

Safety Data Sheet

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

Product identifier:

Product name: 2-Propanol

Product code (SDS NO): 64605jis_E1-2

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

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 2

Reproductive toxicity: Category 2

Specific target organ toxicity – single exposure: Category 1 (central nervous system, systemic toxicity)

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

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

Specific target organ toxicity – repeated exposure: Category 2 (respiratory system, liver, spleen)

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

Label elements



Signal word: Danger

HAZARD STATEMENT

H225–Highly flammable liquid and vapor

H319–Causes serious eye irritation

H361–Suspected of damaging fertility or the unborn child

H370–Causes damage to organs after single exposure

H335–May cause respiratory irritation

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/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/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 for extinction.
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.

Disposal

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

Specific Physical and Chemical hazards

Highly flammable liquid. Vapor/air mixture may explode.

3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Common name, synonyms: Isopropyl alcohol

Ingredient name: 2-Propanol

Content (%): 99.5 <

Chemical formula: C₃H₈O

Chemicals No, Japan: 2-207

CAS No.: 67-63-0

MW: 60.10

ECNO: 200-661-7

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. Do NOT induce vomiting.

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)

Cough. Dizziness. Drowsiness. Headache. Sore throat. Abdominal pain. Laboured breathing. Nausea.
Unconsciousness. Vomiting.

(Symptoms when skin and/or eye contact)

Dry skin. Redness of the eyes.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use alcohol-resistant foam, dry powder, CO₂, water in large amounts 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.

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.

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

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.

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.

Wear protective gloves, protective clothing or 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.

Storage

Conditions for safe storage

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

Keep cool. Protect from sunlight.

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

8. Exposure controls/personal protection

Control parameters

Control value

Japan control value (2004) \leq 200ppm

Adopted value

JSOH(1987) (ceiling) 400ppm; 980mg/m³

ACGIH(2001) TWA: 200ppm;

STEL: 400ppm (Eye & URT irr; CNS impair)

OSHA-PEL

TWA: 400ppm, 980mg/m³

NIOSH-REL

TWA: 400ppm; STEL: 500ppm

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): nitrile, butyl rubber, viton

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.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Liquid

Color: Colorless-clear

Odor: Characteristic odor

Odor threshold: 200ppm; 7.84~490 mg/m³

pH data is not available.

Boiling point or initial boiling point: 83°C

Boiling range data is not available.

Evaporation rate data is not available.

Melting point/Freezing point: -90°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.) 11.7°C

Auto-ignition temperature: 456°C

Critical temperature data is not available.

Lower and upper explosion limit/flammability limit:

Lower explosion limit: 2.0 vol %

Upper explosion limit: 12.7vol %(93°C)

Vapor pressure: 4.4 kPa (20°C)

VOC data is not available.

Relative vapor density (Air=1): 2.1

Relative density of the Vapor/air - mixture at 20°C (Air = 1): 1.05

Density and/or relative density : 0.784~0.787g/ml(20°C)

Dynamic viscosity: 2.038mPa (25°C)

Kinematic viscosity data is not available.

Solubility

Solubility in water: Miscible

Solubility in solvent: Miscible with ethanol, diethyl ether.

n-Octanol/water partition coefficient : log Pow0.05

No Particle characteristics data is not available.

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 mixes well with air, explosive mixtures are easily formed.

Reacts with strong oxidants.

Attacks some plastics (e.g. Polyvinyl chloride) and rubber (e.g. Natural rubber).

Conditions to avoid

Contact with incompatible materials.

Open flames. Heat. Sparks.

Incompatible materials

Strong oxidizing agents, Plastics, Rubber.

Hazardous decomposition products

Carbon oxides

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

[GHS Cat. Japan, base data]

rat LD50=5480mg/kg (EHC 103, 1990)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

rabbit LD50=12870mg/kg (EHC 103, 1990)

Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

vapor; rat LD50=72.6 mg/L/4hr(29512 ppmV) (EHC 103, 1990 et al.)

Irritant properties**Skin corrosion/irritation**

[GHS Cat. Japan, base data]

rabbit : slight irritant (PATTY 6th, 2012 et al.)

Serious eye damage/irritation

[GHS Cat. Japan, base data]

rabbit : slight~severe irritant (PATTY 6th, 2012 et al.)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenicity

IARC-Gr.3 : Not Classifiable as a Human Carcinogen

ACGIH-A4(2001) : Not Classifiable as a Human Carcinogen

Reproductive toxicity

[GHS Cat. Japan, base data]

cat. 2; PATTY 6th, 2012

STOT**STOT-single exposure**

[cat.1]

[GHS Cat. Japan, base data]

CNS; systemic toxicity (MOE risk assessment vol.6, 2005)

[cat.3 (resp. irrit.)]

[GHS Cat. Japan, base data]

respiratory tract irritation (MOE risk assessment vol.6, 2005)

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

blood/blood system (EHC 103, 1990)

[cat.2]

[GHS Cat. Japan, base data]

respiratory apparatus; liver; spleen (EHC 103, 1990)

Aspiration hazard data is not available.

12. Ecological Information

Ecotoxicity

Aquatic toxicity

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

Fish (Atheriniformes) LC50 >100mg/L/96hr (MOE eco-toxicity tests of chemicals, 1997)

Aquatic chronic toxicity component(s) data

[GHS Cat. Japan, base data]

Crustacea (Daphnia magna) NOEC >100mg/L/21days (MOE eco-toxicity tests of chemicals, 1997)

Water solubility

infinitely soluble (25°C) (HSDB, 2013)

Persistence and degradability

Degrade rapidly [BOD_Degradation : 86% (Registered chemicals data check & review, 1993)]

Bioaccumulative potential

log Pow=0.05 (ICSC, 1999)

Mobility in soil data is not available.

Ozone depleting chemical data is not available.

13. Disposal considerations

Waste treatment methods

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

14. Transport Information

UN No., UN CLASS

UN No.: 1219

Proper Shipping Name : ISOPROPANOL (ISOPROPYL ALCOHOL)

Class or division : 3

Packing group : II

ERG GUIDE No.: 129

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 1219

Proper Shipping Name : ISOPROPANOL (ISOPROPYL ALCOHOL)

Class or division : 3

Packing group : II

IATA Dangerous Goods Regulations

UN No.: 1219

Proper Shipping Name : ISOPROPANOL (ISOPROPYL ALCOHOL)

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

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

2-Propanol

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

Noxious Liquid ; Cat. Z

2-Propanol

US major regulations

TSCA

2-Propanol

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).

16. Other information

GHS classification and labelling

H225–Flam. Liq. 2: H225 Highly flammable liquid and vapor

H319–Eye Irrit. 2: H319 Causes serious eye irritation

H361–Repr. 2: H361 Suspected of damaging fertility or the unborn child

H370–STOT SE 1: H370 Causes damage to organs after single exposure

H335–STOT SE 3: H335 May cause respiratory irritation

H372–STOT RE 1: H372 Causes damage to organs through prolonged or repeated exposure

H373–STOT RE 2: H373 May cause 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 (60th Edition) 2019

Classification, labelling and packaging of substances and mixtures (table3–1 ECNO6182012)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2019 TLVs and BEIs. (ACGIH)

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

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

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.

2-Propanol, JUNSEI CHEMICAL CO., LTD., 64605jis_E1-2, 11/09/2019

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 2017).