

Phenol red ethanol(20) solution (1g/L),

JUNSEI CHEMICAL CO., LTD.,96721jis\_J\_E1-1,12/Sep/2025

Date of issue for the 1st edition : 12/Sep/2025

## Safety Data Sheet

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

Product identifier:

Product name: Phenol red ethanol(20) solution (1g/L)

Reference number(SDS):96721jis\_J\_E1-1

Product type:

Reagent

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the product: Research and Development (Titration indicator)

Uses advised against: Do not use for other purposes.

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, 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

### 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 3

HEALTH HAZARDS

Serious eye damage/eye irritation: Category 2B

Carcinogenicity: Category 1A

Reproductive toxicity: Category 1A

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 classified/Classification not possible

Label elements



Signal word: Danger

HAZARD STATEMENT

H226-Flammable liquid and vapor

H320-Causes eye irritation

H350-May cause cancer

H360-May damage fertility or the unborn child

H372-Causes damage to organs through prolonged or repeated exposure

H373-May cause damage to organs through prolonged or repeated exposure

PRECAUTIONARY STATEMENT

Prevention

Obtain special instructions before use.

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

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Keep container tightly closed.

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- 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.
- 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 water mist, alcohol-resistant foam, dry powder, CO2 to extinguish.
- Get medical advice/attention if you feel unwell.
- IF exposed or concerned: Get medical advice/attention.
- 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 cool.
- Store locked up.

#### Disposal

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

#### Specific Physical and Chemical hazards

- Flammable liquid. Vapor/air mixture may explode.

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### Section 3. Composition/information on ingredients

#### Mixture/Substance selection:

##### Mixture

Ingredient name: Phenol red  
Content (%):0.1  
Chemical formula:C<sub>19</sub>H<sub>14</sub>O<sub>5</sub>S  
ENCS:4-271  
CAS No.:143-74-8  
MW:354.38  
EC No.:205-609-7

Ingredient name: Ethanol  
Content (%):15.6  
Chemical formula:C<sub>2</sub>H<sub>5</sub>OH  
ENCS:2-202  
CAS No.:64-17-5  
MW:46.07  
EC No.:200-578-6

Ingredient name: Water  
Content (%):Residual quantity of the ingredient mentioned above.  
Chemical formula:H<sub>2</sub>O  
ENCS: Existing Chemical Substances under CSCL  
CAS No.:7732-18-5  
MW:18.02  
EC No.:231-791-2

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

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**Section 4. First-aid measures**

## Descriptions of first-aid measures

## General measures

- Get medical advice/attention if you feel unwell.
- Keep victim warm and quiet.
- Call emergency medical service.

**IF INHALED**

- Remove person to fresh air and keep comfortable for breathing.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.
- IF INHALED:** 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.
- In case of burns, immediately cool affected skin for as long as possible with cold water.
- Do not remove clothing if adhering to skin.
- If skin irritation or rash occurs: Get medical advice/attention.
- Remove and isolate contaminated clothing and shoes.

**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.
- IF SWALLOWED:** Call a POISON CENTER/doctor/physician if you feel unwell.

## Most important symptoms and effects, both acute and delayed

- Specific information on symptom and effect are unknown.

## Indication of any immediate medical attention and special treatment needed

- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

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**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

- 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 resistant or flame retardant clothing.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure mode.

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**Section 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 until material pick up is complete.
- Wear proper protective equipment.
- PUBLIC SAFETY:** Ventilate closed spaces before entering.
- Do not touch or walk through spilled material.

**Environmental precautions**

- Runoff to sewer may create fire or explosion hazard.
- Vapor explosion hazard indoors, outdoors or in sewers.
- Avoid release to headsprings, rivers, lakes, ocean and groundwater.

**Methods and materials for containment and cleaning up**

- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- Use clean non-sparking tools to collect absorbed material.
- All equipment used when handling the product must be grounded.
- Water spray may reduce vapor; but may not prevent ignition in closed spaces.

**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.
- Keep out of low areas.

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**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.

(Precautions)

- Avoid contact with skin.
- Avoid contact with eyes.

**Safety Measures**

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Use personal protective equipment as required.
- When using do not eat, drink or smoke.

**Any incompatibilities**

- Strong oxidizing agents should not be mixed with the chemicals.

**Advice on general occupational hygiene**

- Wash contaminated parts thoroughly after handling.
- Do not eat, drink or smoke when using this product.

