation : 89% (Registered chemicals data check & review, Japan, 1993))
Bioaccumulative potential
(Ethanol) log Pow=-0.32 (ICSC, 2000)

Additional information

There are no data available on the preparation itself.

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

Non Noxious Liquid ; Cat. OS…Water

15. Regulatory Information

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

US major regulations

TSCA

Ethanol; Water

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
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

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 18th edit., 2013 UN
Classification, labelling and packaging of substances and mixtures (table3-1 ECNO6182012)
2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)
2016 TLVs and BEIs. (ACGIH)
http://monographs.iarc.fr/ENG/Classification/index.php
Supplier's data/information

Chemical Risk Information Platform (CHRIP)(NITE) 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).