



## Safety Data Sheet

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

#### Product identifier:

Product name: Dichloromethane

SDS No. : 2301E-3

#### Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.

Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN

Division: Safety Management Dept. of Chemicals

Telephone number: +81-6-6946-8061

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e-mail address: kagakuhinanzenkanri@kishida.co.jp

### 2. Hazards identification

#### GHS classification and label elements of the product

#### Classification of the substance or mixture

##### HEALTH HAZARDS

Acute toxicity (Inhalation): Category 4

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 2A

Carcinogenicity: Category 1B

Reproductive toxicity: Category 2

Specific target organ toxicity – single exposure: Category 1(CNS; respiratory apparatus/system)

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

Specific target organ toxicity – repeated exposure: Category 1(CNS; liver; male genitalia)

##### ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 3

Hazardous to the aquatic environment (Long-term): Category 3

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

#### Label elements



Signal word: Danger

#### HAZARD STATEMENT

Harmful if inhaled

Causes skin irritation

Causes serious eye irritation

May cause cancer

Suspected of damaging fertility or the unborn child

Causes damage to organs after single exposure(CNS; respiratory apparatus/system)

May cause drowsiness or dizziness

Causes damage to organs through prolonged or repeated exposure(CNS; liver; male genitalia)

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

#### PRECAUTIONARY STATEMENT

Prevention



Avoid release to the environment.  
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.  
Wear eye protection/face protection.  
Do not eat, drink or smoke when using this product.

**Response**

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 exposed or concerned: Call a POISON CENTER or doctor/physician.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation occurs: Get medical advice/attention.  
Take off contaminated clothing and wash it before reuse.  
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.

**Disposal**

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

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

Ingredient name:Dichloromethane

Content (%):98(min)

Chemical formula:CH<sub>2</sub>Cl<sub>2</sub>

Chemicals No, Japan:2-36

CAS No.:75-09-2

MW:84.93

ECNO:200-838-9

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

**Stabilizing additives**

2-Methyl-2-butene ≤0.0050%

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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.

Wash with plenty of soap and water.

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.

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

Use appropriate extinguishing media suitable for surrounding facilities.

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.

**Advice for firefighters****Specific fire-fighting measures**

Evacuate non-essential personnel to safe area.

**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**

Ventilate area until material pick up is complete.

Wear proper protective equipment.

**Environmental precautions**

Prevent spills from entering sewers, watercourses or low areas.

**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.

**Preventive measures for secondary accident**

Collect spillage.

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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.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

**Safety Measures**

Use only outdoors or in a well-ventilated area.

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

When using do not eat, drink or smoke.

**Any incompatibilities**

See "10.Stability and Reactivity"

**Advice on general occupational hygiene**

Wash contaminated parts thoroughly after handling.

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

Take off contaminated clothing and wash it before reuse.

**Storage****Conditions for safe storage**

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

**Container and packaging materials for safe handling**

Glass

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

(Dichloromethane)

ACGIH(1997) TWA: 50ppm (COHb-emia; CNS impair)

**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.

**Eye protection**

Wear eye/face protection.

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**9. Physical and Chemical Properties****Information on basic physical and chemical properties**

Physical state: Liquid

Color: Colorless, clear

Odor: Characteristic odor

Melting point/Freezing point: -97°C

Boiling point or initial boiling point: 40°C

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit:

Lower explosion limit: 13 vol %

Upper explosion limit: 22 vol %

Flash point data is not available.

Auto-ignition temperature: 605°C

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity: 0.32mm<sup>2</sup>/s(20°C)

Solubility:

Solubility in water: 1.3g/100 ml (20°C)

n-Octanol/water partition coefficient: log Pow1.25

Vapor pressure: 47.4 kPa (20 °C)



Density and/or relative density: 1.3  
Relative vapor density (Air=1): 2.9  
Relative density of the Vapor/air – mixture at 20°C (Air = 1): 1.9  
No Particle characteristics data is not available.

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## 10. Stability and Reactivity

### Reactivity

Not available.

### Chemical stability

Stable under normal storage/handling conditions.

### Possibility of hazardous reactions

The vapour is heavier than air. As a result of flow, agitation, etc., electrostatic charges can be generated.

Decomposes on heating or on burning and on contact with hot surfaces. This produces toxic and corrosive fumes including hydrogen chloride, phosgene and carbon monoxide. Reacts violently with strong oxidants, strong bases and metals such as aluminium powder and magnesium powder. This generates fire and explosion hazard. Attacks some forms of plastic, rubber and coatings. (ICSC 0058)

### Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

### Incompatible materials

Strong bases, Strong oxidizing agents, Metals

### Hazardous decomposition products

Carbon oxides, Hydrogen chloride, Phosgene

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## 11. Toxicological Information

### Information on toxicological effects

#### Acute toxicity

##### Acute toxicity (Oral)

[GHS Cat. Japan, base data]

(Dichloromethane)

rat LD50=2280mg/kg(male), 2120mg/kg(female) (EHC 164, 1996; NITE Primary risk assessment, 2005)