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#### Storage

##### Conditions for safe storage

- Store in a well-ventilated place. Keep container tightly closed.
- Keep cool. Protect from sunlight.
- Store in accordance with local/national regulation.
- Store locked up.

Container and packaging materials for safe handling data is not available.

#### Specific end use(s)

- See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

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### Section 8. Exposure controls/personal protection

#### Control parameters

Control value and Concentration standard value under ISHA

Not established

Occupational Exposure Limit

JSOH

Not established

ACGIH

(Ethanol)

STEL: 1000ppm (URT irr)

#### 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

Select and wear respiratory protection in accordance with approved standards (e.g. JIS T8150).

###### Hand protection

- Wear protective gloves. Recommended material(s): neoprene, nitrile, butyl rubber, viton, PVC, impermeable or chemical resistant rubber
- Inspect before use and replace worn or damaged gloves.
- Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.
- Chemical-resistant, impervious gloves complying with an approved standard (e.g. JIS T8116) should be used.

###### Eye protection

- Wear safety glasses with side-shields.
- Wear eye/face protection in accordance with approved standards (e.g. JIS T8147).

###### Skin and body protection

- Wear impervious clothing and boots in case of repeated or prolonged treatment.
- Personal protective equipment for the body and skin should be selected based on the task being performed and the risks involved.

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### Section 9. Physical and Chemical Properties

#### Information on basic physical and chemical properties

Physical state: Liquid

Color: Yellow~Orange

Odor: Characteristic odor

Odor threshold data is not available.

Melting point/Freezing point data is not available.

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Boiling point or initial boiling point data is not available.  
Boiling range data is not available.  
Flammability data is not available.  
Lower and upper explosion limit/flammability limit data is not available.  
Flash point: ca. 50°C(est.)  
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: Miscible  
    Solubility in solvent data is not available.  
Partition coefficient n-octanol/water data is not available.  
Vapor pressure data is not available.  
Density and/or relative density data is not available.  
Relative vapor density (Air=1) data is not available.  
Particle characteristics data is not available.

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## Section 10. Stability and Reactivity

### Reactivity

Reactivity data is not available.

### Chemical stability

Stable under normal storage/handling conditions.

### Possibility of hazardous reactions

Possibility of hazardous reactions data is not available.

### Conditions to avoid

Contact with incompatible materials.

Open flames. Heating. Sparks.

### Incompatible materials

Strong oxidizing agents

### Hazardous decomposition products

Carbon oxides, Sulfur oxides

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## Section 11. Toxicological Information

The product has not been subjected to toxicological testing. Refer to the available data on the constituents.

### Information on toxicological effects

#### Acute toxicity

##### Acute toxicity (Oral)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

[NITE-CHRIP]

(Ethanol)

rat LD50: 7000 – 11000 mg/kg (source: NITE)

##### Acute toxicity (Dermal)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

[NITE-CHRIP]

(Ethanol)

rabbit LDLo: 20000 mg/kg (source: NITE)

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#### Acute toxicity (Inhalation)

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

[NITE-CHRIP]

(Ethanol)

vapor: rat LC50: 63000 ppmV (source: NITE)

#### Irritant properties

Skin corrosion/irritation

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Serious eye damage/irritation

[Product]

Category 2B, Causes eye irritation

[Data for components of the product]

[NITE-CHRIP]

(Ethanol)

Category 2B (source: NITE)

#### Sensitization

Respiratory sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Skin sensitization

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

#### Germ cell mutagenicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

#### Carcinogenicity

[Product]

Category 1A, May cause cancer

[Data for components of the product]

[NITE-CHRIP]

(Ethanol)

Category 1A (source: NITE)

[IARC]

(Ethanol)

Group 1 : Carcinogenic to humans

[ACGIH]

(Ethanol)

A3: Confirmed Animal Carcinogen with Unknown Relevance to Humans

#### Reproductive toxicity

[Product]

Category 1A, May damage fertility or the unborn child

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[Data for components of the product]

[NITE-CHRIP]

(Ethanol)

Category 1A (source: NITE)

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

[NITE-CHRIP]

(Ethanol)

Category 3 (Respiratory tract irritation), Category 3 (Narcotic effects) (source: NITE)

STOT-repeated exposure

[Product]

Category 1, Causes damage to organs through prolonged or repeated exposure

Category 2, May cause damage to organs through prolonged or repeated exposure

[Data for components of the product]

[NITE-CHRIP]

(Ethanol)

Category 1 (liver), Category 2 (central nervous system) (source: NITE)

Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

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## Section 12. Ecological Information

The product has not been subjected to ecotoxicological testing. Refer to the available data on the constituents.

