

## Safety Data Sheet

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

#### Product identifier:

Product name: Ethyl cyanoacetate

Reference number(SDS):33350jis\_J\_E1-2

#### Product type:

Reagent

#### Recommended use of the chemical and restrictions on use

Recommended uses: Research and Development

Restrictions on uses: 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

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### Section 2. Hazards identification

#### Classification of the substance or mixture

##### HEALTH HAZARDS

Serious eye damage/eye irritation: Category 2A

##### ENVIRONMENT HAZARDS

Hazardous to the aquatic environment, short-term (acute): Category 3

(Note) GHS classification without description: Not classified/Classification not possible

#### Label elements

##### Hazard pictograms:



Signal word: Warning

#### Hazard statements

H319-Causes serious eye irritation

H402-Harmful to aquatic life

#### Precautionary statements

##### Prevention

Avoid release to the environment.

Wear protective gloves/eye protection/face protection.

Wash hands thoroughly after handling. Do not touch eyes.

##### Response

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 help.

##### Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

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**Section 3. Composition/information on ingredients****Substance/mixture:****Substance**

Ingredient name:Ethyl cyanoacetate

Content (%):93.0 &lt;

Chemical formula:C5H7NO2

ENCS:2-1549

CAS No.:105-56-6

MW:113.11

EC No.:203-309-0

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****IF INHALED**

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF INHALED: Get medical help.

**IF ON SKIN**

IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.

If skin irritation or rash occurs: Get medical help.

**IF IN EYES**

IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical help.

**IF SWALLOWED**

Rinse mouth.

IF SWALLOWED: Get medical help.

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

Information on indication of any immediate medical attention and special treatment needed is not available.

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**Section 5. Fire-fighting measures****Extinguishing media****Suitable extinguishing media**

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

**Unsuitable extinguishing media**

Unsuitable extinguishing media data is not available.

**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****Special extinguishing method**

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

### Personal precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

### Environmental precautions

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

### Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, etc.), then place in a chemical waste container.

### Preventive measures for secondary accident

Collect spillage.

### Reference to other sections

Refer to section 8

Refer to section 13

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## Section 7. Handling and storage

### Engineering measures

(Measures to prevent operator exposure)

Avoid breathing dust/fume/gas/mist/vapors/spray.

(Measures to prevent fire and explosion)

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

(Local ventilation/general ventilation)

Exhaust/ventilator should be available.

(Precautions)

Avoid contact with skin.

Avoid contact with eyes.

### Advice on safe handling

Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

### Avoidance of contact

See Section 10: Stability and Reactivity.

### Advice on general occupational hygiene

Do not get in eyes, on skin, or on clothing.

Wash hands thoroughly after handling. Do not touch eyes.

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

### Conditions for safe storage

Keep container tightly closed.

Keep cool.

Store in accordance with local/regional/national/international regulations.

Protect from sunlight. Store in a well-ventilated place.

### Incompatible substances

Refer to Section 10. Stability and reactivity.

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

Permissible concentration

Control value and Concentration standard value under ISHA

Not established

Occupational exposure limit values

JSOH

Not established

ACGIH

Not established

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, such as personal protective equipment

Respiratory protection

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

Hand protection

Wear protective gloves. Recommended material(s): butyl rubber, viton

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/face 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: Colorless~Pale yellow

Odor: Aromatic odor

Odor threshold data is not available.

Melting point/Freezing point: -22°C

Boiling point or initial boiling point and boiling range: 205°C

Flammability data is not available.

Lower and upper explosion limit data is not available.

Flash point: 110°C(Closed cup)

Auto-ignition temperature: 478°C

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: 20g/liter(25°C)

Solubility in solvent: Very soluble in diethyl ether, ethanol.

Partition coefficient n-octanol/water: -0.119(23°C)

Vapor pressure: 0.0388 mmHg(25°C)

Density and/or relative density: 1.0654g/cm<sup>3</sup>(20°C)

Relative vapor density (Air=1): 3.9

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

Avoid direct sunlight, fire, flame, high temperature.

Contact with incompatible materials.

### Incompatible materials

Strong acids, Strong bases, Strong oxidizing agents

### Hazardous decomposition products

Carbon oxides, Nitrogen oxides, Cyanides.

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## Section 11. Toxicological Information

### 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]

rat LD50 (OECD TG 401): >2000 mg/kg (source: SIAR, 2006)

##### Acute toxicity (Dermal)

###### [Product]

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

###### [Data for components of the product]

rabbit LD50(OECD TG 401): >1000 mg/kg (source: SIAR, 2006)

rat LD50 (92/69/EEC B.3.): >2000 mg/kg (source: SIAR, 2006)

##### Acute toxicity (Inhalation)

###### [Product]

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

###### [Data for components of the product]

No data available.

#### Skin corrosion/irritation

###### [Product]

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

###### [Data for components of the product]

rabbit (OECD TG404, GLP): not irritating (source: SIAR, 2006)

#### Serious eye damage/irritation

###### [Product]

Category 2A, Causes serious eye irritation

###### [Data for components of the product]

rabbit (OECD TG405, GLP): moderately irritating (source: SIAR, 2006)

#### Respiratory or skin 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]

[Company proprietary data]

guinea pigs (Buehler test): not skin sensitizing (source: SIAR, 2006)

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]

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

[Data for components of the product]

No data available.

