



Safety Data Sheet

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

Product identifier:

Product name: Phenolphthalein solution(1.0w/v%)

SDS No. : F0024E-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.

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Division: Chemical Safety Management Department

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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 2

HEALTH HAZARDS

Serious eye damage/eye irritation: Category 2B

Germ cell mutagenicity: Category 2

Carcinogenicity: Category 1A

Reproductive toxicity: Category 1A

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

Specific target organ toxicity – single exposure: Category 3 (Narcotic effects)

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

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

Label elements



Signal word: Danger

HAZARD STATEMENT

Highly flammable liquid and vapor

Causes eye irritation

Suspected of causing genetic defects

May cause cancer

May damage fertility or the unborn child

May cause respiratory irritation

May cause drowsiness or dizziness

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

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

PRECAUTIONARY STATEMENT

Prevention



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.

IF exposed or concerned: Get medical advice/attention.

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 or 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.

Disposal

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

Specific Physical and Chemical hazards

Highly flammable liquid. Vapor/air mixture may explode.

Section 3. Composition/information on ingredients

Mixture/Substance selection:

Mixture

Ingredient name:Ethanol

Content (%):80

Chemical formula:C₂H₅OH

Chemicals No, Japan:2-202

CAS No.:64-17-5

MW:46.07

ECNO:200-578-6

Ingredient name:Water

Content (%):18

Chemical formula:H₂O

CAS No.:7732-18-5

MW:18.02

ECNO:231-791-2

Ingredient name:Phenolphthalein

Content (%):1.2

Chemical formula:C₂₀H₁₄O₄

Chemicals No, Japan:9-1152

CAS No.:77-09-8

MW:318.33



ECNO:201-004-7

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.

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 water mist, alcohol-resistant 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 piece 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.

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.

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

Section 8. Exposure controls/personal protection**Control parameters****Adopted value**

(Ethanol)

ACGIH(2009) 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.

Section 9. Physical and Chemical Properties**Information on basic physical and chemical properties**

Physical state: Liquid

Color: Colorless

Odor: Characteristic odor

Melting point/Freezing point data is not available.

Boiling point or initial boiling point: (Ethanol)78°C

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: (reference)about 20°C

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: 0.84

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.

Section 10. Stability and Reactivity**Reactivity**

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

(Ethanol)

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. (ICSC 0044)

Conditions to avoid



Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Strong oxidizing agents, Calcium hypochlorite, Silver oxide, Ammonia

Hazardous decomposition products

Carbon oxides

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity data is not available.

Irritant properties

Skin corrosion/irritation data is not available.

Serious eye damage/irritation

[Data for components of the product]

[GHS Cat. Japan, base data]

(Ethanol)

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

Allergenic and sensitizing effects data is not available.

Germ cell mutagenicity

[Data for components of the product]

[GHS Cat. Japan, base data]

(Phenolphthalein)

cat. 2; NTP DB, 2008

Carcinogenicity

[Data for components of the product]

[GHS Cat. Japan, base data]

(Ethanol)

cat.1A; (IARC, 2010)

(Phenolphthalein)

cat.2; IARC Gr. 2B (IARC 76, 2000 et al.)

[IARC]

(Ethanol)

Group 1 : Carcinogenic to humans

(Phenolphthalein)

Group 2B : Possibly carcinogenic to humans

[ACGIH]

(Ethanol)

A3(2009) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

[EU]

(Phenolphthalein)

Category 1B; Substances presumed to have carcinogenic potential for humans

Reproductive toxicity

[Data for components of the product]

[GHS Cat. Japan, base data]

(Ethanol)

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

(Phenolphthalein)

cat. 1B; mouse : IARC 76, 2000

Specific target organ toxicity (STOT)

STOT-single exposure

[Data for components of the product]

[cat.3 (respiratory tract irritation)]

[GHS Cat. Japan, base data]



(Ethanol)
respiratory tract irritation (PATTY 6th, 2012)
[cat.3 (narcotic effects)]
[GHS Cat. Japan, base data]
(Ethanol)
narcotic effect (PATTY 6th, 2012; SIDS, 2005)
STOT-repeated exposure
[Data for components of the product]
[cat.1]
[GHS Cat. Japan, base data]
(Ethanol)
liver (DFGOT vol.12, 1999)
(Phenolphthalein)
intestine (IARC 76, 2000)
[cat.2]
[GHS Cat. Japan, base data]
(Ethanol)
central nervous system (HSDB, Access on Jun. 2013)
Aspiration hazard data is not available.

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]
(Ethanol)
Algae (Chlorella) EC50=1000mg/L/96hr (SIDS, 2005)
Hazardous to the aquatic environment, long-term (chronic)
[GHS Cat. Japan, base data]
(Ethanol)
Crustacea (Ceriodaphnia sp.) NOEC=9.6mg/L/10days (SIDS, 2005)

Water solubility

(Ethanol)
miscible (ICSC, 2000)

Persistence and degradability

[Data for components of the product]
(Ethanol)
Rapidly degradable (BOD_Degradation : 89% (METI existing chemical safety inspections, 1993))

Bioaccumulative potential

[Data for components of the product]
(Ethanol)
log Pow=-0.32 (ICSC, 2000)

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

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

Section 14. Transport Information

UN Number or ID Number : 1170

UN Proper Shipping Name :

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

Class or division (Transport hazard class) : 3

Packing group : II

ERG GUIDE No.: 127

Special provisions No.: 144

IMDG Code (International Maritime Dangerous Goods Regulations)

UN Number or ID Number : 1170

UN Proper Shipping Name :

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

Class or division (Transport hazard class) : 3

Packing group : II

Special provisions No.: 144

IATA (Dangerous Goods Regulations)

UN Number or ID Number : 1170

UN Proper Shipping Name :

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

Class or division (Transport hazard class) : 3

Hazard labels : Flamm.liquid

Packing group : II

Special provisions No.: A3; A58; A180

Environmental hazards

Marine pollutants (yes/no) : no

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

Noxious Liquid Substances ; Cat. Z

Ethanol

Non Noxious Liquid Substances ; Cat. OS

Water

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

Ethanol; Phenolphthalein; Water

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 2: H225 Highly flammable liquid and vapour
Serious eye damage/eye irritation, Category 2B: H320 Causes eye irritation
Germ cell mutagenicity, Category 2: H341 Suspected of causing genetic defects
Carcinogenicity, Category 1A: H350 May cause cancer
Reproductive toxicity, Category 1A: H360 May damage fertility or the unborn child
STOT – single exposure, Category 3, Respiratory tract irritation: H335 May cause respiratory irritation.
STOT – single exposure, Category 3, Narcotic effects: H336 May cause drowsiness or dizziness.
STOT – Repeated exposure, Category 1: H372 Causes damage to organs through prolonged or repeated exposure
STOT – Repeated exposure, Category 2: H373 May cause damage to organs through prolonged or repeated exposure

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).