

Safety Data Sheet

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

Product identifier:

Product name: Methanol

Product code(SDS NO): 73125jis_J_E1-3

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-Cho, Koshigaya, 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 HAZARDS

Flammable liquids: Category 2

HEALTH HAZARDS

Acute toxicity Oral: Category 4

Serious eye damage/eye irritation: Category 2

Reproductive toxicity: Category 1B

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

Specific target organ toxicity – single exposure: Narcosis Category 3

Specific target organ toxicity – repeated exposure: Category 1 (central nervous system, visual organs)

(Note) GHS classification without description: Not applicable/Out of classification/Not classifiable

Label elements



Signal word: Danger

HAZARD STATEMENT

Highly flammable liquid and vapor

Harmful if swallowed

Causes serious eye irritation

May damage fertility or the unborn child

Causes damage to organs after single exposure

May cause drowsiness or dizziness

Causes damage to organs through prolonged or repeated exposure

PRECAUTIONARY STATEMENT

Prevention

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/eye protection/face protection.
Wear 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 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.
Take off immediately all contaminated clothing.
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.

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.

Physical and Chemical hazards

Highly flammable liquid. Vapor/air mixture may explode.

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

Common name, synonyms: Methyl alcohol

Ingredient name: Methanol

Content(%): 99.6 <

Chemical formula: CH₄O

Chemicals No, Japan: 2-201

CAS No.: 67-56-1

MW: 32.04

ECNO: 200-659-6

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.

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. Induce vomiting (**ONLY IN CONSCIOUS PERSONS!**).

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. Headache. Nausea. Weakness. Visual disturbances. Abdominal pain.

Shortness of breath. Vomiting. Convulsions. Unconsciousness.

(Symptoms when skin and/or eye contact)

Dry skin. Redness. Eye's pain.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

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

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 after material pick up is complete.

Wear proper protective equipment.

PUBLIC SAFETY: Ventilate closed spaces before entering.

Environmental precautions

Avoid release to the 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 & 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.

Avoid breathing dust, fume, gas, mist or vapor.

Safety Measures/Incompatibility

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 or face protection.

Wear protective gloves and face protection.

Wear eye protection/face protection.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities**Recommendation for storage**

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

Keep cool. Protect from sunlight.

Store locked up.

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

Japan control value (1995) ≤ 200 ppm

Adopted value

JSOH(1963) 200ppm; 260mg/m³ (dermal)

ACGIH(2008) TWA: 200ppm

STEL: 250ppm (Headache; eye dam; dizziness; nausea)

Notation...Skin

OSHA-PEL

TWA 200ppm, 260mg/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.

Wear positive pressure self-contained breathing apparatus (SCBA).

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.

Safety and Health measures

Wash ... thoroughly after handling.

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

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical properties

Appearance: Liquid

Color: Colorless-clear

Odor: Characteristic odor

Odor threshold: 100ppm

pH data N.A.

Phase change temperature

Initial Boiling Point/Boiling point: 65°C

Melting point/Freezing point: -98°C

Decomposition temperature data N.A.

Flash point: (c.c.)12°C

Auto-ignition temperature: 464°C

Explosive properties: Flammability or explosive limit

lower limit: 5.5 vol %

upper limit: 44 vol %

Vapor pressure: 12.3 kPa (20°C)

Relative Vapor Density (Air=1): 1.1

Relative density of the Vapor/air-mixture at 20°C (Air = 1): 1.01

Specific gravity/Density: 0.7915(20/4°C)

Viscosity: 0.544~0.59mPas(25°C)

Solubility

Solubility in water: Miscible(1000g/L)

Solubility in solvent: Miscible with ethanol or diethyl ether.

n-Octanol /water partition coefficient: log Pow-0.77

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 violently with oxidants. This generates fire and explosion hazard.

Conditions to avoid

Contact with incompatible materials.

Open flames. Heat. Sparks.

Incompatible materials

Oxidizing agents

Hazardous decomposition products

Carbon oxides

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[GHS Cat. Japan, base data]

human LD50=ca. 1400 mg/kg (DFGOT vol.16, 2001)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

rabbit LD50=15800mg/kg (DFGOT vol.16, 2001)

Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

vapor : rat LC50>31500 ppm/4hr (DFGOT vol.16, 2001)

Labor standard law, Japan; Toxic

Methanol

Irritant properties

Serious eye damage /irritation

[GHS Cat. Japan, base data]

cat.2; rabbit : Draize test (EHC 196, 1997)

Sensitization

Skin sensitization

[GHS Cat. Japan, base data]

guinea pig : not sensitizing (EHC 196, 1997)

Germ cell mutagenicity

[GHS Cat. Japan, base data]

mouse erythrocyte micronucleus tests (in vivo somatic cell mutagenicity tests) : Negative (EHC 196, 1997)

Reverse-mutation assay in bacteria (Ames test) : Negative (EHC 196, 1997 et al.)

Chromosome aberration test : Negative (CHO cells; DFGOT vol.16, 2001)

No Carcinogenic effects data available

Reproductive toxicity

[GHS Cat. Japan, base data]

cat.1B; mouse : PATTY 5th, 2001

Delayed and immediate effects and also chronic effects from short- and long-term exposure

STOT

STOT-single exposure

[cat.1]

[Japan published data]

CNS; vision/organ of vision; systemic toxicity (DFGOT vol.16, 2001)

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

[Japan published data]

Narcosis (PATTY 5th, 2001)

STOT-repeated exposure

[cat.1]

[Japan published data]

CNS; vision/organ of vision (ACGIH 7th, 2001)

No Aspiration hazard data available

12. Ecological Information

Toxicity

Aquatic toxicity

Aquatic acute toxicity component(s) data

[GHS Cat. Japan, base data]

Crustacea (Brine shrimp) LC50=1340mg/L/96hr (EHC196, 1998)

Water solubility

1000 g/L (PHYSPROP Database, 2009)

Persistence and degradability

BOD_Degradation : 92% (Registered chemicals data check & review, Japan)

Bioaccumulative potential

log Pow=-0.77 (HSDB)

13. Disposal considerations

Waste treatment methods

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

14. Transport Information

UN No, UN CLASS

UN number: 1230

UN proper shipping name: METHANOL

Transport hazard class(es): 3

Transport subsidiary risks: 6.1

Packing group: II

ERG GUIDE NO.: 131

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

Noxious Liquid ; Cat. Y...Methanol

15. Regulatory Information

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

US major regulations

TSCA

Methanol

Other regulatory information

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

16. Other information

GHS classification and labelling

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

Acute Tox. 4: H302 Harmful if swallowed

Eye Irrit. 2: H319 Causes serious eye irritation

Repr. 1B: H360 May damage fertility or the unborn child

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

STOT SE 3: H336 May cause drowsiness or dizziness

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

Reference Book

Globally Harmonized System of classification and labelling of chemicals, (5th ed., 2013), UN

Recommendations on the TRANSPORT OF DANGEROUS GOODS 19th edit., 2015 UN

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

2012 EMERGENCY RESPONSE GUIDEBOOK(US DOT)

2017 TLVs and BEIs. (ACGIH)

Methanol, JUNSEI CHEMICAL CO., LTD., 73125jis_J_E1-3,30/11/2017

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

Supplier's data/information

NITE Chemical Risk Information Platform (NITE-CHRIP) <http://www.safe.nite.go.jp/japan/db.html>

General Disclaimer

This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It is advised to make their own tests to determine the safety and suitability of each such product or combination for their own purposes.

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 2015).