Reproductive toxicity

[Product]

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

[Data for components of the product]

No data available.

Specific target organ toxicity – single exposure

[Product]

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

[Data for components of the product]

No data available.

Specific target organ toxicity – repeated exposure

[Product]

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

[Data for components of the product]

No data available.

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

Ecotoxicity

Aquatic toxicity

[Product]

Category 3, Harmful to aquatic life

[Data for components of the product]

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

Fish (Danio rerio) 96-hour LC50: 59mg/L (source: SIAR, 2006)

Water solubility

[Data for components of the product]

20g/L (25°C) (source: HSDB)

Persistence and degradability

[Data for components of the product]

Degradation rate after 28 days: Average 68% (by BOD) (source: J-CHECK)

## Bioaccumulative potential

[Data for components of the product]

log Pow: -0.119(23°C) (source: REACH Registration dossier)

## 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

## Waste treatment methods

## Waste from residues

Disposal should be in accordance with local, national, and international laws and regulations.

Comply with relevant laws and regulations as well as local municipal standards.

Avoid release to the environment.

Do not dump into sewers, on the ground or into any body of water.

## Contaminated packing

Disposal should be in accordance with local, national, and international laws and regulations.

Comply with relevant laws and regulations as well as local municipal standards.

Dispose of container after using the contents completely.

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Section 14. Transport Information

## UNRTDG

UN number : Not regulated

UN Proper Shipping Name : Not regulated

Transport hazard class(es) : Not regulated

Packing group : Not regulated

## IMDG Code (International Maritime Dangerous Goods Regulations)

UN number : Not regulated

UN Proper Shipping Name : Not regulated

Transport hazard class(es) : Not regulated

Packing group : Not regulated

## IATA (Dangerous Goods Regulations)

UN number : Not regulated

UN Proper Shipping Name : Not regulated

Transport hazard class(es) : Not regulated

Packing group : Not regulated

## Marine pollutants (yes/no) : no

## Special precautions for user

No information available.

## Maritime transport in bulk according to IMO instruments

Not applicable to Transport in bulk according to Annex II of MARPOL and the IBC Code

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Section 15. Regulatory Information

## U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

105-56-6

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.

Ethyl cyanoacetate ,JUNSEI CHEMICAL CO., LTD.,33350jis\_J\_E1-2,10/Jul/2026

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

H319–Serious eye damage/eye irritation, Category 2A: H319 Causes serious eye irritation

H402–Hazardous to the aquatic environment, short-term (acute), Category 3: H402 Harmful to aquatic life

### 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 (67th Edition) 2026

2024 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2026 TLVs and BEIs. (ACGIH)

JIS Z 7252 : 2025

JIS Z 7253 : 2025

Recommendation of occupational exposure limits (2024–2025) (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 4.39 (<https://www.asahi-ghs.com/>)

NITE Chemical Risk Information Platform "NITE-CHRIIP"

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

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

### Abbreviations and acronyms

ACGIH – American Conference of Governmental Industrial Hygienists;

anh – anhydride;

ATE – Acute Toxicity Estimate;

BCF – Bioconcentration Factor;

BOD – Biochemical Oxygen Demand;

Cat. – Category;

Ceiling–C – Ceiling value;

COD – Chemical Oxygen Demand;

CSCL – Chemical Substances Control Law in Japan;

DSEN – Dermal Sensitization;

EC No. – The European Community number;

EC50 – Effective Concentration 50;

ENCS – Existing and New Chemical Substances Inventory under CSCL

EPA – US Environmental Protection Agency;

EU – European Union;

GHS – Globally Harmonized System of Classification and Labelling of Chemicals;

IARC – International Agency for Research on Cancer;

IATA – International Air Transport Association;

IBC Code – International Code for the Construction and Equipment of Ships carrying



Dangerous Chemicals in Bulk;  
IMDG Code – International Maritime Dangerous Goods Code;  
ISHA – Industrial Safety and Health Act in Japan;  
JSOH – Japan Society for Occupational Health;  
LC50 – Lethal Concentration 50;  
LD50 – Lethal Dose 50;  
logPow – n-Octanol/water Partition Coefficient;  
MARPOL – International Convention for the Prevention of Pollution from Ships;  
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  
NOEC – No Observed Effect Concentration;  
NTP – US National Toxicology Program;  
REACH – Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation  
(EC) No.1907/2006;  
RSEN – Respiratory Sensitization;  
Skin – Danger of cutaneous absorption;  
STEL – Short-term Exposure Limit;  
STOT – Specific target organ toxicity;  
SVHC – Substance of Very High Concern under REACH;  
TWA – time-weighted average;  
UN – United Nations;  
UNRTDG – United Nations Recommendations on the Transport of Dangerous Goods;

#### General Disclaimer

The information relates to this specific material. It may not be valid for this material, if used in combination with any other materials or in any process. It is the user's responsibility to satisfy him-selves as to the suitability and completeness of this information for his own particular use.

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 FY2024).