##### Acute toxicity (Inhalation)

[GHS Cat. Japan, base data]

(Dichloromethane)

vapor:rat LC50=18371ppm/4hr(male, cal.) (EHC 164, 1996; NITE primary risk assessment, 2005); < 90% of saturated vapor press. conc. (574109ppm (25°C))

#### Irritant properties

##### Skin corrosion/irritation

[GHS Cat. Japan, base data]

(Dichloromethane)

rabbit severe or moderate irritation (DFGOT vol. 1, 2016, Access on May 2017; NITE primary risk assessment, 2005)

##### Serious eye damage/irritation

[GHS Cat. Japan, base data]

(Dichloromethane)

rabbit mild to moderate inflammation, moderate irritation (either DFGOT vol. 1, 2016, Access on May 2017)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

**Carcinogenicity**

[GHS Cat. Japan, base data]

(Dichloromethane)

cat.1B; IARC Gr.2A (IARC 110, 2016); NTP R (NTP RoC, 14th, 2016); EPA L (IRIS, 2011)

(Dichloromethane)

IARC-Gr.2A : Probably carcinogenic to humans

(Dichloromethane)

ACGIH-A3(1997) : Confirmed Animal Carcinogen with Unknown Relevance to Humans

(Dichloromethane)

EU-Category 2; Substances suspected human carcinogens

**Reproductive toxicity**

[GHS Cat. Japan, base data]

(Dichloromethane)

cat. 2; human JSOH, 2005; SIAP, 2011; NITE primary risk assessment, 2005; DFGOT vol. 1,

2016, Access on May 2017; ACGIH 7th, 2015; MOE risk assessment, vol.3, 2004

**STOT**

STOT-single exposure

[cat.1]

[GHS Cat. Japan, base data]

(Dichloromethane)

CNS; respiratory system (NITE primary risk assessment, 2005; EHC 164, 1996)

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

[GHS Cat. Japan, base data]

(Dichloromethane)

narcotic effect (NITE primary risk assessment, 2005; EHC 164, 1996)

STOT-repeated exposure

[cat.1]

[GHS Cat. Japan, base data]

(Dichloromethane)

CNS; liver; male genitalia (NITE primary risk assessment, 2005; EHC 164, 1996; MOE risk

assessment vol.3, 2004; JSOH, 1999)

Aspiration hazard data is not available.

**12. Ecological Information****Ecotoxicity****Aquatic toxicity**

Harmful to aquatic life

Harmful to aquatic life with long lasting effects

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(Dichloromethane)

Crustacea (Daphnia magna) LC50=27mg/L/48hr (Canada PSAR, 1993; OECD SIDS, 2011)

**Water solubility**

(Dichloromethane)

1.3 g/100 ml (20°C) (ICSC, 2017)

**Persistence and degradability**

(Dichloromethane)

Not degrade rapidly (BOD\_Ave. Degradation: 13% (CSCL DB, 1986))

**Bioaccumulative potential**

(Dichloromethane)

log Pow=1.25 (ICSC, 2017); BCF=40 (Check &amp; Review, Japan)

**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**

Avoid release to the environment (- if this is not the intended use).

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

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**14. Transport Information**

UN No.: 1593

Proper Shipping Name :

DICHLOROMETHANE

Class or division : 6.1

Packing group : III

ERG GUIDE No.: 160

**IMDG Code (International Maritime Dangerous Goods Regulations)**

UN No.: 1593

Proper Shipping Name :

DICHLOROMETHANE

Class or division : 6.1

Packing group : III

**IATA Dangerous Goods Regulations**

UN No.: 1593

Proper Shipping Name :

DICHLOROMETHANE

Class or division : 6.1

Hazard labels : Toxic

Packing group : III

**Environmental hazards**

MARPOL Annex III – Prevention of pollution by harmful substances

Marine pollutants (yes/no) : no

MARPOL Annex V – Prevention of pollution by garbage discharge

Carcinogenicity: cat.1, 1A, 1B

Dichloromethane

Specific target organ toxicity – repeated exposure: cat.1

Dichloromethane

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

Noxious Liquid ; Cat. Y

Dichloromethane

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**15. Regulatory Information**

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

**US Federal Regulations**

Chemicals listed in TSCA Inventory

Dichloromethane

**Other regulatory information**

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.



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**16. Other information****GHS classification and labelling**

Acute Tox. 4: H332 Harmful if inhaled

Skin Irrit. 2: H315 Causes skin irritation

Eye Irrit. 2A: H319 Causes serious eye irritation

Carc. 1B: H350 May cause cancer

Repr. 2: H361 Suspected of damaging 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

Aquatic Acute 3: H402 Harmful to aquatic life

Aquatic Chronic 3: H412 Harmful to aquatic life with long lasting effects

**Reference Book**

Globally Harmonized System of classification and labelling of chemicals, (7th revised edition, 2017), 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)

2016 EMERGENCY RESPONSE GUIDEBOOK (US DOT)

2020 TLVs and BEIs. (ACGIH)

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

Supplier's data/information

**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 2019).