

## Safety Data Sheet

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

Product identifier:

Product name: Acetone

Product code (SDS NO): 11265jis\_E1-4

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

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### 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

Reproductive toxicity: Category 2

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

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

Specific target organ toxicity – repeated exposure: Category 1 (central nervous system, respiratory system, gastrointestinal tract)

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

Label elements



Signal word: Danger

HAZARD STATEMENT

H225–Highly flammable liquid and vapor

H320–Causes eye irritation

H361–Suspected of damaging fertility or the unborn child

H335–May cause respiratory irritation

H336–May cause drowsiness or dizziness

H372–Causes 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/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.

Acetone, JUNSEI CHEMICAL CO., LTD., 11265jis\_E1-4,23/04/2020

- 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.
- Use personal protective equipment as required.
- Do not eat, drink or smoke when using this product.

**Response**

- In case of fire: Use appropriate media other than water for extinction.
- Get medical advice/attention if you feel unwell.
- IF exposed or concerned: Get medical advice/attention.
- Call a POISON CENTER or doctor/physician 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.

**Specific Physical and Chemical hazards**

- Highly flammable liquid. Vapor/air mixture may explode.

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

- Ingredient name: Acetone
- Content (%): 99.0
- Chemical formula: C<sub>3</sub>H<sub>6</sub>O
- Chemicals No, Japan: 2-542
- CAS No.: 67-64-1
- MW: 58.08
- ECNO: 200-662-2

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**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)

Sore throat. Cough. Confusion. Headache. Dizziness. Drowsiness. Unconsciousness. Nausea. Vomiting.

(Symptoms when skin and/or eye contact)

Dry skin. Redness of the eyes. Pain of the eyes. Blurred vision.

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## 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use water mist, alcohol-resistant foam, dry powder, CO<sub>2</sub> to extinguish.

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

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.

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## 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.

Environmental precautions

Runoff to sewer may create fire or explosion hazard.

Vapors may form explosive mixtures with air.

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.

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.

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## 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/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.

#### Safety Measures

Obtain special instructions before use.

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/eye protection/face protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

#### Any incompatibilities

Acids, Bases, 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.

#### Storage

##### Conditions for safe storage

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

Keep cool. Protect from sunlight.

Store locked up.

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

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## 8. Exposure controls/personal protection

### Control parameters

#### Control value

Japan control value (2004)  $\leq$  500ppm

#### Adopted value

JSOH(1972) 200ppm; 470mg/m<sup>3</sup>

ACGIH(2014) TWA: 250ppm;

STEL: 500ppm (URT & eye irr ; CNS impair)

#### OSHA-PEL

TWA: 1000ppm, 2400mg/m<sup>3</sup>

#### NIOSH-REL

TWA: 250ppm

### 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

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.

## Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.

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## 9. Physical and Chemical Properties

## Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless

Odor: Characteristic odor

Odor threshold data is not available.

pH: 5~6 (20°C)

Boiling point or initial boiling point: 56°C

Boiling range data is not available.

Evaporation rate data is not available.

Melting point/Freezing point: -95°C

Decomposition temperature data is not available.

Self-Accelerating Decomposition Temperature/SADT data is not available.

Flammability (gases, liquids and solids): Ignitable

Flash point: (C.C.) -18°C

Auto-ignition temperature: 465°C

Critical temperature: 235°C

Lower and upper explosion limit/flammability limit:

Lower explosion limit: 2.1 vol %

Upper explosion limit: 13 vol %

Vapor pressure: 24 kPa (20°C)

VOC data is not available.

Relative vapor density (Air=1): 2.0

Relative density of the Vapor/air - mixture at 20°C (Air = 1): 1.2

Density and/or relative density: 0.789~0793 g/ml (20°C)

Dynamic viscosity: 0.32mPas(20°C)

Kinematic viscosity data is not available.

Solubility:

Solubility in water: Miscible

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

n-Octanol/water partition coefficient: log Pow-0.24

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## 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 is heavier than air and may travel along the ground; distant ignition possible.

Contact with strong oxidants such as acetic acid, nitric acid and hydrogen peroxide generates explosive peroxides.

Reacts with chloroform and bromoform under basic conditions. This generates fire and explosion hazard.

Attacks plastics.

**Conditions to avoid**

Contact with incompatible materials.

Open flames. Heat. Sparks.

**Incompatible materials**

Acids, Bases, Strong oxidizing agents

**Hazardous decomposition products**

Carbon oxides

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**11. Toxicological Information****Information on toxicological effects****Acute toxicity****Acute toxicity (Oral)**

[GHS Cat. Japan, base data]

rat LD50=5800mg/kg(SIDS, 2002 et al.)