Ecotoxicity

Aquatic toxicity

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

Hazardous to the aquatic environment, short-term (acute)

[NITE-CHRIP]

(Ethanol)

Algae (*Chlorella vulgaris*) 96-hour EC50: 1000 mg/L (source: NITE)

Crustacea (*Daphnia magna*) 48-hour EC50: 5463 mg/L (source: NITE)

Fish (*Oncorhynchus mykiss*) 96-hour LC50: 11200 ppm (source: NITE)

Hazardous to the aquatic environment, long-term (chronic)

[NITE-CHRIP]

(Ethanol)

Crustacea (*Ceriodaphnia* sp.) 10-day NOEC: 9.6 mg/L (source: NITE)

Water solubility

[Data for components of the product]

(Ethanol)

miscible (source: ICSC, 2018)

Persistence and degradability

[Data for components of the product]

(Ethanol)

Rapidly degradable (Degradation rate: 89% (by BOD)) (source: NITE)

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Bioaccumulative potential

[Data for components of the product]

(Ethanol)

log Pow: -0.32 (source: ICSC, 2018)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

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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.

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Section 14. Transport Information

UN No., UN CLASS

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 : III

ERG GUIDE No.: 127

Special provisions No.: 144; 223

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 : III

Special provisions No.: 144; 223

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 : III

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

MARPOL Annex V – HME (Harmful to the Marine Environment)

Carcinogenicity: cat.1, 1A, 1B

Ethanol

Reproductive toxicity: cat.1, 1A, 1B

Ethanol

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Specific target organ toxicity – repeated exposure: cat.1  
Ethanol

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## 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

64-17-5; 143-74-8; 7732-18-5

All components are listed or exempted.

Other regulatory information

We are not able to check up the regulatory information with 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.

Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

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## Section 16. Other information

GHS classification and labelling

H226-Flammable liquids, Category 3: H226 Flammable liquid and vapour

H320-Serious eye damage/eye irritation, Category 2B: H320 Causes eye irritation

H350-Carcinogenicity, Category 1A: H350 May cause cancer

H360-Reproductive toxicity, Category 1A: H360 May damage fertility or the unborn child

H372-STOT – Repeated exposure, Category 1: H372 Causes damage to organs through prolonged or repeated exposure

H373-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 23rd edit., 2023 UN

IMDG Code, 2024 Edition (Incorporating Amendment 42-24)

IATA Dangerous Goods Regulations (66th Edition) 2025

2024 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2025 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

Recommendation of occupational exposure limits (2023-2024) (JSOH)

Notification No. 0111-1 (January 11, 2022), Chemical Hazards Control Division, Industrial

Safety and Health Department, Labour Standards Bureau, MHLW in Japan

Supplier's data/information

Chemicals safety data management system "GHS Assistant" Version 4.34 (<https://www.asahi-ghs.com/>)

NITE Chemical Risk Information Platform "NITE-CHRIP"

([https://www.chem-info.nite.go.jp/chem/chrip/chrip\\_search/systemTop](https://www.chem-info.nite.go.jp/chem/chrip/chrip_search/systemTop))

GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.1) (May, 2024, METI)

Abbreviations and acronyms

SDS (Safety Data Sheet)

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LD50 (Lethal Dose, 50%)  
LC50 (Lethal Concentration, 50%)  
IARC (International Agency for Research on Cancer)  
ACGIH (American Conference of Governmental Industrial Hygienists)  
EPA (US Environmental Protection Agency)  
NTP (US National Toxicology Program)  
METI (Ministry of Economy, Trade and Industry in Japan)  
MHLW (Ministry of Health, Labour and Welfare in Japan)  
MOE (Ministry of the Environment in Japan)  
JSOH (Japan Society for Occupational Health)  
ISHA (Industrial Safety and Health Act in Japan)  
CSCL (Chemical Substances Control Law in Japan)  
EU (European Union)  
EC50 (Effective Concentration, 50%)  
NOEC (No Observed Effect Concentration)  
BOD (Biochemical Oxygen Demand)  
COD (Chemical Oxygen Demand)  
BCF (Bioconcentration Factor)  
anh (anhydride)

#### 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 Data published in Japan (National Institute of Technology and Evaluation (NITE) Chemical Risk Information Platform (NITE-CHRIP), up to FY2023).