**Acute toxicity (Dermal)**

[GHS Cat. Japan, base data]

rabbit LD50 >7400mg/kg(SIDS, 2002 et al.)

**Acute toxicity (Inhalation)**

[GHS Cat. Japan, base data]

vapor; rat LC50=32000ppm/4hr(SIDS, 2002 et al.)

**Labor standard law, Japan; Toxic**

Acetone

**Irritant properties****Skin corrosion/irritation**

[GHS Cat. Japan, base data]

rabbit : not irritating(SIDS, 2002 et al.)

**Serious eye damage/irritation**

[GHS Cat. Japan, base data]

rabbit : Although a corneal epithelium is destroyed, substrate is not destroyed, and destruction of a corneal epithelium will be recovered in 4~6 days (SIDS, 2002).

**Sensitization****Skin sensitization**

[GHS Cat. Japan, base data]

It is considered that acetone is not a skin sensitizer. (EHC 207, 1998)

**Germ cell mutagenicity**

[GHS Cat. Japan, base data]

mouse/hamster\_ micronucleus assay : Negative (SIDS, 2002 et al.)

Reverse-mutation assay in bacteria (Ames test) :Negative(SIDS, 2002 et al.)

Chromosome aberration test :Negative(SIDS, 2002 et al.)

**Carcinogenicity**

ACGIH-A4(2014) : Not Classifiable as a Human Carcinogen

EPA-I; "Inadequate Information to Assess Carcinogenic Potencial"(2005)

**Reproductive toxicity**

[GHS Cat. Japan, base data]

cat. 2; EHC 207, 1998

## STOT

STOT-single exposure

[cat.3 (resp. irrit.)]

[GHS Cat. Japan, base data]

respiratory tract irritation (ACGIH 7th, 2001)

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

[GHS Cat. Japan, base data]

narcosis (ACGIH 7th, 2001)

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

CNS; respiratory system; digestive apparatus (ATSDR Addendum, 2011)

Aspiration hazard data is not available.

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**12. Ecological Information**

Ecotoxicity

Aquatic toxicity

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

Fish (fat head minnow) LC50 &gt;100mg/L/96hr (EHC207, 1998)

Water solubility

1000 g/L (PHYSPROP Database, 2005)

Persistence and degradability

BOD\_Degradation : Avg.96% (Registered chemicals data check &amp; review, Japan)

Bioaccumulative potential

log Pow=-0.24 (ICSC, 2009)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

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**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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**14. Transport Information**

UN No., UN CLASS

UN No.: 1090

Proper Shipping Name : ACETONE

Class or division : 3

Packing group : II

ERG GUIDE No.: 127

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 1090

Proper Shipping Name : ACETONE

Class or division : 3

Packing group : II

## IATA Dangerous Goods Regulations

UN No.: 1090  
Proper Shipping Name : ACETONE  
Class or division : 3  
Hazard labels : Flamm.liquid  
Packing group : II

## Environmental hazards

MARPOL Annex III – Prevention of pollution by harmful substances  
Marine pollutants (yes/no) : no

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**15. Regulatory Information**

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

## Environmental hazards

MARPOL Annex V – Prevention of pollution by garbage discharge  
Specific target organ toxicity – repeated exposure: cat.1  
Acetone

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

Noxious Liquid ; Cat. Z  
Acetone  
Flammable Liquid  
Acetone

## Basel law, Japan

Acetone

## US Federal Regulations

## Chemicals listed in TSCA Inventory

Acetone

## 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).

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**16. Other information**

## GHS classification and labelling

H225–Flam. Liq. 2: H225 Highly flammable liquid and vapor  
H320–Eye Irrit. 2B: H320 Causes eye irritation  
H361–Repr. 2: H361 Suspected of damaging fertility or the unborn child  
H335–STOT SE 3: H335 May cause respiratory irritation  
H336–STOT SE 3: H336 May cause drowsiness or dizziness  
H372–STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure

## Reference Book

Globally Harmonized System of classification and labelling of chemicals, (6th ed., 2015), UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 20th edit., 2017 UN IMDG Code, 2018 Edition (Incorporating Amendment 39–18)  
IATA Dangerous Goods Regulations (61th Edition) 2020  
Classification, labelling and packaging of substances and mixtures (Table 3 ECNO6182012)



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2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2019 TLVs and BEIs. (ACGIH)

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

JIS Z 7253 : 2019

JIS Z 7252 : 2019

2019 Recommendation on TLVs (JSOH)

Supplier's data/information

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

NITE Chemical Risk Information Platform (NITE-CHRIP)

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

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

#### 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 2018).